

The KRAV mark stands for a good environment, good animal husbandry, good health and social responsibility.

The KRAV label stands for a good environment

KRAV certified production is free from pesticides and herbicides and contributes to reduced leaching of foreign substances to surface and ground water.

KRAV certified production contributes to an increased biodiversity and reduced danger of nutrient leaching that can result in over-fertilization of waterways, seas, and lakes.

The KRAV label stands for a good animal husbandry

KRAV certified products come from animals that have lived under conditions supporting their natural needs. They have received feedstuffs adapted to their needs and not aimed primarily at maximized production. They can freely seek shelter or be outdoors and they have received a respectful and considerate slaughter.

The KRAV label stands for good health

Handling of chemicals and exposure to poisons is minimized in KRAV certified production and products and subsequently, the working environment is relatively good. This is even more important for workers with the nearly 49 000 KRAV certified production units in the Third World where the working environment can be directly hazardous.

Knowing that KRAV inspected production is free from pesticides/herbicides, gene modified organisms (GMO), and other unnecessary additives contributes to the increasing consumers' well being and confidence.

The KRAV label stands for social responsibility

KRAV certified products must be produced under acceptable social and working conditions according to KRAV standards. This also applies to products that are originally inspected by a KRAV sister organization.

Re-certification of foreign products gives organic producers throughout the world access to a wider market, the possibility of a better price for the products, and the opportunity for Swedish consumers to show global solidarity.

Production and graphic design: KRAV information department April 2004

Contents

	KRA	V from a to z	2
		bers	
		V board of directors	
		lards Committee	
		als committee	
		ess and telephone to KRAV	
		ing instructions	
_	Defin	itions	. 25
		tive and scope of the standards	
2.	Gener	al standards	. 39
	2.1	Registration	. 40
	2.2	Certification	
	2.4	KRAV's inspection	
	2.5	Contract with third parties	. 43
	2.6	Annual fees and contract duration	. 44
	2.7	Confidentiality	. 45
	2.8	Handling of personal records	. 46
	2.9	Sanctions for non-compliance to standards	. 46
	2.10	Dispensation, appeal and review	. 48
	2.11	Environmental, nature, and cultural protection	. 48
	2.12	Handling of KRAV certified products	. 49
	2.13	Labelling	. 53
	2.14	Marketing	. 55
3.	Agricu	ılture in general	• 57
	3.1	Extent	. 58
4.	Crop	production	
	4.1	General	63
	4.2	Pollution and contamination	
	4.3	Fertilizer and soil conditioners	
	4.4	Plant protection and weed control	. 66
	4.5	Mushrooms	
	4.6	Soil, seed and plants	. 68
	4.7	Miscellaneous	
5.	Anim	al husbandry	. 71
	5.1	General	
	5.2	Animal welfare	. 75
	5.3	Feed	
	5.4	Health and medical treatment	. 8
	5.5	Miscellaneous	85
6.	Apic	ulture	
	6.1	Registration and conversion	
7.		aculture	
<i>/</i> •	_		
	7.1	Scope	. 92
	7.2	Setting upp the production	. 92
	7.3	Conversion period	- 95
	7.4	Raw materials and origin	. 96
	7.5 7.6	Health and animal welfare	. 96
	7.6 7.7	Salmonoid fish	
8.		harvested crop production	
9.	Food	l processing	107

10. Sla	ughter
11. Pe	food
12. Pr	oduction inputs117
13. Te	xtiles121
13.	1 Extent
13.	2 The foundation of the standards
13.	3 Raw materials 122
13.	
13.	·
13.	1 0
13.	1
13.	
13.	9 Quality criteria for the finished product
	des, leather and skins
14.	J
14.	
14. 14.	
14.	· · · · · · · · · · · · · · · · · · ·
14.	
14.	
14.	
15. Re	tailers
15.	
15.	
15.	9
15.	4 Display
15.	<i>y</i>
15.	
15.	
	staurants and others industrial kitchens 141
16.	
16.	
16. 16.	
	certification of products that are approved
by	other certification bodies
17.	
17.	
17.	·
17.	
18. KI	AV inspected and certified foreign production
19. Fis	hing
	Competency requirements for KRAV and
	compliance with these standards
19.	2. Stock - basic principles and standards for assessing
	fish and shellfish stocks
	3. Fishing vessels
	4. Fishing methods
	5. Landing and processing
Appen	dices

EXTRACT FROM KRAV'S BUSINESS MISSION

Adopted by the Board of Directors 22 June 2004.

Vision KRAV

- is an effective tool for sustainable development of organic production and consumption,
- is one of the world's most effective certification bodies,
- is a global operator firmly established locally,
- is a model among Swedish service companies because of our environmental adaptation and our social responsibility, and
- one of the most attractive workplaces for both the agricultural and food industry sectors.

Through the KRAV label, KRAV has created one of Sweden's most widely recognized and credible brandings in the food industry and producers in agriculture and aquaculture. KRAV is seen to be an important operator working towards a long term, sustainable, democratic society.

KRAV's mission

KRAV's mission is to strive for a sustainable development by creating standards for organic production, carrying out inspections for standard compliance, and informing about the KRAV mark.

We make it possible for our operators to market their products credibly as inspected organic products representing a good environment, good animal husbandry, good health and social responsibility.

KRAV INCORPORATED ASSOCIATION

KRAV is a certification body organised as an incorporated assocoation. KRAV's purpose is to further the members' economic position by providing inspection of organic products. KRAV's goal is to contribute to increase organic farming, animal husbandry and production by establishing credible standards, inspections, labelling and informing.

Members

The 29 members of KRAV represent farmers, processors, trade and commerce, importers and distributors, hotels and restaurants as well as environmental, consumer and animal welfare interests.

- Arla Foods AB
- Biodynamiska Produkter *
- Eco Trade AB
- Ekokött ek. för.
- Ekologiska Lantbrukarna
- Everfresh Group AB *
- Fältbiologerna
- Förbundet Djurens Rätt
- Förbundet Organisk Biologisk Odling
- GRO i Sverige AB
- Hemköpskedjan AB
- Hushållningssällskapens förbund
- Hälsokostrådet
- ICA-Handlarnas AB
- Kooperativa Förbundet

- Kung Markatta AB *
- Lantbrukarnas Riksförbund
- Milko ek. för.
- Norrmejerier ek. för.
- Saba Trading AB
- Samodlarna Sverige ek. för.
- Scandic Hotels AB
- Skånemejerier ek. för.
- Swedish Meats
- Svensk Mjölk AB
- Svenska Kvarnföreningen
- Svenska Lantmännen ek. för.
- Svenska Naturskyddsföreningen
- Vattenbrukarnas Riksförbund

^{*}associate members

BOARD OF DIRECTORS

The Board of Directors includes eleven directors, the CEO and employee representatives. The Board is appointed at the Annual General Assembly and is composed to reflect the areas of competence in commercial farming, distribution, processing as well as concerns of consumer, animal welfare and environmental groups.

Employees

The first of July 2004 KRAV had an average of 73 fulltime employees of which half where regional inspectors. The rest works at the main headoffice in Uppsala and are responsible for certification, information and administration.

Licensees and products

In July 2004, the number of licensed operators for KRAV certified production were:

- 3 372 farmers
- 482 processors
- 250 importers
 - 82 production input businesses
- 552 retailers
- 2.76 restaurants
 - 10 textile manufacturers.

In January 2004, 3 885 articles were KRAV certified.

Please see the KRAV website, www.krav.se, to locate KRAV certified products or businesses. Search in "Katalogen" (www.krav.se/katalog) for the list of all businesses using KRAV's services and "Produktlistan" (www.krav.se/produktlista) for all products carrying the KRAV label.

KRAV'S MISSION

KRAV's mission is to strive for a sustainable development by creating standards for organic production, carrying out inspections for standard compliance and informing about the KRAV mark.

It is vitally important that members, consumers and authorities perceive KRAV's work as credible. Thus, standards must be able to be inspected, meaningful and equitable. KRAV standards, inspections and certification are good tools for reaching a clearly defined goal, but they do not solve all problems. Below are some of the areas about which we often receive inquiries.

Transportation and energy use

Many ask how KRAV can reconcile long-distance transport of organic goods from the producer to the consumer. This concerns especially products such as coffee, cacao, tea and bananas. Should these products be allowed in retail shops?

In addition to ensuring that production is organic, KRAV does not take a position on the type of products which are imported. However, KRAV's position is that it is better that an imported product is organically produced. All parties benefit in the long term, including those who live in the land of production and those Swedish producers who venture to invest in an obviously growing market for organic products, and finally, the consumer who receives a wider selection of KRAV labelled products.

Neither is it obvious that long distance transport of products has used more non-renewable energy than products transported a short distance. For example, vegetables grown outdoors in other countries and transported to Sweden may use less energy than Swedish vegetables grown indoors. It is always important to look at the entire chain of custody from farming until the product reaches the consumer.

There are no KRAV standards for transport and energy consumption, because in this area it is difficult to create equitable standards that are verifiable. This question has been thoroughly investigated by the Standards Committee with the decision that the area, for the time being, must be handled outside of the standards' framework.

Environmental impact

Application of KRAV's standards in farming strengthens and increases the biodiversity in the cultivated landscape. By eliminating chemical pest control substances and artificial fertilizer, microorganisms thrive and multiply in the soil. Organic farming encourages more insects, plants, birds and other animals displaced due to chemical-intensive farming to return to areas under cultivation.

Two further steps in the current standards include the requirement that the farmer has a plan for managing the natural and cultural heritage of the farm. Additionally, KRAV operators also ought to have an environmental management system.

Plant nutrition

KRAV's standards dictate that farmers should minimize the loss of nutrients and manage the naturally available plant nutrition. This contributes to the benefits drawn from organic farming while at the same time improves the economy of the farm.

One aid in working out the plant nutrition equation is by measuring the amount of nutrients contained in the products that leave the farm with the amount of nutrients that are bought commercially such as feedstuffs and fertilizer. Soil mapping offers a basis for how the actual phosphorus and potassium fertilizing should be managed in the best manner.

The organic farmer can obtain tools for gaining optimum nutritional exchange on the farm by using the advisory services available from County Administration Boards and agricultural societies.

INTERNATIONAL

IFOAM

Organic production is a phenomenon present throughout the world. There are certification organizations for organic production around the globe and the organic movement is growing fast. The International Federation of Organic Agriculture Movements (IFOAM) is an international umbrella organization for farmers, researchers, educational and certifying organizations formed to work on behalf of organic production. IFOAM was founded in 1972 and has 700 members in 100 countries. KRAV is a member of IFOAM.

KRAV is actively involved in developing the IFOAM standards and criteria. KRAV was also the first certification organization for organic production that was accredited according to IFOAM's criteria as outlined in ISO 65. KRAV is also active in monitoring and influencing the EU standards and legislation for organic production.

For more information about IFAOM, please see their website: www.ifoam.org. For more information about the EU, please see their website: www.europa.eu.int

KRAV International program

In cooperation with other certification organisations KRAV offer certification of certian production outside Sweden. We strive to support the development of locally based certification where we are active.

Trade

It is essential that recertification runs smoothly in international trade with organic products. Recertification allows organic products that have been certified in another country by the local certification organization to be sold in Sweden with the KRAV mark. If all of the documentation concerning the product is complete and KRAV has thoroughly investigated the certification body, the product will be approved and may sold as KRAV-certified.

A cooperative effort has begun with a number of IFOAM's accredited, international certifying members, including KRAV, to work towards a well-functioning and uncomplicated recertification of organic products. The idea is that the accredited members should strive towards agreement on standards and streamline the processes so that unnecessary hurdles are removed for importing and exporting organic products.

Growing global market

Europe and the USA are witnessing a rapid growth in the organic food market. This is due largely to a lack of faith in the food industry and strong trend towards healthy lifestyles. The global market for organic foods is growing annually at a rate of 20 percent and is estimated in 2002 to amount to about SEK 200 thousand million.

THE GOAL OF ORGANIC AGRICULTURE

The basis for organic agriculture are the care for nature's fundamental functions and the idea of global solidarity. The aim is to produce high-quality products in a sustainable manner and to do so in a credible and reliable way. The striving should be to respect natural processes and behaviour through the entire chain from farm to the final consumer.

Activities (farming, processing, distribution etc) should be designed with the following principles in mind:

- the long-term productivity of the soil and other parts of the agricultural eco-system should be preserved and enhanced
- the biological diversity of the agricultural environment should be protected and developed
- the use of fossile fuels and other non-renewable resources should be minimised
- the use of man-made substances should be avoided
- farm animals should be kept in a manner which promotes good health and dignity. It should especially give the animals opportunity to express their natural behaviour
- the farmer should enjoy a reasonable income, a safe working environment and the opportunity to experience joy and satisfaction in his or her work
- organic foodstuffs should be available to the consumer at easonable prices

Organic agriculture aims to strengthen the ties between town and country by recirculation of nutritive substance and humus. It also aims to strengthen the ties between producer and consumer by being as open as possible about the operation.

The text above is taken from KRAV byelaws (§4)

CONSTRUCTING THE STANDARDS

KRAV's standards should be seen as minimum level standards. These are based on "The goals of organic farming" (see page 11) and what is possible to achieve today. The standards are changed periodically to better reflect the stated goals. The changes in the standards may not be retroactive.

Since 2002, KRAV standards are continually updated chapter by chapter throughout the year and not annually as in prior years. Thus, revising and adapting the standards will be an on-going work with different sections being revised at different times. The KRAV Board of Directors decides the revisions necessary, the goals of the revision and the time frame for implementing the changes.

The Standards Committee has the overall responsibility for developing the standards, making small changes, ensure that the overall structure of the standards is preserved, that no anomalies appear in the standards and also suggest changes in the standards to KRAV Board of Directors. The Standards Committee is assisted by the Standards Officer and working groups that is convened specifically for working on the defined standard section. Experts from the respective areas are included in the re-working of the standards and the new standards are referred in one or more rounds for comments. When all feedback has been assembled, the suggested changes are referred to KRAV Board of Directors.

The changes required because of global influences, such as new EU regulations, can be incorporated without any circulation for comment.

Circulation for comment

Standards are always sent to KRAV members for comment, as well as others who will be affected by the changes. All suggested changes are available at the KRAV website where there is a link to an address for sending comments and viewpoints: regelremiss@krav.se. All comments are in the public domain.

New standards

The KRAVs Standards are normally amended twice a year and enters into force the first of January (version January) and the first of July (version July) respectively. Version January is published in paper as well as in electronic form. The paper copy is distributed the first of October, three months before the standards enter into force. At that time they can also be found on the KRAV website. Version July is published in electronic form and is found on the KRAV website the first of April, three months before the standards enter into force.

Standards Committee

The members of the Standards Committee, a sub-committee to KRAV Board of Directors, are appointed every year with eight members including KRAV's CEO. The members must have a deep understanding based on their area of expertise.

The members of the Standards Committee during 2004 are:

- Chairperson
 - Lena Söderberg, Chief Executive Officer, KRAV
- Standards officer
- Kathinka Löfberg, KRAV
- Members

Marianne Schönning (Organic farmer, Board member, Ekologiska lantbrukarna and KRAV), Kari Örjavik (Consultant and organic producer), Els-Marie Aronsson (Head Department of Consumer Affairs, Gothenburg), Lars Hällbom (Consultant, environmental issues), Kristina Odén (Animal Rights Sweden), Lisa Deutsch (Economist and PhD student at the Department of Systems Ecology, Stockholm University) and Mats Johansson (Lawyer)

IFOAM's standards and inspections

IFOAM has developed the general international standards for organic production. These form the basis for KRAV standards. IFOAM has also created a quality assurance system to evaluate and approve inspection praxis for certification, the IFOAM Accreditation. KRAV is accredited by this system.

There are international standards describing how a certification body shall be constituted. ISO Guide 65 (in Europe EN 45011) is an example of such a standard and it corresponds to, in Europe, EN 45011. IFOAM Accreditation Criteria (IAC) corresponds to ISO Guide 65, but in addition to that also includes standard setting procedures. IAC also contains a mechanism for recognising other certifications.

KRAV complies with EU standards

The European Union published standards for organic production in the "Council Regulation (EEC) 2092/91 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs". These regulations are law in Sweden and govern the way in which the term "organic" may be used. The regulations cover crop farming, animal husbandry and processing.

KRAV's standards comply with the EEC regulation and are in some cases are stricter. Another large difference is that KRAV standards cover more areas than the EEC regulation, such as certification of restaurants, textile producers and aquaculture.

Only EU approved

Standards in the EEC regulation differ in some ways from KRAV standards. In addition to inspections carried out according to KRAV standards, KRAV is also commissioned by the Swedish Board of Agriculture and the Swedish National Food Administration to inspect production according to EEC regulation. By only fulfilling EEC regulation, a business is allowed to call the product "organic". However, the product may not use the KRAV label or trademark on the product or in any product description.

INSPECTIONS CREATE CREDIBILITY

KRAV inspects organic production, handling and marketing of KRAV labelled products.

One part of the process is an on-site inspection of a member producer (such as a farmer). KRAV-employed inspectors conduct the inspection. Another part of the inspection is the examining of reports, recipes, recertification matters etc. Certification officers at the KRAV offices conduct this part of the inspection.

Quality

In addition to striving for a good environment, KRAV labelled products should also be of high quality and reliability. The standard routines for hygienic handling of foodstuffs are obviously to be followed but these are not included in the KRAV inspection.

Traceability

Thanks to the annual inspection of all member businesses complying with KRAV standards, KRAV also keeps track of the origin of all source materials for the products.

KRAV is also inspected

KRAV, in turn, is also inspected and certified according to the IFOAM Accreditation Criteria. In Sweden, both the Swedish Board of Agriculture and the Swedish National Food Administration have approved KRAV to carry out the inspection of organic production.

Foreign products

Products originating from other countries where the handling and production processes have not been subject to a KRAV inspection require a recertification. Recertification has two main parts:

- 1. The inspection body or bodies must be recognized prior to the products being KRAV inspected.
- 2. KRAV's approval of the product in question.

KRAV endeavours to co-operate with certifying agencies that have been evaluated by independent auditors to facilitate reliable trade with organic products. At present, accreditation is judged according to the IFOAM Accreditation Criteria, which is thought to be the most reliable evaluation method.

THE TRADEMARK

KRAV is a registered trademark with the registration number 338 153.

The registration affords KRAV the sole right to the KRAV name. The KRAV name and label may only be used by those who have entered into a contract with KRAV and are subsequently certified by KRAV.

Use of the KRAV name and label is defined in the following standard sections:

- Chapter 1 Objectives and scope
- Chapter 2 General standards, sections 2.13 and 2.14
- Chapter 13 Textiles, section 13.10
- Chapter 14 Hides, leather and skins, section 14.8
- Chapter 15 Retail handling and retailer authorization, sections 15.1.1, 5.1.2 and 15.1.7
- Chapter 16 Restaurants and industrial kitchens, sections 16.1.9-16.1.12 and 16.2.4
- Chapter 19 Fishing 19.5.1.4-5

Using the KRAV logotype

The KRAV logotype is available in the following formats:



Basic label is a label signifying organic production.



Label for wild production



Label for production inputs



Label for B label; label for restaurants and industrial kitchens (without footnotes) and for products with less than 95% organically produced materials (with footnotes).



Label for export



The various formats for the different KRAV logotypes in black/white/colour can be downloaded from the KRAV website or can be ordered from the KRAV headoffice. If you are uncertain about the proper labelling, please contact the KRAV headoffice.

Instructions

The KRAV logotype should not be re-sized but used in its entirety.

The KRAV logotype should always be printed in positive colour, i.e. black white, even if it appears against a dark background where it should be printed with a light background retaining the oval shape.

The colour key for the KRAV logotype is as follows:

Colour PMS code CYMK scale dark green pas 342

100% yellow

40% magenta

100% cvan

or 100% black

The KRAV label should not be directly connected to other logotypes or

The KRAV label may not overshadow the logotype of other producers.

The KRAV label shall be placed on the portion of packing that is exposed

The word KRAV must always be written with capital letters in both

headings and in running text.

KRAV is not a name of a product, nor is it a part of a name of a product. Compositions like KRAV-bread, KRAV-fruit and KRAV-milk etc shall be avoided. Correct descriptions are for example KRAV-certified bread, fruit and milk etc or product names.

Recommendations

Even though the demand for KRAV products is increasing, the products do not sell without help. These products must be marketed with the same energy that conventional products are marketed to be a success on the market.

KRAV certified production should be able to be marketed based on their own merits gained for value added production in its own right, and avoiding negative comparisons with conventional production.

The added value that should be emphasized for the scope of KRAV labelled products rest on four principles:

- Good environment
- Good animal welfare
- Good health
- Social responsibility

MEMBERS AS OF JULY 2004

Arla Foods AB

Gun Olsson

Box 5407, 402 29 Göteborg Tel: 031-703 23 25, Fax: 031-703 20 90

E-post: gun.olsson@arlafoods.com

Biodynamiska Produkter *

John Gerhard

Tuna Industriväg 17, 153 21 Järna Tel: 08-551 708 30, Fax: 08-551 713 37

E-post: john.gerhard@biodynamiskaprodukter.se

Eco Trade AB

Anneke Svantesson 745 84 Enköping

Tel: 0171-266 00, Fax: 0171-266 70 E-post: anneke.svantesson@lantmannen.se

Ekokött ek. för.

Börje Karlsson

Kinne Vedum, Lerslyckorna, 533 97 Götene Tel: 0511-530 19, Fax: 0511-532 59

E-post: info@ekokott.org

Ekologiska Lantbrukarna

Lennart Larsson

Sågargatan 10 A, 753 18 Uppsala Tel: 018-10 10 06, Fax: 018-10 10 66

E-post: lennart.larsson@ekolantbruk.se

Everfresh Group AB *

Paulina Luedtke

Långbergav. 5, 256 69 Helsingborg Tel: 042-450 23 00, Fax: 042-450 23 90 E-post: paulina.l@everfreshgroup.com

Fältbiologerna

Jan Wester

Gärdesvägen 8, 793 41 Insjön

Tel: 0247-400 57

E-post: jan.wester@faltbiologerna.se

Förbundet Djurens Rätt

Kansliet Box 2005

125 02 Älvsjö

Förbundet Organisk Biologisk Odling

Sven-Åke Svensson

Castmans väg 158, 575 37 Eksjö

Tel 0381-160 67

e-post sven-ake.svensson@ebox.tninet.se

GRO i Sverige AB

Jan Nerelius

105 33 Stockholm

Tel: 08-787 53 00, Fax: 08-787 53 10

E-post: jan.nerelius@gro.lrf.se

Hemköpskedjan AB

171 78 Solna

Tel: 08-553 999 00

E-post: info@hemkop.se

Hushållningssällskapens förbund

Åke Clason

Stortorget 7, 111 29 Stockholm

Tel: 08-545 278 00

E-post: ake.clason@hush.se

Hälsokostrådet

Anna Maria Nordin

Box 6356, 102 35 Stockholm

Tel: 08-545 411 60, Fax: 08-545 401 70

E-post: annamaria@halsokostradet.se

ICA Sverige AB

Anna Carlsson

170 85 Solna

Tel: 08-585 502 90, Fax: 08-585 506 21

E-post: anna.carlsson@ica.se

KF (Kooperativa Förbundet)

Åke Natt och Dag Coop Sverige, 171 88 Solna

Tel: 08-743 15 05

E-post: ake.nattochdag@coop.se

Kung Markatta AB *

Lennart Olsson

Hjälmarsberg, 705 90 Örebro

Tel: 019-30 73 00, Fax: 019-32 02 01

 $\hbox{E-post: lennart.olsson@kungmarkatta.se}$

LRF (Lantbrukarnas Riksförbund)

Kjell Ivarsson

Klara Östra Kyrkogata 12, 105 33 Stockholm

Tel: 08-787 50 00, Fax: 08-24 81 19

E-post: kjell.ivarsson@lrf.se

Milko ek. för.

Anders Magnusson

Box 2047, 650 02 Karlstad

Tel: 054-22 30 14, Fax: 054-22 30 02

 $\hbox{E-post: anders.magnusson@milko.se}$

Norrmejerier ek. för.

Jan-Erik Noord Mariehemsvägen 10, 906 52 Umeå Tel: 090-18 29 33, Fax: 090-18 29 45 E-post: janerik.noord@norrmejerier.se

Saba Trading AB

Linnea Jönsson Box 150 73, 250 15 Helsingborg Tel: 042-24 95 69, Fax: 042-29 71 31 E-post: linnea.jonsson@saba.se

Samodlarna Sverige ek. för.

Frans Brozén Prästgården Fårö, 620 35 Fårösund Tel: 0498-22 38 00, Fax: 0498-22 37 74 E-post: frans@samodlarna.se

Scandic Hotels AB

Wilhelm Hardt
Box 6197, 102 33 Stockholm
Tel: 08-517 350 04, Fax: 08-517 352 40
E-post: wilhelm.hardt@scandic-hotels.com

Skånemejerier ek. för.

Ingemar Nordell 205 03 Malmö Tali 040 31 30 34 Fave 041

Tel: 040-31 39 26, Fax: 040-94 73 58 E-post: ingemar.nordell@skanemejerier.se

Swedish Meats

Johan Stegard Ballabo 27, 436 93 Västerlanda Tel: 0520-65 21 31

E-post: stegard@telia.com

Svensk Mjölk AB

Hans Andersson 105 46 Stockholm Tel: 0771-19 19 00, Fax: 08-21 83 63 E-post: hans.andersson@svenskmjolk.se

Svenska Kvarnföreningen

Alf Messing Box 16141, 103 23 Stockholm Tel: 08-762 67 96, Fax: 08-678 66 02 E-post: alf.messing@bageri.se

Svenska Lantmännen ek. för.

Anna Björnberg Sockerbruksgatan 38 531 87 Lidköping Tel: 0510-887 52, Fax: 0510-219 44 E-post: anna.björnberg@lantmannen.se

Svenska Naturskyddsföreningen

Gun Rudquist
Box 4625, 116 91 Stockholm
Tel: 08-702 65 07, Fax: 08-702 08 55
E-post: gun.rudquist@snf.se

Vattenbrukarnas Riksförbund

Björn Lindblad

Fiskebäckshamn 4, 426 58 Västra Frölunda Tel: 031-29 04 68, Fax: 031-29 57 74 E-post: bjorn.lindblad@vattenbrukarna.se

^{*} Associate members

KRAV BOARD OF DIRECTORS

The Board of Directors is composed of the chairperson, eleven representatives, two employee representatives, two alternates for employees and the KRAV CEO. In addition, the Board, excluding employee representatives, is appointed to reflect the different interests of the member organizations.

Chairperson

Bo Thunberg Hannäs Gård 665 91 Kil Tel: 0708-83 35 25

E-post: bo.thunberg@krav.se

Vice chairperson Per Stenström Sia Glass AB Box 100, 310 80 Slöinge Tel: 0346-71 51 24, Fax: 0346-71 51 02 E-post: per@siaglass.se

CEO

Lena Söderberg KRAV, Box 1940 751 49 Uppsala Tel: 018-10 02 96, Fax: 018-10 03 66

E-post: lena.soderberg@krav.se

Per Baummann

Coop Sverige Box 15200, 171 88 Solna E-post: per.baummann@coop.se

Anneke Svantesson

Lantmännen - Eco Trade Linbanegatan 12 745 84 Enköping

Hélène Arrenfeldt

Svensk Dagligvaruhandel 103 29 Stockholm Tel: 08-762 78 05

E-post: helene.arrenfeldt@svenskdagligvaruhandel.se

Marie Pettersson

Mälarchark AB, Hejargatan 1 632 29 Eskilstuna Tel: 016-14 89 80 E-post: marie@malarchark.se

Carl Jonson Toften 623

311 96 Heberg Tel: 0346-521 86

E-post: carl jonson@hotmail.com

Kristine Borg

Mörbyvägen 9 149 31 Nynäshamn Tel: 08-520 106 45

E-post: kristine.borg@krav.se

Lennart Josefsson (supl.)

Färsån 3820 840 70 Hammarstrand Tel: 0690-240 60. Fax: 0690-240 60 E-post: lennart.josefsson@krav.se

Hans Huiskamp

KRAV, Box 1940 751 49 Uppsala

Tel: 018-10 78 14, Fax: 018- 10 03 66 E-post: hans.huiskamp@krav.se

Bo Berg

Milko Box 362, 831 25 Östersund

Bengt Persson

Välingetorps Gård 79 a 262 92 Ängelholm Tel: 042-690 62, Fax: 042-690 54 E-post: bengt.persson@lrf.se

Marianne Schönning

Härnebo 8363 823 92 Holmsveden

Tel: 0270-42 22 00, Fax: 0270-42 22 00 E-post: marianne.schonning@ekolantbruk.se

Gunnel Axelsson Nycander

Gnejsvägen 18 C 752 42 Uppsala Tel: 018-5012 05

E-post: gunnel.axelssonnycander@telia.com

Deniz Varhos

KRAV, Box 1940 751 49 Uppsala Tel: 018- 10 75 09

E-post: deniz.varhoz@krav.se

STANDARDS COMMITTEE 2004

Chairperson

Lena Söderberg, VD KRAV E-post: lena.soderberg@krav.se

Secretary

Kathinka Löfberg, KRAV E-post: kathinka.lofberg@krav.se

Marianne Schönning

Härnebo 8363 823 92 HOLMSVEDEN Tel/Fax: 0270-42 22 00

E-post: marianne.schonning@ekolantbruk.se

Kari Örjavik

Östra Skymnäs 684 95 HÖJE

Tel: 0563-723 68, Fax: 0563-720 66

E-post: kari@grolink.se

Els-Marie Aronsson

Konsument Göteborg Box 113 64, 404 28 GÖTEBORG Tel: 031-612 391, Fax: 031-13 10 43

E-post: els-marie.aronsson@konsument.goteborg.se

Lars Hällbom

Hedenbergsvägen 10, 752 60 UPPSALA

Tel: 018-46 31 66

E-post: lars.hallbom@kemil.se

Kristina Odén

Förbundet Djurens Rätt Järntorget 3 3tr 413 04 GÖTEBORG Tel: 031-775 95 84

E-post: kristina.oden@djurensratt.se

Lisa Deutsch

Stockholms Universitet, 106 91 STOCKHOLM

Tel: 08-16 12 90

E-post: lisad@system.ecology.su.se

Mats Johansson

Ceba Foods AB, Scheelevägen 18, 223 63 Lund Tel: 046-19 13 12, Fax: 046-14 41 12 E-post: mats.johansson@oatly.com

APPEALS COMMITTEE 2004

Chairperson Kåre Olsson

Skattungbyn 1225 794 91 ORSA Tel: 0250-55 12 02 E-post: k.olsson@snf.se

Secretary

Lena Söderberg, VD KRAV KRAV Box 1940, 751 49 Uppsala Tel: 018-10 02 96, Fax: 018-10 03 66 E-post: lena.soderberg@krav.se

Staffan Ahrén

Husa, 186 97 Brottby Tel: 08-512 414 12 E-post: staffan@husagard.se

Carl Jonson

Toften 623, 311 96 Heberg Tel: 0346-521 86

E-post: carl_jonson@hotmail.com

Pia Lindeskog

Stockholms Läns Landsting Centrum för tillämpad näringslära 118 91 Stockholm Tel: 08-517 780 44, Fax: 08-517 780 51 E-post: pia.lindeskog@smd.sll.se

Maud Lindmark

Box 30 125 21 Älvsjö

Tel: 08-727 05 00, Fax: 08-99 41 90 E-post: maud.lindmark@kavli.se

Linnea Jönsson

Box 150 73, 250 15 Helsingborg Tel: 042-24 95 69, Fax: 042-29 71 31

Birgitta Carlsson

Alamedan 9b 371 31 Karlskrona

Address and telephone to KRAV:

KRAV employees may be reached through the central telephone exchange and the address at KRAV, Box 1940, SE-751 49 Uppsala, Sweden

Tel: +46 18-10 02 90 (exchange)

email: info@krav.se (general)

lantbruk@krav.se (for KRAV certified operators)

livsmedel@krav.se (for KRAV certified food companies)

website: www.krav.se

Email: KRAV employees' addresses are as follows: first name. surname @

krav.se (Swedish vowels are written as follows: å=a, ä=a, ö=o).

• CEO

Lena Söderberg

Tel: +46 18-10 02 96, +46 70-622 78 46

VICE CHAIRPERSON

Kjell Sjödahl Svensson

Tel: +46 18-10 75 04, +46 70-311 44 37

INFORMATION

Information Officer
Jessica Elgenstierna

Tel: +46 18-10 78 21, +46 70-591 30 04

FARMING

Department head

Eva-Lena Rådberg

Tel: +46 18-10 13 05, +46 70-621 05 24

• FOODS

Department head

Ewa Bellbrant

Tel: +46 18-10 75 07, +46 70-587 06 00

FIELD INSPECTION

Department head

Marc Wester

Tel: +46 523-233 08, +46 70-215 46 24

Mälardalen Region

Jonas Tannlund

Tel: +46 150-311 70, +46 70-591 16 74

Region Norr (Northern region)

Eva Alskog

Tel: +46 90-12 13 70, +46 70-215 46 17

Region Öst (Eastern region)

Gunnel Sigurd

Tel: +46 371-702 06, +46 70-591 16 77

Region Väst (Western region)

Marc Wester

Tel: +46 523-233 08, +46 70-215 46 24

Region Syd (Southern region)

Dan Elisson

Tel: +46 35-426 40, +46 70-630 35 23

KRAV's subsidiary

KRAV KONTROLL AB

Tel: +46 18 13 80 40 Fax: +46 18 13 80 41

Box 1940, SE-751 49 Uppsala email: info@kontroll.krav.se www.krav.se/kravkontroll

READING INSTRUCTIONS

The table gives you an overview of the chapters that you will need to read thoroughly, depending upon your activities.

	Z Z	CHAPIER																		
Production	ᆵ	1	2	3	4	2	. 9	7 8	6	10	11	12	13	14	15	16	16 17 18	18	19	Appen dices
Crop production	×	×	×	×	×															×
Animal husbandry	×	×			×	×				×										×
Apiculture	×	×	×	×			×													×
Wild harvested	×	×	×					×												×
Handling and Processing	×	×	×						×								×	×		×
Slaughter	×	×	×							×										×
Retail	×	×	×						×						×					×
Restaurants and industrial kitchens	×	×	×						×							×				×
Production inputs	×	×	×		×	×			×			×								×
Textiles	×	×	×										×							×
Leather and skins	×	×	×										×	×						×
Mushrooms	×	×	×		×															×
Import	×	×	×		×												×	×		×
Aquaculture	×	×	×				^	×				×								×
Pet food	×	×	×						×		×									×
Fish	×	×	×						×										×	×

APTER:

Standards for KRAV certified production July 2004

KRAV's standards were approved by KRAV's Board of Directors the 27th of November 2003, the 11th of February, the 25th of Mars, the 22nd of June and the 6th of October 2004.

The following standards have been amended: Definitions, 2.2.3, 2.9.3, 2.10.1, 2.12.15, (new), 4.4.1, 5.4.5, chapter 9, 10.1.3, chapter 15, 16, 17 and chapter 19 (new) as well as appendix 7 and 8.

Entry into force

The standards enter into force the 1st of July 2004. Chapter 19 enter into force the 1st of April 2004. The amendments in chapter 17 enter into force the 1st of November 2004.

DEFINITIONS

KRAV's standards use the following terms:

A-product

A product which contains at least 95 percent by weight KRAV certified source materials is termed an A-product.

Additive

A substance that is not normally consumed as a foodstuff and is normally not used as a typical ingredient in food, regardless of its enrichment properties. The term also includes a substance added to a foodstuff for technological purposes when making, processing, preparing, treating, storing, packaging and transporting, which results in the substance becoming a component of the foodstuff whether or not the substance is altered.

Appeals Committe (old Certification Committee)

The Appeals Committee is elected on annual basis by the BoD, to which it also reports. The purpose of the appeals committee is to make decisions on the appeals of decision on matters of certification.

Artificial fertilizer

Fertilizer produced by a chemical process or other process which chemically alters a natural source material, except in cases where such a change occurs through a natural biological and physiological process. Artificial fertilizer may also be called synthetic fertilizer.

Base amount

The base amount for 2004 is SEK 39 300.

B-product

A product which contains at least 70 percent and less than 95 percent by weight KRAV certified source materials is termed a B-product.

Biological agents for pest control

Biological agents for pest control include biotechnical organisms (micrororganisms, nematodes, insects or arachnids that are produced having a technical function), that are specifically produced to prevent or neutralize animals, plants or microorganisms, including virus, from causing damage or discomfort to human health or damage to property.

By-products

The fish waste from processing industries including raw materials of fish from species intended for human consumption but are classified as unfit because of quality. This definition applies only to Chapter 7, Aquaculture.

Cage

A limited enclosure floor space for poultry or other small animals.

Certificate

Document indicating KRAV certification for a specific product, production or activity.

Climate similar to outdoor conditions

When the quality of air, light and the temperature inside a building follows the conditions outdoors.

Chemical pesticides and herbicides / chemical agents

Chemical products intended to prevent or neutralize animals, plants or microorganisms, including virus, causing damage or discomfort to human health or damage to property.

Concentrated feed

All feed that is not roughage or vitamin or mineral supplement. However, potatoes are considered to be concentrated feed.

Contamination

By contamination is meant transferring, adulterating or infecting.

Certification matters

Certification matters concern the approval or rejection of products and producers and also matters of inspection into deviation from KRAV's standards, applications for exemptions, appeals and inquiries into the standards. These matters apply to the application and interpretation of KRAV's standards.

Conventional

In KRAV's standards, the term conventional signifies production and producers who are not KRAV certified.

Conversion period

The interim period set from which KRAV standards are followed until the product is certified. The production must be registered to the KRAV inspection scheme during the entire period.

If a product is rejected, a new conversion period commences if no other exceptions are stated.

Colourings

Substances that have or can give colour. These can be natural or synthetic.

Degradable

According to OECD guidelines 301 A-F the limit for readily degradable is either more than 60 percent mineralization within 28 days measured as production of carbon dioxide/oxygen consumption (CO₂/BOD) or more than 70 percent mineralization within 28 days measured as reduction of dissolved organic carbon (DOC).

According to OECD guidelines 302 A-C substances are ultimately degradable if more than 70 percent of the degradability is measured as DOC or COD (chemical oxygen demand). This term applies only to Chapter 12.

Divergence

Deviation from KRAV's standards.

Drugs and chemical agents for the treatment of animals

According to KRAV's standards, drug products apply to products that are administered to animals to indicate, prevent, relieve or cure diseases or symptoms caused by disease or use in similar situations. KRAV's classification of substances for chemical means of control includes agents against vermin, fly tags and pouron agents.

Eco-labelled

A product that is approved by the Nordic Swan label (Svanen), Bra Miljöval (Good Environmental Choice), EU flower, TCO 1999 and later, KRAV or that may be marketed as organic within the EU.

EN 45011

European Norm 45011 (in Sweden "SS EN 45011", where SS stands for Swedish Standard)

Environmental aspects

Is defined according to SS EN ISO 14 001.

Environmentally certified

A third party certification that an operation complies with the stated standards or set of rules. The ISO 14000 series and EMAS (Eco Management and Audit Scheme) are examples of third party certification schemes.

Environmentally adapted product

An environmentally adapted product is a good or service that causes less damaging environmental impact when compared to other products for the same purpose. Products that are labelled with the Nordic Swan label, or the "Bra miljöval" (Good Environmental Choice) label, or the EU flower label comply with the environmental criteria for the respective labels and are examples of environmentally adapted products.

Environmental impact

A change in the environment - positive or negative - caused totally or partially by the producer's activities, products or services.

EU organic

Grown in accordance with "Council Regulation (EEC) no 2092/91 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs", without being certified by KRAV.

Exemption (individual and general)

An individual exemption is an exemption from the KRAV standards for a limited time. General exemption is considered an urgent standard revision. When deciding on an urgent standard revision KRAV take into account the amount of products concerned.

Heavy metal

A metal with a density higher than 5 g/cm3.

Heavy metals

Heavy metals include those with a density higher than 5 g/cm3. A large number of basic elements are included, but the most important for environmental considerations are listed here. Dangerously high levels of other heavy metals appear only occasionally. Arsenic is usually considered to be one of the most environmentally dangerous heavy metals though it is actually a semi-metal.

Chrome (Cr)

Game

Game meat is considered to be meat from wild, living mammals and birds. The animals shall have been owned by anyone. Note: Reindeer is considered to be domesticated livestock.

Genetically modified organisms (GMO)

An organism which carries genetic material manipulated in such a way other than natural recombination or mating.

This definition includes the genetic modification that arises from the application of the following methods:

- Hybrid DNA method with the vector system that is included in the Council's recommendation 82/472/EEC (1).
- Methods that directly inject hereditary material that was prepared outside the organism into an organism using techniques such as micro-injection, macro-injection or micro-encapsulating;
- Cell fusion (including protoplast infusion) or methods of hybridization where living cells with new hereditary genetic codes are artificially created by fusing two or more cells.

The following methods are not considered to lead to genetic modification providing that hybrid DNA molecules or genetically modified organisms are not used:

- In vitro fertilization;
- Conjugation, transduction, transformation or other natural process;
- Induction of polyploids.

Products derived from genetically modified organisms

Products using GMO source materials or products that are synthesized by a GMO.

Grazing period

The minimum period established by the Swedish National Board of Agriculture for grazing in different parts of the country.

Handling

Handling is a collective concept for treatment of a product in such a way that no changes occur to the product such as for example receiving, storage, sorting and packaging a product. Drying own cereals on the farm and the washing of own products with water on the farm are considered to be handling. Transport, storage, distribution and sales of KRAV labelled products in unopened packaging are not considered to be handling.

Hazardous waste

Hazardous waste includes explosive, inflammable, oxidizing, toxic or waste dangerous to health. Examples of hazardous waste include spill oil, impregnated timber, electric and electronic waste, batteries, solvents, paints and varnish.

Holding

Property or business consisting of one or more registered properties or parts of properties with joint accounting.

IAC

IFOAM Accreditation Criteria

IBS

IFOAM Basic Standards

ICES

International Council for the Exploration of the Sea

IFOAM

International Federation of Organic Agriculture Movements. A worldwide collaborative federation for organic production (IFOAM). Develops international standards (IFOAM Basic Standards for Organic Production and Processing) for organic production and criteria for accreditation of certification programmes (IFOAM Accreditation Criteria for Programmes Certifying Organic Agriculture and Processing).

Indoor period

The period when animals are kept daily indoors with or without an outdoor period. Milking during the grazing period is not included.

Ingredients (including raw materials, additives, vitamins, flavourings and taste enhancers) "Every substance, including additives, used in producing or processing of a foodstuff and that can be found in the final product even in another form. If an ingredient in a foodstuff consists of several ingredients, these shall be considered as ingredients in the foodstuff.

The following are not considered as ingredients:

 Constituents of an ingredient which, during the manufacturing process, are temporarily separated but which are subsequently returned to a foodstuff in proportions that are not in excess of the original proportions;

- Additives which occur in a foodstuff only as a result of their inclusion in one or more ingredients in the foodstuff, provided that the additives do not have any technological function in the finished product;
 - Additives used as processing aids; or
- Substances used in quantities strictly necessary as solvents for, or as carriers of, additives, including flavourings."

(See the Swedish SLVFS 1993:19)

Initial recipient

Auction establishment or other organ that is authorized by the Swedish National Board of Fisheries (according FIFS 1995:23) to mediate sale of fish or buy fish for further marketing as the initial recipient in the chain of custody. In other countries outside of Sweden, it is an organization with equivalent authorization.

ISO 65

Certification Body - General standards to certification of products (ISO/IEC Guide 65:1996)

Litter bed

Deep litter bedding is cleaned after a few to several weeks up to a year. It is kept dry by spreading new layers of litter on the bed.

Marketer

A marketer registered for KRAV inspection and responsible for the use of KRAV's name or the KRAV mark in the marketing of a KRAV certified article.

Nature identical

A term used to identify a substance that is produced synthetically but also could be found in nature.

Nets of degradable fibres, degradable panel

A part of the fishing gear (usually a trap or fyke net) that rots after a time in the water. The netting or panel is placed so that the gear either collapses or gets a large hole when the panel had degraded. In this way, lost gear is prevented from continued fishing - (so called ghost fishing).

Outdoor period - free range

The time preceding and following the grazing period. Animals are to be kept outside when the ground and weather conditions so permit for the respective animal.

Packaging

A product's inner and outer wrapping.

Packaging agreement

A contract form used when packaging and KRAV labelling are carried out by a non-certified KRAV supplier, however, the supplier is approved by another organic certifying body that has a contract with KRAV.

Packaging materials

Products for containing, protecting, handling and presenting goods regardless of material.

Perishable goods

Foodstuffs that are not preserved by such processes as sterilization, salting, drying, smoking or freezing and therefore have limited shelf life. Perishable goods may or may not be ready to use. Shelf life for some goods may be dependent upon manner of storage, such as refrigeration.

Precautionary approach

The precautionary approach is a set of measures that intend to minimize degrading or irreversible effects by human activity on marine ecosystems. These measures require that fishery management must evaluate and consider effects of fishing on fish stocks and the marine environment when deciding on fishing.

Preservatives

Substances that increase the shelf life of foods by preventing activity by microorganisms. However, salt (sodium chloride) is not considered to be a preservative.

Precautionary principle

If the environmental effects of a substance, product or activity are unknown or uncertain then it is better to err on the side of caution to minimize possible risks. This is the underlying principle in the Environmental Code and means that any planned activity should take into consideration protective measures, observing boundaries and take precautionary steps necessary so the activities will not endanger health or the environment.

Processing

Processing is the collective concept for all processing of agricultural products to food, feed, production inputs or textiles, furs, leather and skins. The first level of custody does not cover packaging and labelling the product as part of processing but, for example, if a product is washed or peeled, it is considered to be processed. Examples of processing include grinding cereals, producing juice concentrates, meat processing, dairy-, bakery-, slaughter and butchering operations, bottling, canning, freezing, drying or other treatments for preservation, spinning and weaving of textiles.

Processing aid

A processing aid is a substance not consumed as an ingredient and used in food processing of source materials, food or ingredients to foods serving a technical function during treatment or preparation. The use may result in the avoidable or technically unavoidable presence of such a substance or its metabolites in the finished products. The presence may not create a danger to health or have any technological influence on the finished product.

Producer

A person who is registered for inspection with KRAV and grows, produces, handles, processes, distributes or imports a product.

Product

A product is a good that is composed of a single raw material or a composition of several raw materials. A product can also be a substance or a preparation.

Production

A product, its packaging, a process, handling, a production unit, or anything else which is connected to producing products.

Production inputs

Production inputs include additions to agriculture (such as fertilizer, soil conditioners and plant protection substances), animal management agents, desinfection agents and biocides in storage facilities.

Production unit

A physically limited unit registered for inspection.

Protected areas

The concept protected area is used to describe those areas, environments, types of natural areas etc. that are important for flora and fauna and/or have great cultural value. Examples of natural and cultural environments needing protection include meadows and natural pastures, keybiotopes in forests and biotope protected areas on agricultural lands such as stone walls, cultivated cairns, groups of trees/bushes in fields, avenues, open ditches, springs, small waterways and wetlands.

Raw or source materials

Raw or source materials are the main ingredients in a processed product.

Recertification

KRAV can approve and certify an organic product approved and certified by another inspectorial unit. KRAV uses the information from the unit as a basis for approval and examines whether the standards are in agreement (see Chapter 17).

Reconstitution

Reconsitution means that the initial water content of a product is restored.

Registered for KRAV inspection

A written agreement shall be entered into in order to join the KRAV inspection scheme. The agreement includes the obligation to follow KRAV standards and pay the relevant fees.

Roughage

Roughage refers to pasture, hay, silage, whole crop silage, green fodder crops, straw, leaves, bark, twigs, sugar beet pulp and root crops (not potatoes).

Sanction

A measure taken for indicating a deviation from KRAV's standards.

Sanitized residues from abattoirs

Products from slaughtering used as fertilizers i.e. blood meal, hoof meal, horn meal, bone meal, bone char, meat meal, feather meal, hair meal, wool, fur and hair.

SS 15 54 34, SS 15 54 70

The Swedish Standard Hydraulic Fluids - Requirements and Test Methods and the Swedish Standard Lubricating Grease - Requirements and Test Methods

Stock

Biological unit that limits individuals within a species that mainly have a common geographic and annual lifecycle.

Sub-contracting

The producer delivers raw materials for handling or processing to another business and then retrieves the processed goods. Slaughter is not covered in the standards for sub-contracting.

Subject to examination

When 'subject to examination' is mentioned in the standards, a written application by the producer is required, followed by a decision by KRAV.

Synthetic substance

A substance made by chemical means. If it is found in nature, it is nature identical. If not, it is artificial.

Ultimate country of origin

The country where the finished product is packaged and labelled with the KRAV mark.

Ultimate producer origin

The producer that packages and labels the finished product with the KRAV mark.

Watercourse

Any watercourse or lake that is indicated on the topographic map and/or is water bearing year round.

Withdrawal period

The withdrawal period is the period from the last treatment with the drug or chemical agent until the time the product may be sold as KRAV certified.

1. OBJECTIVE AND SCOPE OF THE STANDARDS

Objective

Standards for KRAV certified production, henceforth referred to as KRAV Standards is a tool to implement "The goal of organic production" into the entire chain of custody from production of raw materials to the consumer in regards to food and other agricultural products.

Standards encompass many factors so that the entire production system and the surrounding environment are considered. Social justice and social rights are an integral part of the Standards. Biological mechanisms and contexts compose the basis for what is considered natural and therefore compatible with organic production. There is an endeavour to attain scientific support for all Standards. The precautionary principle is often used until research and experience can give a secure basis for the scope of the Standards. If there is a conflict between different objectives, the holistic view is judged to be more important than the different objectives.

KRAV Standards lay down the conditions for producing a product entitled to be labelled and marketed with the KRAV label and/or in other ways indicate that the product has been produced according to KRAV Standards. Through this, KRAV creates a platform for uniform marketing of KRAV certified production, and instils confidence in the chain of custody and on the market.

Framework of the Standards

National laws, such as animal protection and environmental laws, always form the basis for KRAV certified production. In addition, other standards, on the European as well as on international level, are considered in the formulation and content of KRAV Standards. KRAV has been accredited by the international organization IFOAM, with a subsequent adaptation of KRAV Standards to IFOAM Basic Standards.

EU has standards for organic production in the "Council regulation (EEC) 2092/91 on organic production of agricultural products and information thereof of agricultural products and food". The regulation is law in Sweden and regulates the use of the word "organic". The regulation includes crop production, animal husbandry, and processing. KRAV Standards fulfil the EEC regulation and are in some cases stricter. KRAV Standards encompass more areas than the EEC regulations, such as certification of restaurants, textiles and aquaculture.

Scope

Standards are drawn up with regards to what is considered practical and possible to achieve at present. KRAV 's Board of Directors approve the standards which are current rules until another decision is taken. KRAV Standards create limits for the products and production or handling of organic products which can be certified.

The KRAV label is primarily used as a label for food products but KRAV also certifies other raw materials from organic agriculture and aquaculture. KRAV reserves the right to ascertain whether the Standards are applicable to specific types of production.

Standards and inspection include

- production conditions,
- products and recipes,
- documentation and
- labelling

In relation to

- primary production,
- production inputs & additives,
- handling, storage and packaging,
- processing,
- sales and marketing and
- recertification

2. GENERAL STANDARDS

2.1 REGISTRATION

This section describes the general standards for krav certified production as well as the prerequisites for registrating with the krav inspection.

2.T.T

Producers, processors, marketers or those who handle KRAV certified products in any other way can apply to KRAV to be registered. (In addition, see Standard 1.1.3)

The applicant seeking to be KRAV certified agrees to comply with KRAV's standards

- submit complete application documents
- pay the KRAV registration fees for the specified production Applications for KRAV registration of crop production, greenhouse production, apiculture, and wild production are subject to a fixed deadline.

KRAV processes the registration applications and supplies information on the current standards and fees.

A deadline for seasonal production applications in the spring is established so that KRAV can plan for and carry out timely inspections. The deadlines for applications are announced annually.

2.1.2

The Producer/Business is considered to be registered when the complete application has been processed and a registration contract has been signed. In addition the registrant is bound by the information in the registration application and/or later information.

2.1.3

KRAV certification is a voluntary undertaking and is open for all who comply with KRAV's standards and contracts.

2.1.4

For the purpose of preserving the benefits of the KRAV label for all certified operators KRAV has the exclusive right to change the KRAV standards. This may in exceptional cases mean that products with valid certifications is decertified.

2.1.5

Marketing of several KRAV certified products is covered by the "Council regulation (EEC) 2092/91 on organic agricultural production and information on agricultural products and foods" and all related EC regulations. KRAV's standards are written so that markteing of KRAV certified products shall fulfil the legal requirements or the regulations in force.

2.2 CERTIFICATION

2.2.1

Certified operators have the right to use KRAV's name and label according to the standards described below when KRAV has received the signed contract and has issued a certificate for the KRAV certified production, activities and/or products.

2.2.2

KRAV certified products with a limited certification period may continue to be produced as long as the certificate is valid, regardless if KRAV's standards has

been amended since the product was certified. The operator may market the product as long as there is in stock. KRAV certified production inputs may only be marketed during the validity of the certificate.

Producers having certified products with certificates not limited in time are responsible to comply with current KRAV standards regarding recipes as well as for packaging. If there is no other transitional period agreed with KRAV this kind of certifications will cease to apply by the latest the first of January 2005.

Certified production inputs are regulated differently because they have a long storage life and are used as additions in KRAV certified production (certified production inputs are added at the beginning of the production line).

2.2.3

Special/new certification is required for:

A special/new certification is required for:

- new tillage area/barn/green house
- new fields
- new animal specie
- new product
- new packaging
- changed recipe
- changed packaging (including decoration and design)
- product with an expired certification limited in time
- new productions unit
- new production line
- KRAV must be of informed and certify any new processes prior to their use
- changes in certified processing or additives
- changes compared to earlier letter of approval issued for import introduction (recertification)

2.3 COMMITMENT

2.3.1

The operator using KRAV's name or label in the marketing of products has towards the purchaser the full responsibility for compliance with KRAV's standards in the certified production and must bear any financial consequences if non-certified products are delivered as KRAV certified.

2.3.2

The operator shall follow KRAV's standards and inform all concerned within the activity. All personnel handling KRAV certified products shall have knowledge of the requirements to comply with the standards.

2.3.3

The operators have the responsibility to comply with the latest version of KRAV's standards. (See also 2.1.4 and 2.2.2)

KRAV strives to inform the operators of changes in the standards for certified production within reasonable time, at latest three months prior to the standards coming into force. The current standards can be found at KRAV's web site - www.krav.se - and may also be ordered from KRAV main office.

2.3.4

There shall be a contact person for every production unit included in the contract. This person must be well informed about KRAV's standards and the operations at the production unit. The name of the contact person must be notified to KRAV.

2.3.5

The operator shall have documentation that shows compliance with KRAV's standards and the documentation shall be available to KRAV. KRAV has the authority to require documentation from the operator which KRAV consider it needs. The operator shall continuously document the products and raw materials that are purchased for the KRAV certified production. This shall contain information on quantities, origin and content. The operator shall also document quantity, content and receivers of sold KRAV certified goods.

Suppliers are responsible to declare KRAV certified on the delivery note and invoices. The documentation shall be stored for two years for the possibility for KRAV to inspect.

The documentation may be stored as paper copies or electronically.

2.3.6

Purchased raw materials and products from KRAV certified production shall be explicitly described as KRAV certified by the supplier on possible packaging as well as on delivery notes and invoices. If this is not done the raw material cannot be considered KRAV certified. Additional instructions sent by KRAV must be complied with.

2.3.7

The operator agrees to inform KRAV of all important changes in the operations. If a new inspection is required before the certification the operator bears the costs. Standard 2.2.3. indicates the type of changes that require a new written certification.

Important changes are for example relocation of a business or there is a change in ownership.

2.3.8

The operator shall immediately inform KRAV of all violations of standards for KRAV certified production within the operations. This shall done regardless of who has violated the standards and regardless of whether or not the violation was made by misstake or not.

2.3.9

The applicable legislation and regulations shall be followed and are superior KRAV standards for certified production.

2.3.10

Operators shall have a written policy on social justice. Operators who hire fewer than ten (10) persons for labour and those who operate under a state system that enforces social laws are excepted from such a documented policy. Products will not be KRAV certified in cases where production is based on violation of basic human rights and clear cases of social injustice.

KRAV operators may not use forced or involuntary labour. The operators

shall provide their employees and contractors equal opportunity and treatment and not act in a discriminatory way. They shall furthermore enable children employed to attend basic education. Employees and contractors of organic operations shall have the freedom to associate, the right to organize and the right to bargain collectively.

2.4 KRAV's INSPECTION

2.4.1

When KRAV has received an application – or notification of major changes – then KRAV inspects the relevant part of the operations named in the application. After the initial inspection, KRAV is entitled to inspect the operation at any point during the duration of the contract. KRAV is entitled

to inspect and receive documentation on other parts of the operations that the operator runs if it is deemed necessary to be able to certify the operation specified in the application. KRAV is also entitled to carry out spot checks of products and production.

2.4.2

To simplify inspections and judging compliance of KRAV's standards, the operator agrees to:

- Render all documentation that KRAV requests, such as different documents, certificates and accounts.
- Give KRAV access to land, greenhouses, animal houses, stores, manufacturing and production premises, sales facilities, eating facilities and other places that are included in the operations.
- If so directed, carry out analyses of land, source materials, products or other items that are relevant for the actual production.

2.4.3

KRAV may issue a sanction according to the section on sanctions if there are deviations from the standards and/or contract. (See Standard 2.9.1 - 2.9.5.)

2.4.4

Even if KRAV does not find shortcomings during the inspection, the operator is bound to ensure compliance with KRAV's standards. KRAV may comment upon documented shortcomings at any time retroactively.

2.4.5

The operator may appeal KRAV's choice of inspector. The appeal must be written and KRAV must appoint a new inspector if there is just cause. (See also Standard 2.10.2 concerning appeal and review)

2.5 CONTRACT WITH THIRD PARTIES

2.5.1

Third parties may be affected by KRAV certified production in some cases. In these cases, an additional contract must be issued and signed by the operator, the third party and KRAV. This must be done prior to the third party participating in the operations. KRAV is entitled to inspect the third party.

A third party contract must be issued in the following cases:

- The product marketer is not the producer. The contract must be issued between the marketer, the certified producer and KRAV.
- The producer transfers simple processing (solely own source materials), subcontracting, to a third party. The contract must be issued between the operator, processor and KRAV.
- The producer transfers storage/drying of cereals or other comparable source materials to a third party. The contract must be issued between the operator, the third party responsible for the drying facilities/warehouse and KRAV.
- The producer transfers packaging and KRAV labelling to a non-KRAV certified supplier in a packaging agreement. The contract must be issued between the operator, supplier and KRAV. The supplier must be certified by another organic inspection organization that has an agreement with KRAV.
- Other cases that KRAV considers that the third party should be inspected.
 KRAV determines the contents of the contract. The third party is not entitled to use KRAV's name or label unless there is a marketing contract.

2.5.2

A business may market and sell KRAV certified products in its own name when these are produced by a KRAV certified business. This presupposes registration to KRAV and that a marketing contract has been drawn up according to Standard 2.5.1 for every manufacturing company.

2.5.3

Sub-contracting contracts apply only to handling/preparation of products that include only own produced source materials. The producer is responsible to ensure the sub-contractor complies with KRAV's standards. A subcontractor contract is required when the sales value of the products let out to sub-contractors is more than two price basic amounts during one year. The sub-contractor must submit in writing to the producer that the production complies with KRAV's standards.

KRAV must be informed of all sub-contracting.

2.6 ANNUAL FEES AND CONTRACT DURATION

2.6.T

The registered for KRAV inspection must pay KRAV's fees established annually. The fees include fixed and variable costs.

KRAV also charges other fees in addition to the annual fees, such as fees for product applications and investigation fees.

2.6.2

Those registered for KRAV inspection must submit supporting documents annually so that KRAV can determine the variable fees when these are based on production's sales value. KRAV must allow at least one month and clearly state the deadline for submission for the operator to submit information. The operator may request an extension in writing if there are special circumstances.

The information in the supporting documents must be certified by an accountant if requested during 2003 and beginning in 2004, from all limited

liability companies and incorporated associations. This requires a qualified accountant according to the legislation in force.

The variable fees for the production's processing, recertification, flp (foreign licence program) and production inputs are based on the sales value of the KRAV certified products. Those KRAV registered with other type of production exclusively are not affected by this standard.

2.6.3

The contract between KRAV certified operators and KRAV applies until further notice. The operator may withdraw from the contract with KRAV in writing at any time. The contract ceases to apply after the expiration of the notice period and payment of any outstanding fees.

The period of notice is covered in the contract.

2.6.4

KRAV may cancel a contract with an operator with immediate effect if the operator does not pay the fees on time or does not submit information required for inspection and in cases of serious violation of standards. (See Standard 2.9.3.)

2.6.5

When a contract is revoked, all certificates, diplomas and similar materials must be returned to KRAV immediately. No products may be labelled with KRAV's label or contain any other labelling using KRAV's name. Other materials that indicate the operations are KRAV certified must be destroyed or returned to KRAV. The products may not be marketed as KRAV certified.

KRAV is entitled to inspect that there is no unauthorized use of KRAV's name and label during six months following the revoking of the contract. This also includes right to access to the accounts, storage facilities, packaging facilities etc.

The operator must remain as registered if it is desired to no longer produce krav certified products but continue to sell the remainder in storage facilities.

2.6.6

The operator is not entitled to recover fees paid to KRAV after the cancellation of the contract. The operator must render accounts of the sales value up until the cancellation of the contract and pay the variable fees.

2.7 CONFIDENTIALITY

2.7.1

KRAV ensures that the information submitted concerning the business operations and production methods are not released to any third party – unless permitted to do so by the operator. The following standards indicate some exceptions.

2.7.2

Confidentiality does not apply to information that KRAV can prove was in the public domain and not a result of breaking the registration contract.

2.7.3

KRAV is entitled to make public any information demanded by a court of law or authority. KRAV must immediately inform the operator of any information is made public.

2.7.4

KRAV may also use information about and from the operator to develop the organic product market when, for example, publishing statistics. KRAV is entitled to do this even if the information otherwise would be covered by confidentiality. KRAV may only use the information in such a way that the operator cannot be identified.

2.7.5

KRAV is entitled to publish information about if and how an operator has transgressed KRAV's standards.

2.8 HANDLING OF PERSONAL RECORDS

2.8.1

KRAV has a directory of all those registered for KRAV inspection including information on name, address, contact person(s) and the type of operations. The directory helps KRAV to work effectively.

The information may be released on the KRAV web site, www.krav.se. The web site enables purchasers seeking to buy KRAV certified products to find KRAV certified products and producers.

The signing of the registration contract implies that the operator consents to the handling of the personal records.

2.8.2

The operator should contact KRAV immediately to revoke consent or correct information in KRAV's directory

2.8.3

KRAV will release an account of how personal records have been handled, to which purpose, the information registered, source of information and to whom information has been released upon request.

2.9 SANCTIONS FOR NON-COMPLIANCE TO STANDARDS

The purpose of reporting divergences and sanctions is partly to clearly show when there is non-compliance with krav's standards, and partly that the products can be withdrawn.

2.9.1

If there are indications that the production has not complied with one or more of KRAV standards, the information is documented in a "Report on divergences from KRAV standards". The operator has 14 days to respond after receiving the report. Thereafter, KRAV investigates whether or not there has been a violation of the standards. The following sanctions may be applied if the operator has violated the standards:

- Written remarks. KRAV outlines the measure(s) that must be carried out prior to the next inspection.
- Request for a correction plan. This means the operator must show a plan
 of what, how and when corrections will be made to comply with the

- standards. KRAV must approve the plan.
- Special conditions for approval. KRAV informs of the corrections that must be made immediately. If these corrections are not made within the indicated time limit, the production, production unit, activities, authorization or product will be decertified.
- The operator must pay for the extra inspections carried out to verify compliance with the standards.
- Warnings with or without fees can be issued for serious divergences.
- The fees are based on the financial gain plus 10 percent. The financial gain is figured on the difference in gross income between KRAV certified and the corresponding conventional products.
- Provisional decertification of a product or production (See also 2.9.4)
- Decertification of a product
- Decertification of the total production or parts of production, activities or authorization
- Decertification of all certified production, activities an/or authorization of the certified operator.

KRAV bases the type of sanction after judging the importance of the divergence. The different sanctions can be dealt out individually or in combination. KRAV may also demand damages for serious divergences.

2.9.2

Warnings are issued only for serious divergences. These can thus be counted together in the individual contracts. A second and third warning will be issued if the operator has had one or two warnings within a three-year period, respectively.

KRAV will consider decertification of production if the operator receives a third warning.

2.9.3

In serious cases the operator may be excluded from the KRAV control up to five years.

2.9.4

KRAV's inspectors are entitled to issue a provisional decertification if there are obvious violations of the standards. This occurs when there is a danger that noncertified products will be sold as KRAV certified. The inspector's decertification is valid for at the most three working days and is then examined according to the same routines as for certification matters.

2.9.5

In addition to the standards below, the following can be cause for sanctions, decertification, cancelling of contract(s) or exclusion:

- The production or operation continues to be run disregarding "The goal of organic agriculture" (see page 11).
- The operator simultaneously runs another operation or production that does not comply with the laws and regulations within the actual area.
- The operator detracts or spreads false information about KRAV or acts in any other way that is damaging to KRAV as an organization or the value of the KRAV label.
- Sub-standard working and/or social conditions

 The products contain high levels of undesirable substance such as traces of pesticides/herbicides, GMO, or raised levels of heavy metals (see Appendix 3).

The reason why krav is entitled to decertify production under this standard even where the certified production complies with krav's standards is that it devalues the KRAV label marketing value if the producer has operation that clearly violate KRAV's goals or the society's regulations.

2.10 EXEMPTION, APPEAL AND REVIEW

2.10.1

KRAV can allow individual or general exemptions according to established routines. The application for an exemption must be submitted in writing. The application must indicate why the exemption is requested and which standards(s) are applicable.

See the KRAV webpage for more information on the management of exemptions.

2.10.2

The decisions issued may be appealed to KRAV. Only the operator may appeal a decision concerning an individual certification matter. KRAV must receive the appeal within three weeks after the operator has been informed of the decision.

KRAV is entitled to review the decision without any right to appeal if new information comes to light.

2.11 ENVIRONMENTAL, NATURE, AND CULTURAL PROTECTION

Food production shall add to the enrichment of the natural and cultural environment. This demands conscious decisions and commitments in the whole chain of custody, not in the least when choosing resources. The following is required to reach the objectives for organic agriculture to long-term preserve and strengthen the ecosystems and to protect and develop the agricultural landscape's nature and cultural values:

- 1. that consideration is given to the environment surrounding the production place
- 2. a well-developed protection and care for the natural and cultural environments
- 3. that a general consideration given to biodiversity is integrated in all of the operations
- 4. that processed products are produced with the least possible environmental impact on the surrounding environment and minimal damage has been done to the final product.

2.11.1

KRAV licensees shall care for the natural and cultural environment. Special consideration must be shown to natural and cultural environments needing protection. KRAV licensees must observe KRAV recommendations found in Appendix 1.

2.11.2

Hazardous waste shall be minimized. Hazardous waste is defined in the section Definitions. Hazardous waste must be stored and handled so there is no danger that soil, air or water will be polluted. Different types of hazardous wastes may not be mixed. Neither may hazardous waste be mixed with other types of waste, substances or materials.

Hazardous waste may only be transported by businesses that have special permission. KRAV licensees may transport some hazardous waste from their own operations without permission but only in smaller quantities.

For more information please see the Swedish Waste Regulation (SFS 2001:1063).

2.11.3

KRAV licensees must have an environmental policy and manage a systematic environmental effort. An environmental management system or similar, for example the Swedish Miljöhusesyn. Documentation must contain defined objectives that are followed up during a KRAV inspection.

2.12 HANDLING OF KRAV CERTIFIED PRODUCTS

2.. T 2.. T

KRAV licensees using the KRAV label on products sold to the consumer must be able to show that all channels in production and handling leading to the final product are KRAV inspected and certified.

KRAV licensees whose operations include processing and handling of products must have a special processing contract with KRAV. Exceptions to the requirement for a processing contract include

- 1. enterprises that only handle unopened KRAV certified products,
- 2. producer licensees registered with the agricultural certification program that only handle their own raw materials,
- 3. producer licensees registered with the agricultural certification program who have a limited processing of their own raw materials,
- 4. licensees registered with the agricultural certification program who carry out sub-contracting according to Standards 2.5.1 and 2.5.3
- 5. processors that sub-contract according to Standards 2.5.1 and 2.5.3 or
- 6. companies that bring in/import products and only package or repackage.

With limited listed in paragraph 2, point 3, it is meant that the sales net of the processed products is less than three basic amounts annually. At least 50 percent of the end-product must consist of own products and it shall fulfil the Standard for A product. Processing according to paragraph 2, point 3 must be reported to KRAV.

Business according to paragraph 2, point 6 shall be registered for recertification of introduced/imported products (see standard 17.1.3)

2.12.2

Those excluded from the processing contract according to Standard 2.12.1 paragraph 2, shall have a sub-contractor contract according to KRAV Standard 2.5.1 and 2.5.3.

Separation

2.12.3

All handling of KRAV certified products shall occur in such in way that there is no danger of mixing with non-KRAV certified products. KRAV certified products shall be stored and handled so that separate handling is ensured and no contamination of the product can occur. Products may not be contaminated by containers, packaging or other factors in the surroundings.

2.12.4

When facilities, equipment etc. are used for both KRAV certified and non-KRAV-certified production, the danger of mixing shall be minimized through a clear differentiation in the production. Containers, equipment for transport, machinery, etc. shall be carefully cleaned before KRAV certified production is started. The procedures guaranteeing handling must be in writing.

Transport

2.12.5

KRAV certified products may be transported by carriers without a special contract. The supplier must ensure that the products are labelled so that substitution can not occur. The delivery note shall state that the contents are KRAV certified products. The purchaser shall, on delivery, ensure the products are properly labelled and packaged on delivery so that no substitution or mixing of products can occur.

KRAV certified products shall be transported and handled so that separate handling is ensured and no contamination is possible. Products may not be contaminated by containers, packaging or other factors in the surroundings.

Storage

2.12.6

During storage, KRAV certified products shall always be clearly labelled with the KRAV name or label in their respective units. Exceptions may be made only if all products in a certain storage area are KRAV certified.

2.12.7

KRAV certified products shall be stored and handled so that separate handling is ensured and no contamination of the products can occur. Products may not be contaminated by containers, packaging or other factors in the surroundings. If there is danger of contamination, KRAV certified products may not be stored in the same warehouse with products that have been chemically treated after harvest.

Air-tight storage or storage in a controlled atmosphere (carbon dioxide, nitrogen, argon or oxygen) are permitted.

2 т2 8

KRAV certified products may not be stored in packaging or wrappings (such as reusable packaging or boxes) in which non-certified products have been stored unless the packaging and wrappings have been thoroughly cleaned.

Suppliers not KRAV certified may store KRAV certified products and raw materials in separate units, boxes, and containers or similar, without any sub-contractor contract.

Cleaning, disinfection, and pest control

Preventive measures

2.12.9

KRAV licensees shall work with preventive measures including risk assessment, sanitary and building measures, surveillance and cleaning. KRAV licensees must be observant of the limits and take steps and other necessary precautions to forestall, prevent, or counteract the operations or measures bring about harm or nuisance to human health or the environment. KRAV licensees must also avoid using chemical products or biotechnical organisms that may possibly danger human health or the environment, if they can be replaced with products or organisms that are considered to be less harmful. For more information please see Chapter 2 §§ 3 and 6 in the Swedish Environmental Code (Miljöbalken SFS 1998:808).

2.12.10

KRAV licensees shall consider the potential production problems in their risk assessment. Considering the risk assessment measures shall be taken to minimize potential problems.

In addition, KRAV licensees shall carry out sanitary and building measures such as proper waste disposal. Measures must be taken to correct deficiencies. In addition, licensees shall have a documented system for regular supervision of the operations.

The licensees shall also perform appropriate and continuous cleaning. Cleaning agents must be eco-labelled. If eco-labelled cleaning products are not available, the precautionary principle described in Standard 2.12.9 should determine the choice of product.

Measures

2.12.11

Pest control or disinfection agents for production facilities or storage areas used where KRAV certified products are stored or handled must be approved by KRAV approved prior to use. KRAV certified products shall be stored and handled so that separate handling is ensured and no contamination is possible. Products may not be contaminated by containers, packaging or other factors in the surroundings. The following agents and methods are permitted at present:

- 1. Mechanical methods
- 2. Physical methods
- 3. Biotechnical methods or
- 4. Chemical methods

Mechanical methods include

- traps and catching devices
- rat- and mousetraps or
- insect bait with boric acid (The Swedish National

Chemicals Inspectorate is testing the use of boric acid in specific circumstances). Physical methods include

- freezing,
- light traps for capturing flying insects,
- ultrasound against rats and mice,
- ultraviolet light,
- heat or
- steam

Biotechnical methods include

- diatomaceous earth
- ethyl alcohol,
- sulphur,
- oxygen reduction with nitrogen gas,
- soaps and vegetable oils or,
- acetic acid

Chemical methods include using naturally-occurring, non-synthetic products or substances or eco-labelled chemicals.

Organisms/substances used in biotechnical methods stated in paragraph 4 may not be produced using genetic engineering or GMO.

Chemical methods according to paragraph 5 may be used when other methods are considered to be impossible and after examination by KRAV. The principle of the best available technique shall be used when deciding on the chemical methods. For more information please see chapter 2 §3 of the Swedish Environmental Code (Miljöbalken SFS 1998:808).

The Swedish National Chemicals Inspectorate must approve the pest control substances before sale and use. (there are exceptions). Please also see the Swedish national rules on caution that include limits on using chemical products (or biotechnical organisms) for pest control, chapter 14 § 17 Environmental Code (Miljöbalken SFS 1998:808).

2.12.12

If there is pest control and disinfection in facilities where no KRAV certified products are handled or stored at the time, with substances other than those listed in 2.12.11, measures must be taken to ensure that no traces of the substances can come into contact with KRAV certified production. A disinfection and pest control log must be kept. Using pest control agents may be authorized in retailers, subject to examination, even if KRAV certified products remain at the retailer.

Packaging material

2.12.13

Packaging shall be environmentally adapted. PVC and other chlorine-based plastics are not permitted.

Minimizing packaging materials shall be a goal.

2.12.14

Packaging materials may not be treated with preservatives or chemicals that can be a danger to health or the environment. For more information please see the Swedish National Chemicals Inspectorate's database describing limits

governing use of chemicals and the Observation List for more information on environmental and health hazards of the chemicals.

2.12.15

Only those processes listed in standard 9.2.4 are permitted for processing grains and feed.

2.13 LABELLING

2.13.1

KRAV's name or the KRAV mark may only be used on products from KRAV inspected and certified production. The KRAV mark may be used only in the forms provided by KRAV according to the instructions issued by KRAV.

2.13.2

The party responsible for labelling must be KRAV certified. Retailers, wholesalers and similar who only handle unopened KRAV labelled packaging with KRAV certified products may, however, use KRAV's name on receipts, invoices, packing slips and similar items.

2.13.3

KRAV's name or mark on products must always be accompanied by the ultimate responsible producer's name. The ultimate producer is considered to be the producer who packages the final product. (Compare with standard 2.5.2 on marketing contracts).

Products must be labelled in such a way that it is possible to determine when and where production has taken place (processing, packaging etc). From the labelling, the producers must be able to determine the raw materials used in the production in question. The registered operator shall appropriately design labelling. The principles for labelling must be reported to KRAV.

An exception to the labelling standard includes fruit and vegetables. The date and place of production must be included on the delivery note and accompany delivery of the fruits and vegetables. KRAV may, after deliberation, also grant exemptions for other types of production if such labelling would incur greater costs in relation to the extent of the production.

2.13.4

When selling unpacked KRAV certified products, the producer shall state that the products are KRAV certified on delivery notes and invoices.

2.13.5

Where other certifying bodies have certified products, the companies registered with KRAV for re-certification are responsible for KRAV labelling according to Chapter 17.

2.13.6

The name of the ultimate processor shall be on the packaging.

2.13.7

KRAV's name may not be used in product brand names, or in such a size that it can give the impression of being a brand name.

2.13.8

KRAV must approve all use of KRAV's name or the KRAV mark on packaging, product information sheets or similar. Changes in printed materials shall also be approved. KRAV requires no prior approval of advertisements, displays and similar but it shall be clear which products are KRAV certified.

Compound products

A-products

2..T2.Q

A product which contains at least 95 percent by weight KRAV certified source materials is termed an A-product. The KRAV mark for processed A-products shall be used. A-products may be called 'organic'.

B-products

2.13.10

A product which contains at least 70 percent and less than 95 percent by weight KRAV certified source materials is termed a B-product. The KRAV mark for processed B-products shall be used. The list of ingredients should indicate the proportion of KRAV certified ingredients. B-products may not be termed 'organic'.

2.13.11

The amounts of salt and/or water added to a product shall not be included in the above calculations. When water is added for reconstitution of concentrates the weight of the water will be calculated as belonging to the concentrate.

List of contents

2.13.12

The list of contents shall state clearly the raw materials that are KRAV certified or EU organic in origin.

2.13.13

Food additives shall be identified by name in the list of contents. Single item sale by weight

2.13.14

Products may be sold from open KRAV labelled packaging only if the packing/ refilling date is clearly stated (KRAV's standards for processing (Chapter 9) and retail handling (Chapter 15) apply to re-packing).

2.13.15

A sign bearing the KRAV mark shall be placed close to the product in question.

Labelling from the country of origin and ultimate processing country

2.13.16

The ultimate processing country shall always be indicated on the package. The

producer shall always be able to inform the consumer or purchaser of the country of origin of the source materials in a product. This information can be made available via internet web pages, by telephone customer service etc. Perishable goods shall always bear the country of origin on their label.

2.13.17

When selling unpacked recertified products the following shall be stated on the invoice and the delivery notes:

- Country of origin;
- The certification body which certified the product;
- The notice that the product is KRAV certified.

Feed for KRAV certified animal husbandry

2.13.18

The KRAV mark may be used on feed sacks or product information sheets only if all the source materials in the feed are KRAV certified and feed additives etc. are in accordance with KRAV's standards.

Feed mixes which also contain non-certified source materials but only permitted feed additives may be marketed using KRAV's name directly followed by an equally clear statement of the proportion of KRAV certified source materials expressed as percent by weight.

Wild harvested crops

2.13.19

Products which exclusively contain source materials from wild harvested crop production shall be labelled with the KRAV mark for wild harvested crops.

Production inputs

2.13.20

Production inputs may be labelled and marketed as KRAV certified using the special KRAV mark for production inputs. Production inputs manufactured solely from products whose production is KRAV certified may be labelled with the KRAV mark.

Pet food

2.13.21

Pet food may be labelled with the KRAV mark.

2.14 MARKETING

2.14.1

KRAV's name or the KRAV mark may not be used in marketing in such a way that gives the impression that products not certified by KRAV are KRAV certified.

2.14.2

A display bearing the KRAV mark shall be placed in conjunction with the products in question or in a place where no confusion with non-KRAV certified products is possible.

2.14.3

Producers are not permitted to state that a production unit has been inspected by KRAV other than in connection with the marketing of KRAV certified products. Nor is the producer permitted to state that animals have been fed on KRAV certified feed when selling non-KRAV certified animal products. Further, the producer is not permitted to indicate that ingredients are KRAV certified unless the whole product is certified.

2.14.4

Certified retailers and restaurants may market the business as KRAV-authorized. When the KRAV mark and name are used in advertisements at least one product in the advertisement shall be KRAV certified.

2.14.5

Restaurants and mass caterers that have registered KRAV certified foods may mention this in their marketing. See Chapter 16.2 Registration of KRAV certified foods.

3. AGRICULTURE IN GENERAL

3.1 EXTENT

3.I.I

KRAV inspections encompass the entire holding. The obligation to comply with KRAV's standards applies to the production that is registered as KRAV certified.

3.1.2

In cases where only part of the total holding is registered with KRAV, organic production shall be kept clearly and permanently separate from conventional production. KRAV certified animal husbandry shall be run separately from conventional production.

3.1.3

KRAV certified products, production inputs, feed etc. shall be kept and handled separately from non-certified products. See standards in 2.5

3.1.4

KRAV will treat a holding having two or more KRAV certified production units that cannot be inspected during one inspection visit, or where there is separate accounting for the units as separate businesses registered with KRAV.

3.1.5

KRAV may request information on the entire original holding and also charge fees for extra inspections if a producer has several production units, if there is extensive co-operation between the agricultural businesses, or a holding is divided into several units and there is a risk of KRAV certified and conventional production becoming mixed.

Protection of the environment, natural and cultural heritage

3.1.6

In the following cases, KRAV standards may apply to the entire holding:

- Chemical pesticides and herbicides/chemical agents may not be used on gravel paths, roads and farmyards with the exception of using acetic acid.
- Cultivation of genetically modified crops is not permitted on the conventional part of the holding.
- Environmentally adapted substances must be used in facilities where the drainage is connected to a manure receptacle or other drainage from which the end product can be used for cultivation purposes.
- The company running the operation ought to have an environmental management system.
- Clearing of primary ecosystems is prohibited.

KRAV will gradually require an environmental management system for KRAV certified production. In the initial stage, the following points are planned to be included as a foundation for the environmental management system:

- plant nutrient balance
- soil mapping
- crop production management plan

3.1.7

The Swedish Federation of Farmers Environmental Audit (Lantbrukarnas Riksförbund Miljöhusesyn, a self-auditing of environmental aspects of the farm) or similar programme shall be applied.

3.1.8

A nature and cultural heritage management plan to ensure biodiversity must be in place. If there is no such a plan, an application must be made to establish a management plan.

KRAV takes into consideration that the county administrative board/county agricultural society or comparable at present do not have the capacity or financial resources to create such a plan.

3.1.9

- A permanent, unfertilized overgrown buffer zone at least 3 meters wide (measured horizontally from the edge of the water) is to be left beside watercourses, wetlands and lakes that have are water-bearing year round;
- The Swedish Environmental Code shall be consulted before conducting new drainage work and the removal of obstacles to cultivation;
- Uncultivated patches in cultivated fields and other valuable vegetation and natural grazing shall be protected from rooting domestic animals;
- Wire fences which are not in use shall be removed.

3.1.10

Plastics, scrap metal, paper, oils and other waste products that are not likely to be used for repairs shall be sorted and sent for reuse, recycling or energy recovery. Vehicles and other kinds of scrap, which are not needed for repairs should be sent for recycling. Materials and spare parts required for repairs shall be neatly gathered and placed in the storage area which shall be maintained so that materials are not covered with vegetation.

Practical handling standards for agriculture

3.1.11

Seed drills, manure spreaders, agricultural sprayers etc. shall be well cleaned if they have also been used for production inputs, seed etc. which are not KRAV certified.

3.1.12

The general standards for storage and handling shall be followed even in cases where a producer handles only his/her own products. These also apply to milk handling, harvesters, storage etc. See also standards 2.5.6 - 2.5.10.

3.1.13

Temporary storage or handling of products outside the holding is covered by the standards for handling and processing 2.5. This is to be documented and available for inspection. Regular storage or handling outside the holding shall be registered with KRAV for inspection through a processing agreement, under a sub-contracting agreement, or through a co-operation agreement for limited grain drying and storage. Farm shops are governed by the standards for retailers in Chapter 15.

4. CROP PRODUCTION

4.1 GENERAL

4.I.I

Cultivation shall be carried out so as to avoid a negative impact on crop quality.

4.1.2

Certification depends on nutrient management, the inclusion of pasture or green manure in the rotation system and the farmer's endeavours to minimize the loss of plant nutrients. Exceptions to crop rotation include cultivation of bushes and trees, permanent pasture and greenhouse cultivation.

4.1.3

Preventive cultivation techniques against weeds and pests shall be used to the greatest possible extent.

4.1.4

A cover of vegetation during winter is encouraged. The cultivation of catch crops is recommended where possible. Animal manure shall be handled in such a way as to minimize losses.

4.1.5

The application of organic or mineral fertilizer is acceptable only where it is necessary and where other measures have been taken as set out above.

4.1.6

Where it is considered justifiable, KRAV may request that a plant nutrient equation be calculated at the producer's expense.

Conversion period

4.1.7

The production shall be KRAV registered and inspected during the conversion period. To KRAV certify one-year crop, pasture or grazing land the production on the parcel of land must have been practiced according to KRAV standards during the two preceding years. For perennial crop (except pasture) the production on the parcel of land should have been practiced according to KRAV standards during the three preceding years.

One year conversion can be practiced for the following acreage:

- Conversion land 2003 which was notified to KRAV and diverted by the 31st of December 2002.
- All acreages included in a five year KRAV certified diversion plan starting by the latest the 31st of August 2002. At least 10 persent of the acreage in the plan shall be diverted every year during the five year period. Land which according to the plan shall be in conversion during 2003 shall follow KRAV standards from the 31st of August 2002.

For land which has been exposed to intensive use of chemicals the converion period may be even more extended.

KRAV can retroactive certify land that has received EU support for ecologic production as well as land where it can be proved that artificial fertilizer and chemical pesticides have not been used during three years. KRAV determines the necessary documentation and fee for this kind of retroactive conversion control.

New acreage

4.1.8

The producer is not permitted to remove acreage from KRAV certified and then re-establish the acreage as KRAV certified without KRAV approval. It is not permitted to rotate the certified production. New acreage may, therefore, be certified only if all previously certified acreage is still certified. Exceptions to this may be made in cases where a producer has lost acreage that was certified by KRAV. Exceptions may be made when the KRAV certified acreage is no longer available to the producer. KRAV can allow exemptions if the KRAV certified part of the holding will gain a more coherent geographical structure, or if there are other compelling reasons to cease KRAV certified cultivation on the land in question.

Parallel cultivation

4.1.9

A crop which is intended to be sold as KRAV certified may not be cultivated in both a conventional and an organic system on the same holding (parallel cultivation), unless the varieties differ in such a way that they can easily be distinguished by the producer, KRAV and buyers during and after harvest. KRAV may grant exceptions to this, subject to examination, only if the following criteria are met:

- The KRAV certified and non-certified crops are harvested at different times and dates, so that verification of the separate grain harvests is possible;
- The products are handled after harvest in such a way that it can be guaranteed that certified and non-certified products have not been mixed.

In connection with the examination, KRAV has the right to issue instructions to verify that KRAV certified crops are not mixed. If the KRAV certified grains are only used to feed the producer's own domestic livestock, the inspection will take place in connection with the inspection for animal husbandry.

4.2 POLLUTION AND CONTAMINATION

4.2.1

The areas where products are cultivated and stored should be located so that contaminants do not reduce the value of the KRAV certified products as food or feed. Arable land located within 25 metres of the side of a road carrying more than 3 000 vehicles per 24 hours may not be used for crops destined for human consumption.

4.2.2

KRAV may de-certify a cultivation site because of residues of undesirable substances, e.g. residues of previously used pesticides and herbicides or excessive concentrations of heavy metals.

4.2.3

In cases where the entire holding is not farmed according to KRAV's standards, chemical pesticides and herbicides may not be used within 25 metres of KRAV certified cultivation. Artificial fertilizers may not be spread within 10 metres of the KRAV certified cultivation. If fertilizer is drilled in, this distance will be reduced to 1 metre.

4.2.4

If chemical pesticides and herbicides and artificial fertilizers are used on land farmed by another producer adjacent to land with KRAV certified organic cultivation, action should be taken to minimize the risk of contamination of the KRAV certified land or crops. Such action may include: an agreement with a neighbour on the establishment of a buffer zone, establishing a buffer zone of one's own, or the planting of a windbreak.

Heavy metal contamination of arable land

4.2.5

The application of heavy metals to arable land is to be limited. The highest permitted average amounts of heavy metals applied (over a five year period) via fertilizer, soil conditioners, chemical pesticides and herbicides or other products previously or subsequently applied to the soil (e.g. feed, feed minerals and medicines) are given in Appendix 3.

4.3 FERTILIZER AND SOIL CONDITIONERS

4.3.1

The following are permitted:

- Manure (see 4.3.3), straw, plant residues, waste from green manure and similar agricultural products;
- Peat to plants, compost, litter, greenhouse cultivation and gardens;
- Algae and seaweed;
- Domestic wastes, refuse from parks and gardens, food retailers, restaurants, food-, textile- or forestry industries unless additives or processes have rendered the waste unsuitable for spreading;
- Compost or fermented domestic waste from a closed collection system that have been explicitly approved by KRAV;
- Sanitized residues from abattoirs. These shall be KRAV certified as KRAV certified inputs;
- Bone meal or meal free from residues of gelatine, bone char, horn, hoof, hair, meat, and fur meal, fur and hair, if the origin of the slaughter by-products is inspected by a veterinarian or the remains from cutting-up are approved for human consumption. Specified dangerous materials may not be included. Slaughter products inspected by a veterinarian must be sterilized at 133° C at a minimum of with at least 3 bars pressure for at least 20 minutes, or according to the recommendations for neutralizing BSE:
- Blood meal fit for human consumption;
- Poultry and chiquette meal produced in facilities where no animal proteins from other animal species are processed;
- Fishmeal produced in facilities where no animal proteins from other animal species are processed;

The above named fertilizer (sanitized residues from abattoirs) may not be spread on grasslands, cultivated grassland or green fodder. Covering seeds/harrowing when sowing or re-seeding are permitted.

The following are not permitted:

- Sea bird guano;
- Soil bacteria or other microorganisms that have been genetically modified;
- Manure from genetically modified animals;
- Other materials not stated above.

4.3.2

Sludge from a private waste water system or equivalent may be used, provided that the sewage system is not connected to sewers where environmentally harmful substances are used and that the use of all chemical products is environmentally adapted and the precautionary principle is applied. If the farm has many visitors (e.g. farm shop, bed and breakfast, and courses) such use shall be subject to examination by KRAV.

Manures containing human excrement (feces and urine) are prohibited for use on crops for human consumption.

4.3.3

Manure from the specialized indoor production of beef cattle in slatted floor boxes, uncertified pig production, battery hens and caged fur animals may not be used. Notwithstanding the above standard, manure from an annual pig production corresponding to fewer than 50 pigs for slaughter or pigs kept in large boxes with straw bedding may be used.

To stimulate the conversion to organic production, producers with non-certified pig production or specialized cattle breeding in boxes with slatted floor which simultaneously has KRAV certified production of the same species may, subject to examination, use manure from the conventional part of the production. In such a case the KRAV certified production shall at least extend to 10 percent of the conventional during the first three years, and thereafter 20 percent of the KRAV certified production.

4.3.4

Mineral fertilizers may be applied only if they are in their natural form, i.e. without any further processing to increase solubility, with the exception of grinding.

The following minerals are permitted:

- Stone meal (e.g. silicon, basalt and granite meal)
- Raw phosphate
- Apatite
- Limestone meal
- Calcified seaweed
- Dolomitic limestone

In addition to these the following may be used:

- Calcium silicates
- Wood and peat ash
- Gypsum
- Kieserite (magnesium sulphate)

The following are not permitted:

- Artificial fertilizers (synthetic fertilizers), unless stated in section 4.3.5.
- Chilean nitrate
- Kainite, patent kali, and other potassium salts
- All other substances not stated above

4.3.5

Micronutrients may be applied to the soil if the need for micronutrients cannot be met by reasonable amounts of other approved fertilizers and if there is a clear lack of such nutrients. Micronutrients may be applied to growing crops only subject to examination by KRAV. An exception is manganese where the producer must document the use.

Criteria for the examination are:

- A documented need;
- Documented problems in previous years;
- The fact that the producer has taken other action to prevent the problem arising;
- Using the fertilizer in question cannot pose a risk to the environment, soil activity or humans or animal welfare.

Miscellaneous

4.3.6

Fertlizers may be rejected if the production or the use create an unacceptable environmental impact.

4.3.7

Fertilizers and soil conditioners shall be analysed, before spreading, for their content of heavy metals and radioactive, contaminating or other undesirable substances where there is reason to expect high concentrations. This always applies in the case of by-products of industry or incineration such as ash, sludge and industrial lime.

4.3.8

Substances not included in standards 4.3.1 or 4.3.4 may be allowed after examination by KRAV. IFOAM's standards for examination of fertilizers and soil conditions form the basis for the examination.

According to Council Regulation (EEC) no 2092/91 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs, Annex ii, the kinds of fertilizer and soil conditioners that may be used in organic production are regulated. (this does not automatically allows the products to be used in krav certified production.)

4.4 PLANT PROTECTION AND WEED CONTROL

4 4 T

Plant protection and weed control substances may not be used with the exceptions of the substances listed in 4.4.2.

Thermal sterilization of soil is not permitted.

4.4.2

The following are permitted:

- pesticides and plant protection products consisting of, or are directly extracted from for example, non-genetically modified plants, animals, micro organisms and insects
- products that are approved as fertilizers according to the above (4.3)
- gelatine
- pheromones and pheromone traps
- traps or other catching devices
- saponified fatty acids (soft soaps) that KRAV has specifically approved as production inputs
- copper compounds may be used as fungicides in fruit production but only within the framework of the limits stated in the Standards for heavy metals
- sodium bicarbonate
- ethyl alcohol
- pure sulphur
- thermal and electrical weed control
- hot water and steam
- silicates (sodium silicate, quartz)
- vegetable oils. If these do not produce the desired results, pure paraffin oil can be used, subject to examination.

The Swedish National Chemicals Inspectorate shall approve plant protection and weed control products for sale and use. There are also standards for safety and caution governing the use of chemical or biotechnical organisms. See the Environmental Code (Miljöbalken) Chapter 14 §17.

According to Council Regulation (EEC) no 2092/91 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs, annex ii, the kinds of plant protection and weed control that may be used in organic production are regulated. (This does not automatically allow the products to be used in KRAV certified production.)

4.4.3

Products or agents not listed in section 4.4.2 can be approved after examination. At such examination shall be considered if:

- The use of the product is necessary or has a considerable value for organic production
- The product is bio-degradable
- The use of the product in any considerable way affect the environment or other organisms than those targeted
- The use of the product affects the end products

The IFOAM standards for evaluation of the inputs are used as the basis for examination.

4.4.4

Synthetic additives to the substances stated in standard 4.4.2 such as carriers, wetting agents etc. may be used only subject to examination by KRAV. Such examination will assess if the additive:

- Is necessary for the function of the substance
- Is natural

- Is bio-degradable
- To any considerable extent affects the environment or other organisms than those targeted
- Affects the end production (food or feed)

In difficult cases, KRAV may apply the IFOAM standards for evaluation of additives. A list of approved additives is enclosed in Appendix 4.

4.5 MUSHROOMS

4.5.1

Culture medium for mushrooms shall contain KRAV-approved raw materials such as grain and straw. Other additives shall be approved according to the KRAV standards for crop production. The origin of at least 75 percent of the culture medium shall be KRAV certified calculated by the weight of the product prior to composting.

According to Council Regulation (EEC) no 2092/91, 75 percent of the culture medium should consist of organic source materials.

4.6 SOIL, SEED AND PLANTS

4.6.1

KRAV certified seeds, plants and propagation materials for annual and biennial plants shall be used whenever possible. Seeds shall be KRAV certified by 2010 at the latest. Seeds from KRAV certified production during conversion period may be included.

According to Council Regulation (EEC) no 2092/91 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs, organically grown seed and organically grown plants are compulsory. until the 31 december 2003 the Swedish National Board of Agriculture may permit the use of conventional seed and plant material where there is no organic propagation material of the appropriate sort available.

4.6.2.

Plants for annuals shall be KRAV certified. Perennials and other propagation materials shall be KRAV certified if the harvest is to bear the KRAV label sooner than 12 months after planting. For harvest from 2005, the standard will be 18 months prior to planting.

4.6.3

Seed may not be treated (coated) with chemical pesticides or herbicides.

4.6.4

Seed, plants or other propagation material may not originate from genetically modified organisms.

4.6.5

Seedling and potting soil may only contain soil conditioners and fertilizers approved in accordance with these standards. Vermiculite, sand, clay, light clinker and perlite are accepted as soil conditioners for seedling and potting soil.

4.6.6

Seeds for sprouts shall be KRAV certified.

4.7 MISCELLANEOUS

4.7.1

Artificial light may not serve as the sole source of light during the entire life cycle of the plant. This does not apply to mushrooms.

4.7.2

Hydroponics is prohibited, other than for aquatic plants and sprouts.

4.7.3

Biologically inactive cultivation media are prohibited.

4.7.4

In the case of cultivation in greenhouses or pots, at least half of the plant's nutritional needs shall be met by the soil in which the plant is placed or planted. Exemptions can be granted for cultures in greenhouses with a long growing season where the soil volume per plant exceeds 20 litres

4.7.5

Only polyethylene- or polypropylene-based or similar materials may be used for fibre cloths and plastic used for soil and plant coverings, insect nets and plastic for silage. The materials should be removed from the soil and plants and shall be removed from the vicinity before incineration. Polyvinyl chloride (PVC) based products are not permitted.

5. ANIMAL HUSBANDRY

The list below shows numbering for certain production categories. Every standard in the chapter on animal husbandry is numbered to show which category or categories each standard or standard section refers to.

- Common
- Cows', sheep's and goats' milk
- 4 Hen's eggs
- Meat, wool and skins from cattle, sheep and goats
- Meat and skins from pigs
- Poultry meat and feathers
- 6 Deer meat and skins

5.1 General

5.1.1

• KRAV's goals for animal husbandry are to promote the physiological and ethological needs of animals. The environment and management given animals shall be such that animal health and welfare is promoted. All KRAV certified animal management shall be characterized by excellent animal care and protection.

Registration

5.1.2

• Land on the holding shall have been registered with KRAV for inspection for one year before livestock husbandry can be KRAV certified.

5.1.3

• Animal husbandry shall be registered with KRAV at least 3 months prior to the planned start for the conversion period. An on-site inspection shall be made prior to the start of the conversion period. The earliest the start date for the conversion period can be determined is at the time of the first inspection.

Initial conversion period

5.1.4

• Milk production can be KRAV certified after a 6-month conversion period of production according to KRAV's standards.

5.1.5

② Poultry production can be KRAV certified after at least a 6-week conversion period of production according to KRAV's standards.

5.1.6

- **9466** For KRAV certified products such as meat, wool, and hides, the brood animal husbandry shall be in accordance to KRAV standards from at least two months before the calculated birth of ruminant, including deer, and one month for pigs.
- Animals present when joining the KRAV inspection scheme, may be certified after KRAV standards have been followed for one year. This also applies to conventional animals purchased later for breeding, milk- or egg-production. Animals can be certified after 24 months when there is a simultaneous conversion

period for both animals and cultivation, and when the feed is primarily more than 60 percent produced on the conversion-year fields.

Extent

5.1.7

• All animals shall be cared for in accordance with KRAV's standards. This also applies to animals which cannot be KRAV certified, e.g. animals bought in or those receiving medication.

5.1.8

 Rearing may not take place only in the winter, fattening of lamb and calves is excluded.

Parallel production

5.1.9

- Parallel production in separate sectors (fields of activity) may be approved subject to examination by KRAV provided that:
 - The stocks are not kept together or KRAV certified stock can easily be distinguished from non-certified stock (e.g. different breeds). External treatment of KRAV non-certified stock shall follow KRAV's standards if the animals are together;
 - The areas for storing feed for KRAV certified and non-certified animals are well separated
 - Accurate documentation is kept of stock, feed handling, etc.
 Animals from the KRAV certified production may not regularly be transferred to the conventional production.

Marking, documentation

5.1.10

• All animals which can be individually marked shall be marked. The least harmful method of marking shall be used. Birth, purchase, sales and death records shall be kept.

5.1.11

l A health record shall be kept of all injuries, illness, treatments and results. Prophylactic treatment shall also be documented. It should be possible to identify all individual animals and groups of animals in the health records. Reports from slaughter, live inspection, milk tests or equivalent shall be entered into the health records, or else they shall be well compiled and easily available.

Purchasing of animals

5.1.12

- Rearing should be integrated, i.e. that mother and offspring shall remain in the same unit
- **30** The purchase of KRAV certified animals for rearing or as breeding females may be approved by KRAV subject to examination. A contract of co-operation is required between the seller and the buyer.

- **60** KRAV recommends that such purchase should be made from one other farm only. If that is not possible such purchase can be extended to a maximum of 3 farms calculated for a 12-month period.
- **②** Pigs from different stocks or of different ages may not be mixed. They should be kept separate from other pigs on the farm for at least three weeks.
- **6** Purchasing of deer calves for further rearing is not permitted.

5.1.13

• Purchased pigs shall be held in quarantine for at least three weeks.

5.1.14

- **0000** At the purchase of mother or breeding stock KRAV certified animals shall be chosen, if possible in a contractual co-operation. If KRAV certified stock is not available, the purchase of single non-certified animals will be permitted. For herds with more than 10 adult females, a maximum of 10 percent may be bought in. If there are less than 10 adult females, only one animal may be purchased. Purchased female animals should preferably not have given birth.
 - A higher proportion of purchased gilts than that indicated above may be allowed, subject to examination.

5.1.15

All purchased livestock shall be KRAV certified by 2004.

Genetic modified organisms are not allowed.

According to "Council Regulation (EEC) NO 2092/91" only organically raised animals may be purchased as of 31 December 2003. According to the EC regulation there is to be a reveiew whether some exeptions for purchasing of non organically raised animals may be allowed later than 2003.

5.1.16

• Single non-certified animals may be purchased for milk production, in which case they shall undergo an individual conversion period of 6 months before the milk can be certified. However, the milk may be used to feed KRAV certified animals after 2 months.

5.1.17

0000 When expanding the herd or when part of the herd shall be slaughtered because of illness, the purchase of larger numbers of non-certified breeding females or breeding stock may be permitted subject to examination. Not certified animals may not be brought in for the purpose of meat production.

5.1.18

- **96** For the time being, the purchase of day old chicks is permitted, where a breeder is unable to rear his own poultry. KRAV certified poultry should be the first choice for purchasing. Poultry reared for meat purchased from conventional operations must be at least 10 weeks old at slaughter to be KRAV certified.
- ② It is also permitted to purchase older laying hens subject to a six-week conversion period in accordance with standard 5.1.4. Such hens shall come from a free-range system that to a large extent is similar to the breeder's own system.

5.2 ANIMAL WELFARE

General

5.2.1

A healthy environment shall provide for the specific needs of each type of animal and allow stock to express the full range of normal behaviour patterns:

- Animals shall be able to express normal social behaviour including herd behaviour, territorial behaviour, loafing, rooting and scratching normal to the species, e.g. by being afforded sufficient space in suitable indoor and outdoor environments
- — Animals shall be given the opportunity to be alone during birth or laying. Mother and young shall have the opportunity of close contact in the initial period of life of the offspring
- @ The natural behavioural patterns of pigs should be provided for such as rooting and food searching behaviour e.g. through fallow land, forest or woodland and deep litter in the wintertime. Pigs should have access to a mud bath or other water bath during the warm season
- ② Hens and chickens should have access to a sand bath, perches and nest boxes so that these are freely available to all animals when needed
- Turkeys shall have access to perches
- Geese and ducks should have access to ponds during the warm season so that these can be used freely by all animals when needed.
- One Deer should have an environment natural for the species, containing the plants and foods they prefer. The enclosure should have accessibility to protection in the form of trees or protection from the wind, and as far as possible in every grazing pen. Red deer should have access to mud holes during the vegetation period.
- When handling deer, special consideration should be given to their sensitivity to stress. The animal owner should be able to document preventive measures.
- The feeding station design should be such that all deer can feed simultaneously. This will minimize the risk of stress and butting injuries, and will facilitate low ranking animals to get enough to eat.

Birth

5.2.2

00 Cows shall calve alone and only in exceptional cases may be tethered. Indoor calving shall take place in a calving box. All cowsheds must contain calving box that may be permanent or temporary. In a spacious free-range system cows may calve in the flock.

5.2.3

9 Sows shall farrow alone in shelter e.g. in a farrowing hut. Farrowing may take place indoors if the sow has sufficient freedom and space to find a separate farrowing place and plenty nesting materials. Only in exceptional cases may sows be locked up in a farrowing hut. After farrowing the sow and the piglets shall have outdoor access after two weeks at the latest.

Grazing and outdoor period

5.2.4

- During the grazing period animals shall be able to be outdoors on grazing land for most of the day with the exception of poultry which may be kept in at night. In the outdoor period, which may be considerably longer than the grazing period, animals should have the possibility of being outdoors for at least part of the day. Animals shall be kept outdoors when the ground and weather conditions so permit for the respective type of animal.
- **0000** Animals may be kept indoors temporarily in the case of mating, insemination, giving birth, illness, insect attacks, extreme weather conditions or before slaughter.
- Calves may be kept indoors during the period of milk feeding. Calves that are three months old in August may be kept indoors for the rest of the grazing and outdoor period.
 - **4** Pigs shall begin grazing from May until the end of September.
- Sows may be kept indoors for at the most one month in the case of mating/insemination. The sows shall have access to an exercise yard if they are indoors for more than one week.
- **②** Bulls that have been notified for slaughter may be kept indoors until 15 June in Götaland and until 1 July in Svealand and Norrland, southern, middle and northern Sweden, respectively. Other bulls shall be let out to graze earlier in the season.
- **10000** The producer should document the presence of animals kept indoors.

5.2.5

In the case of dairy cows in a spacious indoor system where a climate similar to outdoor conditions is possible, the requirement for remaining outdoors can be restricted to the grazing period.

Outdoors during the cold period

5.2.6

- **60** In the cold season animals shall have the opportunity to go out. Animals may be kept indoors during extreme weather conditions, when there is a danger of leaching, mating, artificial insemination, giving birth, illness and prior to slaughter. The producer should document the presence of animals who are kept indoors. The producer must document or keep a journal for all animals that do not have continuous access to the outdoors.
- **1236** Exceptions to the outdoor period include cattle and hens that may be kept indoors in heated buildings.
- Sheep and goats may be exempted from the standard, subject to examination, if they are kept indoors in a climate similar to outdoor conditions and there is adequate space to move freely.
- Pigs shall have access to an outdoor exercise yard that may be partially covered.

Cattle may be kept tethered in buildings constructed on or before the 24 th of August 2000 providing that the animals have access to regular exercise. For the time being maximal outdoor period is enough, the recommendation is however regular exercise during the whole cold season.

5.2.7

• Whenever animals are kept outdoors, measures shall be taken to prevent significant leaching and run-off of plant nutrients.

0000 KRAV recommends that animals are to be kept on a hard surface.

Housing conditions

5.2.8

Specific measurements for space requirements are listed in Appendix 2.

② No more than 7 hens per m² of floor surface are permitted in facilities for laying hens built prior to 24 August 1999. Floor surface means floor and littered area. The surface area of nests may not be included.

No form of cage is acceptable in any form of animal management.

5.2.9

• All animals shall be able to move freely and may not be tethered. An exception is beef cattle over 20 months old, which may be tethered when indoors. Animals may be tethered temporarily for treatment and other handling. Animals may be tethered between 6 - 20 months for a total of three months to become accustomed to tethering.

5.2.10

100 Animals between the ages of 6 and 20 months may be tethered when indoors up until 1 September 2002 for herds registered to KRAV before 1 September 2000.

5.2.11

10 When building or rebuilding cowsheds, solutions shall be found which guarantee daily exercise for dairy cows.

According to "Council Regulation (EEC) 2092/91", the loose housing system shall be in effect as of 31 december 2010 with the exception of dairy cows in small herds that are exercised twice per week.

5.2.12

• Electric cow trainers are not permitted and may not be found fitted in the cowshed. Electric fencing may not be used inside the sheds.

5.2.13

00 Calves shall be kept in groups. Normally they should not be left in a single box for more than one week. In some cases, they may be kept in single box longer but the size of the box should be comparable to two calving boxes according to the animal welfare provisions in force.

5.2.14

② Growing pigs shall be kept in groups, both indoors and outdoors. Indoors they shall have access to a separate lying area with deep bedding and a separate manuring space. They shall also have a well-defined feeding place. The space shall be airy and large enough for all the animals to be able to rest without aggressive competition.

5.2.15

• Animals shall be kept clean. See standard 10.1.4

5.2.16

02000 Lying areas shall be kept dry, clean, free of draughts, and warm where necessary, with ample straw for bedding.

5.2.17

- **000** Slatted floors are permitted only if stock also have access to unslatted lying areas, such as stalls, a bedded surface, or a well functioning deep litter. At least half of the floor space should be whole including the cleaning area in front of the cub cles.
 - 2 At least one-third of the laying hens' indoor area should be littered area
 - **6** Other poultry shall be on the littered area.

5.2.18

02000 Animals shall have adequate access to daylight. The amount of daylight entering the indoor area should be at least 5 percent of the floor area.

5.2.19

9 Hens and chickens shall have at least 8 hours of darkness without artificial light.

5.3 FEED

All feed indications are expressed as dry matter if nothing else is stated.

5.3.I

• Feed shall be of a good hygienic quality and its composition shall be adapted to the respective type of animal.

5.3.2

02000 The goal shall be the use of 100 percent KRAV certified feed. The exceptions below are permitted. However, when purchasing feed, KRAV certified feed should be the first choice.

Feedstuffs from non-KRAV certified production may be used if permitted and under the conditions below:

For ruminants this may be a maximum of 5 percent, non-ruminants a maximum of 15 percent and for poultry a maximum of 15 percent of the annual feed intake.

6 Deer shall be reared using 100 percent KRAV certified feed.

The calculations are made per animal and not per flock or herd as per "Council Regulation (EEC) 2092/91". Conventional feedstuffs and feed supplements shall be listed in "Council Regulation (EEC) 1804/1999, Annex ii".

5.3.3

• Genetically modified organisms are not permitted in feedstuffs, in the production of feedstuffs, in additives or in preservatives.

5.3.4

000 During the first 2 years from the start of the conversion period, in excess of that stated in standard 5.3.2, a further maximum of 5 percent of feed for ruminants and for pigs may be non-KRAV certified provided that it is produced on the holding.

5.3.5

000 Minerals, lime, shell etc. are not included when calculating the percentages of KRAV certified feed.

Self-sufficiency in feed

5.3.6

• The proportion of feed that is home grown shall be at least 50 percent of the annual feed intake (per farm). The exceptions to this standard include herds with at most 3 cows with calves or 10 young animals; 3 sows in integrated production or 50 fattening pigs; 20 adult sheep or goats with young; 500 laying hens or broilers. Co-operation between KRAV certified farms located close to each other may be approved if a contract is entered between parties.

In special circumstances, exceptions also may be made for larger herds subject to examination, provided that manure spreading can be arranged so as to avoid harming the environment (this primarily concerns chickens and hens). Daily feed intake

5.3.7

00000 A maximum of 25 percent of the daily feed intake may be non-KRAV certified.

Maximum proportion of non-KRAV certified feed in percent

TYPE OF ANIMAL		DAILY	ANNUAL	FIRST 2 YEARS*
00	Ruminants	25	5	10
•	Pigs	25	15	20
99	Poultry	25	15	15

^{*} Purchased and home grown feed, see standard 5.3.3.

Maximum proportion of bought in feed per year in percent. Exceptions – holdings with fewer than 10 livestock units *

TYPE OF ANIMAL		MAX. PURCHASED
000	Ruminants	50
•	Pigs	50
2 0	Poultry	50*

^{*} Exceptions may be granted in special circumstances, provided that manure spreading can be arranged so as to avoid harming the environment. see standard 5.3.6.

Feed processing

5.3.8

 All feed shall be produced using processes, which comply with KRAV's processing standards. Such feed are listed on a list of processed feed permitted by KRAV. See Appendix 5.

Feed from cultivation during the conversion period

5.3.9

• Up to 60 percent of the annual feed intake may consist of feedstuffs from the producer's own crops taken during the conversion period and is considered KRAV certified. Autumn sown crops where the seed is chemically treated or where artificial fertilizers have been used in the autumn previous to the conversion year may not be used as part of the quota. This also applies to crops where the land has been treated with chemicals during or after harvest in the autumn previous to the conversion year.

Up to 100 percent of own produced conversion-year feedstuffs may be used during the first two years with a longer conversion period. See standard 5.1.6.

Roughage

5.3.10

- Livestock shall have free access to roughage.
- **6** KRAV recommends that deer also have access to vegetation for browsing during the winter.

Concentrate

5.3.11

60 For ruminants reared for meat and ruminant young stock, concentrate may constitute a maximum of 30 percent of the daily dry matter intake.

For milking stock, concentrate may constitute a maximum of 40 percent of the daily dry matter intake but it may go up to 50 percent during not more than 3 months in the beginning of the lactation.

During weaning, the proportion of concentrate may go up to a maximum of 50 percent for a brief period. For lamb, this period may be a maximum of one month after weaning and for calves it may last until the age of 6 months.

6 For deer, a maximum of 30 percent of the daily dry matter intake may constitute concentrate.

5.3.12

6 The feed for poultry reared for meat shall contain at least 65 percent cereals.

Feed of animal origin

5.3.13

246 Feed of animal origin (including milk, dairy products, fish and other marine animals) shall be of a high quality and is permitted only for pigs and poultry. Meat products are not permitted.

However, whey, skim milk and other by-products from KRAV certified milk processing may be fed to ruminants. See also 5.3.17 and 5.3.18.

Grazing period

5.3.14

OO Grazing shall constitute at least 50 percent of the dry matter for ruminants.

A somewhat lower proportion may be permitted during parts of the period for milking animals and bullocks. Grazing shall, however, constitute at least half of the roughage.

- For pigs, grazing is to provide both food and much opportunity for activity.
- **26** For poultry, the grazing area shall have a grass cover and provide both food and much opportunity for activity.
- **286** For poultry and bullocks, the grazing may be supplemented by fresh roughage.
- **6** For deer, the daily dry matter intake during the vegetation period can comprise grazing or other plants in the enclosure. The number of animals should be adjusted so that normal growth can be achieved without concentrate supplements.

5.3.15

Stud bulls may be kept in outdoor runs. During the grazing period, stud bulls shall have access to roughage.

5.3.16

• All fences shall be well kept. Barbed wire shall be avoided, and electrified barbed wire is prohibited.

Suckling

5.3.17

- **00** Calves, lambs and kids shall suckle for at least the full colostrum period and thereafter be fed unprocessed whole milk from the species in question for at least 12 weeks (calf), 8 weeks (lamb) and 6 weeks (kid).
- **6** Deer kids should suckle throughout the milk period up until natural weaning.

5.3.18

00000 In the raising of supernumerary or motherless animals certified milk from another species may be used. If that is not possible unprocessed conventional milk may be used. Milk may not be acidified with formic, propionic or acetic acid.

Milk substitutes may be used only in individual emergencies for a shorter period. If the quantity exceeds 30 percent of the daily intake, a 12-month conversion period will be required. The producer shall document all use of milk from other species, conventional milk or milk substitutes.

When treating sickness, exceptions can, subject to examination, be made for warming-up milk or the use of milk from other species.

5.3.19

100 Calves which do not suckle shall be given the opportunity to suck through an artificial teat placed in a natural position.

5.3.20

• Piglets shall not be weaned before 7 weeks of age.

5.3.21

000 Milk from animals treated with drugs may not be used to feed other than the animal's own suckling offspring during the withdrawal period laid down by the Swedish National Food Administration plus one day for the treated suckling cows and calves.

Water

5.3.22

• Animals shall always have access to good quality water.

Feed supplements

5.3.23

• Supplementing feed with salt and seashells is permitted.

5.3.24

• Synthetic supplements such as enzymes may be approved only subject to examination to determine whether these are necessary for the health of the animal and where there are no natural alternatives.

Generally, the following apply:

- Trace elements, vitamins and minerals are permitted;
- Amino acids produced in pure form and urea are not permitted.

Conventional feedstuffs and feed supplements shall be listed in "Council Regulation (EEC) 1804/1999, Annex ii".

5.3.25

② Piglets should have access to soil all year round for iron. Soil may be enriched with iron where necessary.

Heavy metal content

5.3.26

Feedstuff preservatives

5.3.27

• Synthetic preservatives are not permitted with the exception of formic, propionic and acetic acids.

5.3.28

- Permitted silage inoculants are:
 - Bacteria (sodium benzoate may be permitted as a preservative upon examination);
 - Formic acid, propionic acid and acetic acid;
 - Enzymes:
 - Molasses in an amount sufficient for making silage (40 kg/ton green fodder);

 Feed permitted under standard 5.3 may be used but is included in the percentages of KRAV certified/non-certified feed.

5.3.29

Bacteria cultures and acidification substances of plant origin may be used for acidification of milk. Chemical feed preservatives including formic, propionic and acetic acids are not permitted for milk acidification.

5.4 HEALTH AND MEDICAL TREATMENT

5.4.1

- Livestock should be kept in such a way that good environment, care and feeding procedures promote good health and keep the level of illness low. Overall good health of stock is a prerequisite for KRAV certification. Animal caretakers shall demonstrate proper care of all stock.
- **3** Deer should be free from tuberculosis. Membership of an official control programme is recommended.

5.4.2

 Animals showing signs of illness or injury shall be attended to immediately and given proper care. If proper care is not provided for, the whole herd may be decertified.

5.4.3

• If health disturbances arise which may have been caused by a deficient environment, care or feeding, action shall be taken to remedy these deficiencies immediately. If appropriate actions are not taken the whole herd may be de-certified. In serious cases, KRAV may demand that the producer join an established animal welfare programme.

5.4.4

- Injections of vitamins and minerals are permitted in individual cases. In order to avoid recurring problem, supplements should subsequently be provided.
- **000** Where low selenium levels are documented, prophylactic injections may be given following notification to KRAV.

Drugs and chemical agents for the treatment of animals

5.4.5

- Routine prophylactic treatment with drugs or chemical disease control agents is not permitted. Exceptions include:
 - The use of vaccine in cases of clear need and where other methods of treatment are considered less effective. Vaccine made of or produced by genetically modified organisms are prohibited. Other restrictions may be introduced in the future.
 - The use of anaesthesia.

It is not permitted to use synthetic substances to stimulate or arrest production or natural growth.

5.4.6

• Drugs or chemical agents may be used only where there is a clear need and

observing the withdrawal periods set out below. Treatment of entire groups of stock should be notified to KRAV in advance. Subject to examination preventive treatments may be given in specific cases.

5.4.7

0006 Avermectins may be used only where other substances are not expected to have the desired effect. Non-degradable substances, e.g. avermectins, should not be used when animals are on natural grazing.

KRAV's withdrawal periods

5.4.8

There is no withdrawal period for the following, assuming the agents or treatments are not prescribed with a withdrawal period:

- **00** Calcium for milk fever
- 10 Agents to increase blood sugar levels (e.g. propylene glycol) for appetite disorders
- Carbon preparations
- Natural medicine
- Injections with vitamins and minerals
- All external treatment except parasite treatment and formalin. For these
 treatments the withdrawal periods apply as laid down for other substances
 in standard 5.4.10 and for substances with a withdrawal period of 0 days
 in standard 5.4.11.

5.4.9

Animals must undergo a conversion period according to "Council Regulation (EEC) No 2092/91" if:

- They receive more than two or a maximum of three courses of treatments with chemically synthesized allopathic veterinary medicinal products or antibiotics within one year;
- They receive more than one treatment if their productive lifecycle is less than one year.

The length of the conversion period is:

- 12 months for beef reared for meat
- 4 months for pigs, sheep, goat. Minimum withdrawal period according to standard 5.4.10
- 3 months for dairy production
- 10 weeks for poultry reared for meat, minimum withdrawal period according to standard 5.4.10
- 6 weeks for laying hens

A treatment means all the treatments made to cure a disease. Use of vaccine, parasite treatments and compulsory treatments demanded by authorities are not included in the number of treatments.

KRAV's withdrawal periods for meat, wool and hides

5.4.10

3456 For treatment with antibiotics and chemotherapeutics:

- Double the withdrawal period laid down by the Swedish National Food

Administration for the respective substance, however always at least 6 months.

For vitamins, minerals and anaesthetics with prescribed withdrawal periods:

 Double the withdrawal period laid down by the Swedish National Food Administration for the respective substance.

For other substances:

 Double the withdrawal period laid down by the Swedish National Food Administration for the respective substance, however always at least 2 months

KRAV's withdrawal periods for milk and eggs

5.4.11

- **O2**For substances with a fixed withdrawal period:
 - Double the withdrawal period laid down by the Swedish National Food Administration

For drugs or agents with a withdrawal period of 0 days:

- 48 hours

5.5 MISCELLANEOUS

5.5.1

0000 Medical hormonal heat synchronization, embryo transfer, or routinely induced birth, are not permitted.

Mutilation

5.5.2

0000 Mutilation of animals shall be restricted. Mutilation other than castration and dehorning is not permitted.

5.5.3

- **00** Castration is permitted for calves prior to 8 weeks of age. Calves shall be anaesthetised during castration.
- **3** Castration of pigs is permitted prior to 7 days of age. Teeth grinding of piglets is permitted in the case of large litters and should be done before one week of age.

5.5.4

- **10** De-horning, by burning only, may be carried out prior to 8 weeks of age. Dehorning of older animals for animal welfare or handling safety reasons can be approved subject to examination.
- **6** Deer may be dehorned to allow handling and transport. This should be done after approval from KRAV. In this case de-horning entails sawing off of horns after cleaning.

Breeding

5.5.5

• Animals of a breed that cannot mate or give birth without human assistance

cannot be KRAV certified. The use of sperm from embryo transfer bulls is permitted for the time being.

Age at slaughter

5.5.6

- For poultry which is not slow-growing the minimum age at slaughter shall be
 - 81 days for chicken
 - 140 days for turkeys and geese

Transport

5.5.7

• The owner of the stock shall ensure that loading, transport and unloading of livestock are carried out in a way that causes as little physical or mental stress as possible.

5.5.8

• The owner of the stock shall allow and facilitate KRAV's knowledge of the results of live inspections and slaughter reports.

5.5.9

6 Deer may only be transported in connection with purchase or sale of breeding stock or milch cattle.

6. APICULTURE

6.1 REGISTRATION AND CONVERSION

6. T. T

Bee keeping may be KRAV certified after a conversion period of one year, during which it shall comply with KRAV's standards and be inspected by KRAV. Parallel production may be approved, subject to examination, under the condition that all production and handling are conducted in a way where there is no danger of mixing certified and conventional products. KRAV certified wax shall be used upon entering the inspection scheme.

It shall be possible to identify hives.

Purchasing bees

6.1.3

Bee colonies and queen bees may only be purchased from KRAV certified producers. An exception may be made, subject to examination, where there are no KRAV certified bee colonies and queen bees for sale.

Genetic modified organisms are not allowed.

6.1.4

Wax not certified may not be brought to the certified production when purchasing bee colonies.

Feed

6.1.5

Portable colonies and hives may not be situated close to fields where chemical pesticides and herbicides are used, i.e. near conventional cultivation of oilproducing plants, fruits and berries. Nectar and pollen sources shall essentially consist of organically produced crops and/or spontaneous vegetation.

6.T.6

Additional feeding of honey and sugar water to bees is permitted during hibernation and in early spring.

6.1.7

KRAV certified sugar or sugar solution shall be used as feed for the winter.

Sources of contamination

6. T. 8

The use of chemical agents around beehives is not permitted.

Beehives may not be placed close to sources of contamination, such as industrial areas and waste dumps.

Drugs and chemical agents

6.1.10

Diseased colonies shall be treated.

6.T.TT

In addition to cold storage, the following are permitted for treating illness and pests, for health control in beehives and when storing frames: oxalic acid, formic acid, acetic acid, lactic acid, soda and caustic soda.

Mutilation

6.1.12

Clipping of wings of queen bees is prohibited.

Handling

6.1.13

Smokers, water and vinegar are permitted to remove and calm bees. Only untreated natural wood and non-fossil fuels of plant origin are permitted in smokers. No other agent to remove or calm bees is permitted.

6.1.14

Oil, diesel and other petroleum products are not permitted in order to prevent ant infestation.

Material for honey frames

6.1.15

Compartment wax walls may only consist of KRAV certified wax or of plastic permitted in use with food.

7. AQUACULTURE

The standards for KRAV certified aquaculture have been developed jointly with the Norwegian certification body Debio. They therefore have a different structure to the other chapters in KRAV's standards.:

General: A general introduction to the relevant standards section is

given under this heading.

Recommendation: The recommendations contain advice on how to relate to

the standards in purely practical terms.

Standards: The Standards section gives the minimum standards

which KRAV inspects that they are complied with.
All standards must be complied with for production to

obtain KRAV approval.

The standards have been drawn up based on a vision for sustainable aquaculture. It has not always been possible to unite this vision with the conditions in reality. KRAV's objective is to develop continuously the standards for aquaculture to realize this vision. See also chapter 1.

7.1 SCOPE

KRAV certified aquaculture covers cultivation of different species in freshwater, brackish water and salt water and transportation and slaughter of these species. The species can be carnivorous, herbivorous or omnivorous (eating meat, plant or both) in all stages. They can be cultivated in all types of land-based or floating/submersible enclosures in seawater or freshwater or in a dam/lake with a natural demarcation and where the activity can be controlled.

Stationary organisms, such as e.g. seaweed and shellfish can be certified as KRAV certified when the parts of these standards that apply for them are fulfilled. Organisms which move freely in open waters (including wild fish) cannot be checked according to general procedures for organic production and are not covered by these standards.

These standards only contain specific standards for salmonoid fish (Salmonidae).

General standards for all types of organic aquaculture production

7.2 SETTING UPP THE PRODUCTION

General

The overall objective for the production shall be consideration for the environment and the thriving and health of the organisms. The production shall be adjusted so that the organisms live to the greatest possible extent in an environment which is adjusted to secure their fundamental physiological and behavioural needs.

The production shall be managed in such a way that the environment in surrounding water and land areas is preserved through:

- Impacting to the minimum possible extent on the local biological processes, which covers microorganisms, plants and animals
- Preventing escape

- When marine foodstuffs are used, they shall come from a sustainable stock which is not normally used as human food and/or by-products from species used as human food
- Managing the production so that infections, parasites and drug residues do not affect wild organisms in the environs
- Not using synthetic fertilizers and impregnating agents that load the environment
- Providing for diversity in the production where this is possible (for example production of common sea mussels in connection with fish breeding)

The production can consist of both KRAV certified and conventional production provided that these operating units are kept well-separated (parallel production).

Records must be kept for the whole cultivation unit.

Recommendation

KRAV recommends that the whole management of the unit be converted to KRAV certified production. To gain experience with this type of production, however, it may be appropriate to convert the production gradually.

Consideration for the surrounding environment is crucial for positioning and management of the KRAV certified unit.

In accordance with the objectives for KRAV certified aquaculture it is important that the production is located at an appropriate distance from emission sources and conventional units.

Use of foodstuffs based on by-products and other materials of biological origin which are not intended directly for, or are used only to a limited extent, for human consumption should be promoted.

Feed wastage or faeces which are collected shall if possible be used as fertilizer in organic agriculture or in other appropriate ways.

Standards

7.2.1 Conversion to KRAV certified production

7.2.1.1

There shall be a production description stating how the requirements in the standards are complied with for the production unit.

The production description shall be updated as required.

7.2.1.2

The KRAV certified production unit shall be clearly defined and demarcated so that confusion cannot arise with conventional feed, input factors etc. It shall be possible to inspect the unit in respect of the documentation requirements laid down in the standards.

7 2 T 2

A production manager shall keep an operating record and shall always be able to present a documented systematic overview of the cultivation activity. The record shall be available during the KRAV inspection.

7.2.2 Parallel production

7.2.2.1

If the whole production unit is not converted at the same time, the following applies:

- The units shall not affect each other through feed wastage, medication, and use of cleaning agents or equivalent
- In the sea and lakes, the distance between open KRAV certified and conventional installations shall be at least 25 metres
- In flowing freshwater the KRAV certified unit and / or the unit in conversion shall lie at least 10 metres upstream of the conventional unit
- For land-based installations, there shall be physical barriers between KRAV certified and conventional units
- Areas for storing feed and input factors between the different production methods shall be kept well separated
- Feed and input factors for KRAV certified production shall be clearly marked

7.2.2.2

Converted units cannot switch between organic and conventional management without this first having been agreed with KRAV. A return to conventional production without KRAV's approval means that KRAV can refuse a new agreement for up to five years.

7.2.2.3

Both production methods shall be documented separately through keeping records, accounting etc..

KRAV shall have access also to relevant documentation for the conventional management.

7.2.3 Environment and water quality

7.2.3.1

The water shall have such a low degree of pollution and such an oxygen content that the cultivation organisms are not affected negatively. The unit must not be positioned in the vicinity of, or downstream of, an important source of pollution.

7.2.3.2

The unit shall be positioned in an area with a good water movement, and/or so that no significant sediment build-up occurs underneath the unit.

7.2.3.3

The environment shall be loaded to the minimum possible extent with feed wastage and faeces that can cause over-fertilisation or other disturbances. Depending on the type of production, KRAV can demand collection in and around the unit.

7.2.3.4

Feed wastage or faeces which are collected shall if possible be used as fertilizer in organic agriculture or in other appropriate connections.

7.2.3.5

The total emissions shall not load the environs so that the biological diversity is affected negatively or over-fertilisation is caused. The producer shall be able to present documentation that confirms this, for example through an in-house control programme.

7.2.3.6

Material, equipment, paints, etc., used in the production shall be selected based on the precautionary principle.

7.2.3.7

Growth on production equipment shall be removed in the first instance using mechanical or biological methods. Impregnating agents that contain environmental toxins (for example heavy metals and biocides) are not permitted. KRAV can, after testing, give a time-limited dispensation for use of chemical/synthetic agents.

7.2.3.8

Installations for cultivating fish or other aquatic animals shall have a container or other device for satisfactory storage of dead aquatic animals. The capacity shall be dimensioned for the installation's production and cleaning routines.

7.3 CONVERSION PERIOD

General

Conversion to organic production is a process to develop an environmentally adjusted production system with special consideration for the thriving and health of the cultivated organisms. The time that runs from applying these standards in their entirety until the production is certified by KRAV is called the conversion period.

The objective is that the cultivation complies with the standards for KRAV certified production throughout the organism's life cycle. If organic basic material (fry, for example) is not available, importation of organisms from conventional production with a subsequent conversion period is permitted.

The organisms are accepted as KRAV certified when the last 90 percent of the increase in biomass occurs according to the standards.

During the conversion period, the standards for KRAV certified management shall be applied and it is therefore necessary that checks be performed during this period.

Recommendation

A conversion period should not be started until all conditions for stable KRAV certified production are fulfilled.

Standards

7.3.1

The conversion period, i.e. the time from when these standards are applied in their entirety until the production is certified by KRAV, shall at least constitute the

last 90 percent of the increase in biomass.

The requirements for KRAV certified production laid down in these standards shall be complied with during the conversion period.

7.3.2

For cultivation to be KRAV certified, it must be checked during the conversion period.

7.4 RAW MATERIALS AND ORIGIN

General

The breeding work shall focus on health and environmental adjustment and good growth with the minimum possible use of input factors.

The production shall be arranged so that permanent injury to individuals is avoided. During hatching, environmental factors shall be controlled so that malformations are avoided.

Recommendation

Stock that is adapted to local conditions is preferable.

Breeding should build on a large number of breeding pairs to prevent inbreeding, genetic damage and loss of genetic variation.

Standards

7.4.1

Any breeding material brought into the unit should be KRAV certified.

7.4.2

If KRAV certified breeding material with desired characteristics cannot be obtained, a full conversion period will be applied.

7.4.3

Triploid and genetically modified organisms are not permitted.

744

An artificially induced sex change is not permitted.

7.5 FEED AND FEEDING

General

The feed in KRAV certified aquaculture shall be of good quality with a nutritional composition adapted to the species.

The feed shall consist of organically produced products and/or feedstuffs originating in wild aquatic stock. For resource reasons, aquatic feedstuffs from stock that is not used as human food and from by-products shall be used. An overarching principle is that marine feedstuffs originates in fishing activity operated in a sustainable way and is preferably environmentally certified.

Additives such as vitamins, minerals, antioxidants and colourings shall have a natural origin or shall be as close to their natural form as possible. Synthetic/

unnatural additives such as the antioxidant ethoxyquin are not permitted.

Feeding shall be performed in a way that allows natural food intake with minimal feed wastage. The feed type and feeding shall not have a negative effect on the biological diversity in the area. Wet feed is not permitted for reasons relating to the environment and infection.

Recommendation

In all connections, consideration to the environment and efficient feed utilisation shall be an overarching principle when choosing feed and feeding. The aquatic feedstuffs should come from environmentally certified fishing activity, to the extent that such feedstuffs are available.

Standards

7.5.1. Raw materials

7.5.1.1

Feed for aquaculture organisms shall basically consist of 100 percent KRAV certified feed and/or feed which is approved for use in KRAV certified production originating in wild aquatic stock.

If such approved feed is not available, up to 5 percent of the feed (dry weight) can be of non-KRAV certified origin.

7.5.1.2

If a certified organic feed ingredient is available, but cannot be used in a justifiable way with regard to resources and/or with unsatisfactory quality, an exemption can be made for use of an equivalent ingredient of non-KRAV certified organic origin for a limited period.

7.5.1.3

Feedstuffs from wild fish can be used in KRAV certified production on the following conditions:

 Wild fish shall come from sustainable stock and shall be environmentally certified by a certification body approved by KRAV

Or

- Where feedstuffs from an environmentally certified wild aquatic stock are not available or only constitute a proportion of the feed mix, at least 50 percent of the aquatic protein in the remaining proportion shall come from by-products. The remaining part shall consist of aquatic feedstuffs from species that are not normally used for human consumption.

7.5.1.4

Ingredients that are genetically modified or produced using gene modification are not permitted.

7.5.1.5

Wet feed is not allowed.

7.5.1.6

Faeces is not permitted as a feed additive.

7.5.2. Additives

7.5.2.1

When minerals and vitamins are found both in concentrated and synthetic form and natural form, additives in a natural form shall be used when this is possible.

7.5.2.2

The following synthetic/unnatural additives are not permitted:

- Growth regulating agents
- Appetite stimulants
- Antioxidants
- Preservatives
- Dyestuffs
- Amino acids

The following are also not permitted:

- Raw materials from the same species as the feed will be used for
- Additives consisting of GMO (genetically modified organisms)
- Additives produced using GMO

7.5.2.3.

Shrimp peels, algae, fungi and bacteria cultures are permitted feed additives as dyestuff.

7.5.3. Record

7.5.3.1

The production manager shall keep a monthly record of the feed type, feed producer and quantity fed.

7.6 HEALTH AND ANIMAL WELFARE

General

Efforts should be made to attend to the organisms' health through preventive measures so that medication does not become necessary. If there are still signs of disease, suitable measures shall be adopted immediately.

When breeding fish, prophylactic work shall be carried out, including effective vaccination against relevant infectious diseases, so that outbreaks of disease and use of drugs are avoided to the greatest possible extent. The production conditions shall always be such that the risk of infection and outbreaks of disease is minimized.

First choice treatment of disease shall be dictated by considering the safety of the animal.

In KRAV certified production the objective is to maintain a low aggression level and to prevent fish from injuring each other. It is documented that a low stock density can entail increased aggression for certain species of fish. On the other hand, a high stock density can also cause discomfort. The stock density standards balance these two extremes against each other (compare with Chapter. 7.7.5).

Recommendation

Production focuses on prophylactic health work and is adjusted to the organisms' needs. There should be hygienic routines and routine examinations should be carried out to detect latent diseases and production disturbances.

Biological combating of disease should be prioritized above use of chemicals where this is possible and effective enough, for example for "delousing" with the help of wrasse (Labrus, Fam. Labridae). Drugs with the minimum possible environmentally harmful effect and with the minimum possible risk to the working environment and animal health should preferably be used. The risk of resistance to antibiotics in the natural environment should be given special consideration.

The organisms shall be handled to the minimum possible extent and as carefully as possible.

Standards

7.6.1 Treatment / drugs

7.6.1.1

Organisms that show signs of disease shall be given suitable treatment immediately.

7.6.1.2

Drugs and chemicals shall be used when no other treatment method can be justified from an animal protection viewpoint and/or when this is required according to national laws and standards.

7.6.1.3

Routine prophylactic treatment with drugs or chemical agents is prohibited.

7.6.1.4

Drugs and additives in feed and water which is added to promote growth/yield artificially are not permitted.

7.6.1.5

Drugs consisting of GMO or which are produced using GMO may only be used when there are no justifiable alternatives.

7.6.1.6

An artificial day length may not be longer than the longest natural daylight length in a year for the species' range.

In open installations, light may only be supplied in the form of underwater light.

76T7

When using drugs and disinfectants in the breeding installation, care shall be taken and active measures adopted to minimize emissions to the surrounding environment.

7.6.2. Withdrawal from drugs

7.6.2.1

The withdrawal period when using drugs is double that compared with national provisions.

Drugs and control agents that do not have a withdrawal period have a withdrawal period of two weeks in KRAV certified production.

7.6.2.2

During treatment with drugs with a withdrawal period in one unit, the same withdrawal period applies for all surrounding KRAV certified production within 150 m in the sea and lakes and within 10 m when a treated unit lies downstream in flowing freshwater.

7.6.3 Record keeping

7.6.3.1

A record shall be kept of treatment of diseases.

The record shall contain:

- Identification of the relevant disease/infection
- Type and length of treatment
- The type of drugs used
- Withdrawal period implemented

Special standards for production of fish

7.7 SALMONOID FISH

This chapter contains special standards for salmonoid fish. These are based on the general standards for KRAV certified aquaculture. The chapter covers the species Atlantic salmon, rainbow trout, brown trout and arctic char.

The standards for conversion to KRAV certified production 7.2.1, parallel production 7.2.2, conversion period 7.3, and feed and feeding 7.5 apply in their entirety for salmonoid fish.

The following additional standards also apply for salmonoid fish:

Standards

7.7.1 Measures to prevent escape

The production shall focus on preventing escape, in respect of both technical equipment and internal control.

7.7.1.2

A production manager for breeding salmon type fish shall have contingency plans for all units used as to how any escapes can be limited and how recapture can be made more efficient. Any escape shall immediately be reported to KRAV.

The contingency plan shall also cover governing principles for moving breeding cages and for handling fish during sorting, loading or unloading.

7.7.1.3

KRAV can impose special conditions on the production manager to prevent escapes. For example, these conditions can be individual marking and technical requirements for the design of the cages.

7.7.2 Environment and water quality (see standard 7.2.3)

7.7.2.1

Daily measurements shall normally be performed at different times in every production unit of:

- Temperature
- Salinity (in marine installations)
- Oxygen content

The oxygen content in the water shall be at least 6 mg oxygen per litre, and the water through flow shall be so great that harmful effects of carbon dioxide (CO2) and ammoniac (NH3) are avoided.

In cage breeding, the oxygen content shall be measured in the middle at a depth of 3 metres.

In land-based installations the oxygen content shall be measured in the outlet water.

7.7.3 Record keeping

The following information shall be recorded every month for every production unit:

- Putting out and stocking of fish: The number of individuals, species, origin, time when put out and average weight (live weight).
- Volume per production unit
- Number of kilos of fish per cubic metre
- Removed quantity of dead/dying fish. Information about the quantity shall be specified as the number of individuals and total weight in kilograms.
- Production result (slaughter weight): Information about the quantity shall be specified as the number of individuals and total weight in kilograms.
- Consumption of cleaning agents and disinfectants. Chemical type, product name, quantity and consumption period.

7.7.3.2

Information about the following conditions shall be recorded every calendar month for the KRAV certified breeding unit:

- The fish's health status. In the event of disease, a diagnosis shall be specified, who has made the diagnosis (fish health control/veterinary surgeon), diagnostic investigations carried out (public/private laboratory), treatment implemented or treatment method, withdrawal periods
- Treatment and handling of dead fish: Treatment method, quantity supplied, time of delivery and recipient

7.7.4 Basic material and origin (see Chapter 7.4)

7.7.4.1

The basic material (such as roe and breeding fish) taken into the production unit shall come from breeding that is subject to health checks.

7.7.4.2

Breeding fish shall originate from domesticated fish.

The origin of the breeding fish shall be recorded.

7.7.5 Health and animal protection (see Chapter 7.6)

7.7.5.1

When adjusting the stock density, consideration must be given to

- The fish must have a low aggression level and low frequency of fin biting
- That the fish can form shoals
- The oxygen content in the water (see standard 7.7.2.1)

The size of the production unit in an open installation shall for the last 50 percent of the biomass increase be at least:

- 100 m2 and/or 500 m3 for salmon
- 50 m2 and/or 250 m3 for rainbow trout, arctic char and brown trout

The breeding unit shall be registered in a health control programme.

7.7.5.3

Abnormal behaviour and/or mortality exceeding 0.5 percent per week shall be reported to the fish health control programme and to KRAV.

Emergency slaughter shall be considered as an alternative to drug treatment.

7.7.5.4

Dumping of dead/dying fish or fish parts/residues is prohibited. Release of fish from the breeding unit is also prohibited.

Dead or diseased fish, waste that comes from the cultivation and used packaging shall be considered to be infectious and shall be treated correctly so that it cannot entail a risk of spread of infection.

This means that dead or dying fish should be picked from the production unit daily to the greatest possible extent. Dead fish shall immediately be ground down and be conserved in acid or handled according to other approved treatment methods.

7.7.5.5

In the event of occurrence of salmon lice, natural methods shall be used such as wrasse (Labrus, Fam. Labridae). The method shall be applied to such an extent that injury to the fish or damage to the environment do not occur. Attention shall be given to the wrasse's natural needs such as the availability of hiding places in the breeding cage.

7.7.5.6

Vaccination is permitted if it is established that diseases are in the area and

that they cannot be controlled using prophylactic production methods. KRAV approval is not affected by vaccination which is ordered by an authority.

7.7.6 Transportation

7.7.6.1

Live fish can be transported for a maximum of 6 hours. After testing, KRAV can give an exemption from this standard for a limited time.

7.7.6.2

A person shall be designated as responsible for animal welfare during transport. It shall immediately be reported to KRAV if the transportation causes physical injury to the fish due to stress.

7.7.6.3

Transport equipment and materials shall not cause poisoning.

7.7.6.4

Synthetic stimuli and/or tranquillizers must not be administered in connection with transportation.

7.7.6.5

Transport time, number of fish and any deviations from the standards during transportation shall be recorded.

7.7.7 Slaughter

7.7.7.I

All handling in connection with slaughter shall entail the minimum possible suffering and stress for the fish.

7.7.7.2

Fish must not be starved in connection with slaughter, more than a maximum of 100 day degrees (water temperature x day).

7.7.7.3

Capture methods for salmon type fish can be a tight collection bag, vacuum pump, seine and fish trap. Fish caught using a hook and line cannot be KRAV certified.

7.7.7.4

Fish shall be fully stunned before they are killed.

7.7.7.5

All fish that are stunned shall be killed immediately.

Carbon dioxide (CO2) or another method approved by an authority shall be used. A blow to the fish's head is approved as stunning. Slaughter shall be done by bleeding.

7.7.7.6

Fish must not be prepared for slaughter at a water temperature above 18 °C.

7.7.7.7

Slaughtering and subsequent handling of KRAV certified and conventional fish shall be clearly separated in time and/or space so that the fish cannot be mixed.

8. WILD HARVESTED CROP PRODUCTION

8. т. т

Wild harvested crop production includes anything that is harvested or gathered without, to any considerable extent, being actively cultivated.

The producer in charge of gathering or harvest should enter into a certification agreement with KRAV.

8.1.3

Wild production shall come from a clearly defined area that meets the criteria

8.1.4

The area may not have been treated with artificial fertilizer or chemicals in the three years prior to harvest. Plants treated with pest control agents may not be planted during the last three years. Liming is permitted.

8.1.5

Areas shall be situated such that contamination does not reduce the value of the products as food for human consumption or animal feed.

8.T.6

A 25 metre wide buffer zone shall be provided beside roads with traffic intensity above over 3000 vehicles per day on a yearly average, or other sources of contamination (e.g. industries or neighbouring land to which artificial fertilizers or chemical pesticides and herbicides have been applied). Limit values have been laid down for caesium in land, see Appendix 6.

The harvest/gathering of the product shall not have a negative impact on the environment or endanger the existence of any species of plant or animal.

All places of purchase shall have personnel who are well-versed in KRAV's standards.

8.1.9

Persons who gather or pick shall have access to maps of KRAV approved areas so that all gathering and picking is confined to these areas. All information, including instructions and standards, shall be available in the appropriate language of the parties at the point of purchase.

9. FOOD PROCESSING

Food processing of raw materials from KRAV certified production shall occur in such a way that the objective of organic production, as it is defined in the byelaws of KRAV, is fulfilled. This is done in the the same way as in the other inspection areas by taking responsibility for the environment impact and by separate handling so the KRAV approved products contain what the labelling indicates. standards for contract, separation, labelling and environmental protection etcetera can be found in chapter 2. In chapter 9 there are standards that only apply to food processing. Processing standards are also important for retailers and restaurants. To get an overview of all the standards please see the reading instructions on page 22.

9.I.I

The objective is that 100 percent of the ingredients in processed products shall come from a KRAV approved origin. Below are the exceptions allowed.

9.1.2

KRAV may permit the inclusion of KRAV non-approved ingredience in a processed product, subject to examination, if the approved ingredience in question is not available in sufficient quantity or quality. The producer is obliged to make efforts to find KRAV approved ingredients and document this in the application or, on the other hand, EU organic ingredients. To obtain certification for a product, it is necessary for the producer to replace conventional ingredients with KRAV approved ingredients or EU organic ingredients when these are available.

9.1.3

It is not permitted to use both KRAV approved and KRAV non-approved ingredients of the same sort in one and the same product.

The following conventional ingredients are permitted and exempted from the requirements in 9.1.1 and 9.1.2:

- common salt (sodium chloride)
- water
- game not reared in enclosures (reindeer are not considered game)

The exemption means that these products may be used as conventional ingredients. Common salt and water shall not be considered in the calculation of the portion of conventional ingredients in a product. See 2.3.10-12 for further information.

Ingredients (including raw materials, additives, vitamins, flavourings and taste enhancers), carriers, solvents and processing aids may not contain nor be produced using genetically modified organisms.

9.1.6

Standards 9.1.5, 9.1.7, 9.2.1 and 9.2.4 also apply to conventional ingredients in a product.

9.1.7

Minerals (including trace substances), vitamins, amino acids and other nitrogen compounds are permitted only if it is specifically prescribed by an authority that one or more of the substances shall be used in the foodstuff in question. See Standard 9.2.2 for KRAV's consideration of enrichment substances.

9.1.8

Synthetic and nature-identical colourings, flavourings and taste enhancing substances are not permitted by KRAV. Only natural substances are permitted.

9.2.1

Food additives and processing aids for processed products must be permitted by KRAV. Lists of the permitted food additives and processing aids are found in appendices 7 and 8. When possible, food additives and processing aids produced with KRAV approved raw materials shall be used.

9.2.2

Food additives and processing aids may be KRAV approved subject to examination of whether the food additive or processing aids:

- are of KRAV approved raw materials,
- are manufactured using processes permitted by KRAV,
- are considered completely harmless for human consumption in the amounts in question,
- do not have negative effect on the product as a food,
- are essential to produce a certain product using a specific process,
- are not produced using genetically modified organisms,
- do not load the environment to a significant extent.

IFOAM 's standards for certification of food additives and processing aids are also used as a basis for the examination.

9.2.3

Preservatives (such as anti-fungal agents), pest control substances, and synthetic or nature-identical colouring agents may not be added to substances that come into contact with foodstuffs (such as for example cheese wax).

9.2.4

The following production processes are permitted:

- Mechanical and physical processes,
- Biological processes such as fermentation and brewing (such as for example using lactic acid cultures and mould cultures),
- Enzymatic processes where the effect is to coagulate (such as rennet) or cleaving substances (such as the enzyme amylase),
- Extraction. Only water, ethanol or fats may be used as solvents.,
- Smoking,
- Precipitation,

Irradiation is not permitted.

KRAV does not permit processes that lead to the creation of foreign molecules.

9.2.5

Filtration techniques that lead to chemical changes at the molecular level are permitted only after special examination according to the relevant criteria in Standard 9.2.2. Filtration equipment may not contain asbestos or affect the product negatively in any other way.

9.2.6

It is permitted to treat potatoes and vegetables with peat or soil if done with KRAV approved soil or peat.

10. SLAUGHTER

General

All handling, including transport, in connection with slaughter shall be carried out calmly and gently and involve minimum physical and mental stress to livestock.

The KRAV contact shall ensure that the handling of animals complies with KRAV's standards and inform all staff concerned of KRAV's standards. Each animal or group of animals shall be identifiable at each step in the transport and slaughter process.

TO.T.2

Stockmen of KRAV certified livestock shall have the opportunity to be present at slaughter until the moment of death.

Transport

10.1.3

The abattoir is responsible for ensuring that animals are transported to the abattoir in accordance with KRAV's standards if not otherwise agreed. The abattoir shall inform the responsible transporter of KRAV's standards. The transporter shall sign a declaration stating familiarity and intent to comply with KRAV's standards.

Animals shall not be treated with synthetic produced tranquilizers or synthetic produced stimulants prior to or during transport

Observe that there is a eight hours transport limit according to Swedish law and IFOAM Basic Stanards.

Live inspection

10.1.4

Animals may not be KRAV labelled if reports from live inspection or meat inspection indicate that an animal has been poorly cared for, such as animals covered with manure. The abattoir is obliged to notify KRAV of live inspection reports which indicate poor care. See also standard 5.5.8.

Marking

10.1.5

Pigs may be marked with a well-cleaned tattoo hammer on the hindquarters or shoulder.

Environment and handling

TO.T.6

Exposure of livestock to reflective surfaces, noise or other stressful situations shall be avoided during all stages of transport and slaughter. A plan for minimizing stress shall be established subject to the abattoir's approval.

10.1.7

Electric prods are prohibited.

10.1.8

Established livestock groups shall be kept together during transport and lairage. Different established groups should be kept apart to avoid unnecessary stress.

Lairage and rest

10.1.9

After transport animals shall be given sufficient time to rest before slaughter. Only animals that have previously been tethered may be tethered. During the waiting period animals shall be given ample amounts of roughage and access to water.

10.1.10

Lactating stock shall be milked when necessary.

TO.T.TT

The number of animals per pen shall be limited, allowing plenty of space for each animal to move about.

Lairage pens may have a slatted floor only if there is a bedded surface with space for all stock to lie down.

10.1.13

Slaughter shall normally take place the same day that the animals arrive. Standard 10.1.9 applies for animals remaining overnight.

Driving

10.1.14

The waiting time in the drive chute, where such is used, should not exceed five minutes.

10.1.15

Natural behaviour, such as keeping a group together, moving from darkness to light and following the leader animal, shall be utilized in driving.

TO.T.T6

Driving in a drive groove is not permitted.

Stunning

10.1.17

Collecting animals in the stunning pen shall occur calmly without stress. Stunning equipment where the animals are driven or held by force, e.g. restrainers, is prohibited. Hanging poultry on slaughter hooks before stunning shall be carried out calmly and systematically. After hanging, each bird should be held for an instant before the next is hung alongside.

то.т.т8

The effectiveness of the stunning procedure shall be checked for each individual animal immediately after stunning and before bleeding.

10.1.19

Cattle should be stunned by a shot in the head, out of sight and hearing of other cattle.

10.1.20

Personnel may not leave the stunning pen while a group of pigs, sheep or lambs are being stunned. The number of animals in the stunning pen shall be limited in order to minimize crowding and stress.

Established groups of sheep, lambs or pigs should be kept together for as long as possible during stunning. Stock shall be stunned without unnecessary delay and thereafter immediately bled.

10.1.22

Deer shall be slaughtered in such a way that stress is avoided as much as possible. The animal owner should be able to document how this is done. Deer slaughter shall be done in an enclosure or in a handling installation adjacent to the enclosure.

Bleeding

10.1.23

Bleeding and all further processing of the carcass shall take place out of sight and hearing of live animals.

Death of the animal shall be ascertained manually after bleeding and prior to further processing.

11. PET FOOD

11.1.1

Pet food that is produced according to KRAV's standards for processing may be KRAV labelled.

Vitamins and minerals may be added.

Animal feed shall meet the same requirements as feed for KRAV certified animal husbandry but may contain meat products fit for human consumption. Pet food shall be adapted to the animal species.

12. PRODUCTION INPUTS

The main objective of labelling production inputs is to make it easier for KRAV licensed producers to determine the production inputs that are permitted in production.

These Standards inform the production inputs producer of the inputs that can be certified and the criteria for certification.

Production input companies that are licensed agree to comply with KRAV Standards for the licensed production and are inspected annually. Production inputs become KRAV certified and may be marketed with KRAV name and label.

Other production inputs may also be used in organic production according to Chapters 4 and 5. These are called permitted production inputs.

Examples of products that can be certified:

- animal management agents
- plant protection agents
- plant growth stimulants
- soil conditioning agentsfertilizers
- sowing and potting soil
- pesticide and disinfection agents in storage areas

Scope

T 2.. T

Products that are permitted for use in organic production according to KRAV Standards in Chapters 4 and 5 and Standard 2.12.1, can be certified as production inputs. Products packaged for consumers can be certified if it has an application area within organic production and comply with KRAV Standards.

Production inputs can only be certified if:

- it is permitted according to the Council Regulation (EEG) 2092/91 annex I and II and IFOAM Basic Standards
- the producer can substantiate that manufacturing, quarrying or collection does not cause serious environmental disruptions
- it is only marketed in the application area and where it has documented effects
- it is not classed as hazardous for animal or human health or the environment according to the risk phrases listed in Appendix 9
- it does not include GMO or is produced using GMO.

IFOAM guidelines for evaluation of additives and production inputs is also used as a basis for certification.

The following may not be registered for production inputs inspection:

- technical equipment
- products permitted only after an examination
- copper compounds.

The Swedish National Chemicals Inspectorate must approve pest control substances for sale and use.

12.2

It is permitted to use the following for soil mixtures:

- Sand, clay, and turf that are taken from an area where no chemical pest control or artificial fertilizers have been used 24 months prior to removal;
- Soil from KRAV approved/KRAV certified land

Analyses

12.3

KRAV certified production inputs must be analyzed for content of heavy metals listed in Standard 4.2.5 and in Appendix 3. Products marketed as fertilizer must also be analyzed for nitrogen, phosphorous, and potassium levels. The frequency of analysis is established when certification of production is determined. The analysis methods for each substance can be found at KRAV's web site, www.krav.se. The level of heavy metals may not be so high so that the highest permitted application will render the substance worthless for the production. Heavy metal levels in sowing and potting soils may not exceed levels given in Appendix 3.

Packaging

12.4

KRAV certified production inputs must declare the following information on the packaging:

- Raw materials. The origin of raw materials from conventional or organic production must be indicated for agricultural and residual products from the food industry.
- The nitrogen, phosphorous, and potassium content must be stated for products marketed as fertilizer. The contents may be stated as an interval.
- A recommended dose or the highest permitted dose according to Standard 4.2.5 and Appendix 3. The recommended application may not exceed the highest permitted applications.

The operator producing products in bulk must include a product sheet with the corresponding information.

Marketing of certified production inputs, where the packaging does not comply with these Standards, may only continue until the 31st of December 2004. This only applies if the packaging complies with the 2003 KRAV Standards.

12.5

Certified production inputs may contain conventional raw materials but only those with 100 weight by percent organic raw materials may also be called organic.

13. TEXTILES

13.1 EXTENT

These standards regulate the processing of KRAV certified fibres. These may come from organic production certified by KRAV or from wild production certified by KRAV. The standards relate to all kind of products made of natural fibres, including:

- Yarn
- Fabrics
- Clothes, cloths, mats and decoration textiles
- Non-woven products

13.2 THE FOUNDATION OF THE STANDARDS

The KRAV standards for processing of KRAV certified fibre into ready-made products are based on the following:

- The fibre raw materials shall as far as possible be 100 percent KRAV certified
- Non textile raw materials used in a textile products shall as far as possible be harmless to people and the environment, in production and consumption as well as at disposal
- To avoid an unnecessary load on the environment should the raw material have the properties that characterise the final product (e.g. naturally coloured fibre, natural flame retardation)
- When assessing chemical inputs shall their total environmental impact be considered
- The processing of KRAV certified fibres shall as far as possible:
 - Use the best possible technology from an environmental point of
 - Minimize the use of energy
 - Use KRAV certified or natural substances
 - Avoid the use of chemical inputs
 - Minimize pollution

13.3 RAW MATERIALS

Apart from KRAV's standards for crop production, animal production, handling and recertification, etc. the following standards apply:

13.3.1

Defoliation of cotton may, subject to examination, be used with the following agents, until the year 2002:

- Calcium chloride
- Magnesium chloride
- Sodium chloride

13.3.2

Field retting of flax and other fibres is permitted. If water or steam retting is used there shall be an appropriate wastewater treatment.

13.3.3

The experiences of organic silk production are not sufficient to establish definitive standards. Registered production will be assessed according to the standards

below, but KRAV reserves the right to impose additional requirements:

- Mulberry tree plantations for silk shall be KRAV certified
- Use of hormones and veterinary treatments shall be in compliance with KRAV standards for animal production
- All products, including disinfectants, in the silkworm cultivation, egg production, reeling and de-gumming shall be in compliance with KRAV standards for handling and processing
- At de-gumming there shall be an appropriate waste water treatment
- Silk may not be treated with metal salts

Chemical products used for scouring and de-greasing of wool shall be readily degradable (OECD 301) and there shall be an appropriate wastewater treatment. Source materials not certified by KRAV

The KRAV labelling standards permits a limited blending of other than KRAV certified fibres. The standards below applies to such fibres:

13.3.5

Non- KRAV certified source materials may be used when needed to produce a long lasting quality, a certain function or fashion. Fibres or their production that are apparently hazardous to consumers, workers or the environment are excluded.

13.3.6

It is not permitted to use the same fibre of both KRAV certified and non-certified origin in the one and same product.

There are no standards for sewing thread or sewn labels.

Approved fibres

The following fibres are approved without further examination:

- Natural fibres which are not available in a KRAV certified quality. The producer have to demonstrate that he/she has made considerable efforts to establish that this is the case and continually examine the possibilities to obtain KRAV certified source materials.
- Polvester
- Viscose
- Polyurethane (Lycra, Elastan)

Unapproved fibres

The following fibres are not approved to use in a KRAV certified product:

- Acrylic - Fibreglass - Chlorofibre - Asbestos Cuprammonium rayon Modakrvlic - Flourinated fibres Modal

13.3.10

The use of fibres that are not mentioned above either as approved or not approved will be examined on application by the producer.

13.4 **ACCESSORIES**

13.4.1

Accessories may not contain more cadmium than 0.1 mg/kg. KRAV may at a future date develop threshold values also for nickel and chrome. Products were non-textile accessories constitute a major part of the product cannot be KRAV certified.

13.5 PROCESSING

General

13.5.1

The KRAV standards for handling and processing apply in all relevant parts. (Standards for separation of products, documentation, use of pesticides etc. are applicable, while standards for additives and processing aids in food production are not applicable).

13.5.2

The following exception from the standards of processing applies; The standards for separation can be given a more generous interpretation if the requirements would cause substantial economical disadvantages or if the environment would be negatively effected by huge quantities of processing liquids that could not be re-circulated in the process. In order to grant such exception it shall be verified (e.g. by means of analysis) that the KRAV certified production is not contaminated.

13.6 **ENVIRONMENTAL CRITERIA** FOR WET PROCESSING

The environmental criteria for wet processing may apply exclusively to the KRAV certified production and not to the whole production unit. This assumes that the KRAV certified production constitutes a minor part (<25 percent) of the total production or if it is carried out in separate production lines.

13.6.1

Each production unit shall:

- at least comply with national regulations regarding environment
- document the use of chemicals, water consumption and waste water treatment, including the disposal of sewage sludge and relevant analyses of effluents

13.6.2

Each unit shall have at least a functioning, internal or external, sewage water treatment. As a minimum a sedimentation stage, temperature and pH regulation shall be implemented. In addition reduction of oxygen consuming compounds and phosphorus shall be made depending on the inputs used, the extent of production, the legislation and the economic development in the country, and

the nature of the recipient. The requirements do not apply for plants with closed systems.

13.6.3

In cases of minor deviations from the environmental criteria the producer shall have developed a plan for how to improve the environmental performance of the production no later than one year after the initial certification. The plan shall contain a time schedule for implementation.

13.7 INPUTS

The standards regulate the use of chemical products (dyes, auxiliaries, processing aids, finishing agents etc.) in textile processing. These are referred to as inputs in the text. The standards do not apply to lubricating oils for machinery, paints for machines and facilities and similar, unless they are likely to contaminate the textile product.

Documentation

13.7.1

All inputs, including preservatives, shall be declared by the operator, including relevant data to assess (among others, safety data sheets according to EEC 1556/91).

13.7.2

Single chemical compounds that constitute more than one percent of the active substance in an input shall be declared with the information that KRAV needs to assess its effect on the environment and health (normally this includes CAS number, chemical structure and eco-toxicological data).

13.7.3

Only formula that have been fully declared and approved by KRAV prior to start of production may be used.

Assessment of inputs

13.7.4

All inputs will be evaluated according to the following table of biological degradability and toxicity for aquatic organisms except for those which exceptions are given below. The same assessment will be made of metabolites, when such are known.

	Bio-degradability (percent) 28 days (OECD 302 A)	Toxicity for aquatic organisms (mg/L (LC50 or EC50 or IC50 for algae, water-fleas and fish) (OECD 201, 202, 203)
Can be approved	< 70	>100
Can be approved	> 70	10-100
Can be approved	> 95	1-10
Prohibited	< 70	< 100
Prohibited		< 1

13.7.5

In addition to the requirements regarding bio-degradability and toxicity for aquatic organisms, an input cannot be approved by KRAV if it is:

- Carcinogenic (R45)*
- Mutagenic (R46)*
- Teratogenic (R60-63)*
- Toxic to mammals LD50 < 2000 mg/kg shall not be allowed
- Known to be bio-accumulative and not bio-degradable (< 70% 28d OECD
- Are listed on the list of not permitted chemicals or contains chemicals on this list.
- * R# refers to the European system as described in Reg. 92/32/EEC)

Notwithstanding that an input fulfils the criteria above it can be prohibited if there is another input with the same function that:

- is natural
- has less negative environmental impact.

Prohibited chemicals

13.7.7

The following chemicals may not be present in any input:

- Biocides including PCP, TCP and PCB
- Fluorocarbons
- Halogenated flame proof agents
- Halogenated anti-moth agents
- Heavy metals (iron is excluded; see also limits for

impurities in dye stuffs and copper in certain dyestuffs)

- Organo-chloride carriers
- Other chlorinated compounds
- Other halogenated compounds

13.7.8

The following chemicals may not constitute more than one percent of any input:

- α-MES
- Antimony
- AOX Absorbable halogenated hydrocarbons, and substances that can cause their formation
- DEHP
- DTPA
- EDTA
- LAS
- NTA
- Quarternary ammonium compounds (DTDMAC etc.)
- Phosphonates

13.8 SPECIAL REGULATIONS FOR DIFFERENT STEPS IN PROCESSING

In addition to the general criteria the following standards apply to specific steps in the processing.

13.8.1

Spinning oils (avivage) and waxes shall be readily bio-degradable (OECD 301), or made from plant or animal origin. Paraffin is approved for waxing of varn.

13.8.2

Sizes shall be ultimately degradable (OECD 302), or be recycled to a minimum of 75 percent.

13.8.3

For de-sizing and washing the general criteria for inputs apply.

13.8.4

Sodium hydroxide or other alkali is permitted for mercerizing, but shall be recycled to the greatest possible extent.

13.8.5

Chlorinated and perborate bleaching agents are not permitted for bleaching, colour removal, or stain removal.

13.8.6

Mordants may not contain heavy metals above the limits indicated under 'dyestuffs'.

13.8.7

Anti-matting (superwash) with hypochlorite or other chloride-based compounds are not permitted.

13.8.8

Enzymes shall be readily bio-degradable (OECD 301).

Dyestuffs

13.8.9

The following dyes may be used:

- Dyes derived from plants (CI 75 000-75 999)
- Mineral dyes not containing heavy metals

13.8.10

The following are not permitted:

- Heavy metal dyes (except for iron)
- Complex bonded metals in excess of 1g metal/kg textile, calculated on the applied quantity of dyestuff
- Complex bonded dyestuffs with copper in excess of 1 g/kg textile
- Dyes capable of releasing aromatic amines that are known or suspected carcinogens
- Dyes that are, or are suspected of being, allergenic or carcinogenic
- Dyes which toxicity for aquatic organisms, LC50 is less than 10mg/L

13.8.11

Apart from what is stated in the paragraph above, the general criteria for assessment of inputs apply for the assessment of dyestuffs and pigments, except for the criterion for biodegradability.

Dyestuff contamination

13.8.12

Dyestuffs shall not contain more impurities than:

Antimony 50 ppm Arsenic 50 ppm Barium 100 ppm Lead 100 ppm Cadmium 20 ppm Chromium 100 ppm Iron 2500 ppm Copper 250 ppm Manganese 1000 ppm Nickel 200 ppm Mercury 4 ppm Selenium 20 ppm Silver 100 ppm Zinc 1500 ppm Tin 250 ppm Cobalt 500 ppm

(ETAD Agreement)

13.8.13

Urea may not be used in dyeing

The fixation of a dye may not be too low. KRAV reserves the right to reject formulas because of insufficient fixation of dyestuffs. A guideline for the evaluation of the degree of fixation is that it should be at least 70 percent at a colour shade of 2 percent in a usual dyeing procedure (exhaust dyeing) as described by the manufacturer. If possible, dyeing should be made as standing bath. The requirements for fixation do not apply for dyestuffs and pigments derived from plant or animal source materials.

Printing

13.8.15

The total proportion of aromatic solvents in printing pastes may not exceed 5 percent.

13.8.16

Only printing methods based on water or natural oils are allowed.

13.8.17

Colour residues shall be recycled or disposed of in an environmentally safe way. Surplus pastes should be handled as solid waste and may not reach the wastewater.

13.8.18

Only readily bio-degradable (OECD 301) thickeners may be used in dyestuff printing.

Other methods and treatments

13.8.19

Other processing methods and the use of chemical products will be assessed according to the general standards for inputs.

13.8.20

No restrictions apply to mechanical and physical treatments.

13.8.21

Chemical pesticides or biocides (such as TCP and PCP and their salts and esters) may not be used, also during transport and storage.

13.9 QUALITY CRITERIA FOR THE FINISHED PRODUCT

Formaldehyde content

13.9.1

The formaldehyde content (tested according to Japan Law 112) may not be higher than:

- 20 ppm for baby clothing and other clothes intended for direct skin contact
- 20 ppm for bed textiles
- 75 ppm for other clothing and outerwear
- 100 ppm for interior decoration textiles

13 10 LARFILING

13.10.1

The labelling shall follow the KRAV general standards for labelling (Chapter 2.6) with the following modifications:

13.10.2

The materials in non-textile accessories shall be declared. They are not included in the calculation of the proportion of organic ingredients.

13.10.3

Inputs used during processing do not have to be declared.

Information on fastness, resistance, shrinking and washing shall be included in the labelling, whenever appropriate and applicable.

13.10.5

In the labelling or the packaging information shall as far as possible be declared from which country the fibre and the accessories originate, where the main processing has been carried out and where the latest stage of essential processing has been made. At the request of clients the producer shall disclose complete information where the different stages of processing has been carried out.

13.10.6

Finished products intended for the consumer market may have sewn-on labels, attached labels or labels on the packaging. The KRAV mark included on sewn-on labels should be washable. The ultimate producer shall be identified on the same label.

13.10.7

Textiles can be KRAV labelled where the certified textile constitutes only a part of the finished product (i.e. furniture upholstery). It shall be clear from the labelling that it only relates to the textile part of the product.

13.10.8

The following exception may be granted, subject to examination:

If a KRAV certified finished product is printed on a total surface of less than 30 percent, the products may be KRAV labelled even if the printing method does not comply with the standards. Exceptions will not be granted if satisfactory print could be offered by a KRAV certified operator.

14. HIDES, LEATHER AND SKINS

Leather and skins are new areas for KRAV's standards. The standards may therefore be subject to substantial revisions. In case of revision certified production will receive reasonable time to adapt to any new standards.

14.1 EXTENT

14.1.1

These standards apply to processing of KRAV certified hides and skins. The standards cover all kind of products made out of hides, skins and leather.

14.2 RAW MATERIALS

T4.2.T

Hides and skins shall originate from KRAV certified livestock production.

14.2.2

Salting of hides and skins is permitted. For production located in areas where salt in wastewater can constitute a considerable problem, KRAV reserves the right to require other methods (drying, cooling etc).

14.2.3

Preservatives may not be added to the skins.

14.3 ACCESSORIES

14.3.1

Accessories containing more that 0,1 mg/kg Cadmium may not be used. KRAV may, at a future date, set limit values also for Chrome and Nickel. Products where accessories constitute a major part cannot be certified. No requirements are made for sewing thread.

14.4 PROCESSING

14.4.1

The standards for textiles apply.

14.5 ENVIRONMENTAL CRITERIA FOR WET PROCESSING

14.5.1

The standards for textiles apply. Appropriate handling of solid waste shall take place.

14.6 INPUTS

14.6.1

Only inputs approved by KRAV may be used. For the time being, the criteria for evaluating inputs for textiles will be used as a starting point, when applicable.

14.7 SPECIAL STANDARDS FOR STEPS IN THE PROCESS

14.7.1

Chlorinated and aromatic solvents may not be used for de-greasing. In plants with closed systems or extensive recycling, exemptions may be granted, subject to examination.

14.7.2

Sodium sulphide may be used for hair removal. Measures shall be taken to reduce the inconveniences for employees.

14.7.3

De-liming with carbon dioxide is permitted. The use of ammonium chloride and ammonium sulphate shall be limited and shall normally only be used as a complement to de-liming with carbon dioxide. Producers using processes depending on larger quantities of ammonium chloride and ammonium sulphate shall develop a plan for how to develop alternative methods.

14.7.4

- Tanning or preparation with chrome is not permitted
- Natural tanning and preparation agents are permitted without restrictions
 At a future date, KRAV may develop standards for the environmental effects of
 the production of natural tanning and preparation agents.

14.7.5

The standards for textile dyes and pigments apply for dying and printing.

14.7.6

For other processes the following apply:

- Halogenated compound may not be used
- Chlorinated or aromatic solvents may not be used.

14.8 LABELLING

General

14.8.1

The labelling shall follow the KRAV standards for textiles. Impressing the KRAV mark may be done if the ultimate responsible producer is indicated in conjunction with the mark.

ABBREVIATIONS USED IN THE STANDARDS FOR TEXTILES, HIDES, LEATHER AND SKIN

 α -MES α -methyl ester sulphonate (C16/18)

AOX Absorbable halogenated hydrocarbons, and substances that can

cause their formation

APEO Alkylphenoloxylate

CI Colour Index

COD Chemical Oxygen Demand DEHP Di-2ethylhexylphtalate

DTPA Diethylenetriamine pentacetate EC50 Effect concentration (50% effect)

EDTA Ethylendiamine tetraacetate

ETAD Ecological and Toxicological Association of the Dyestuff

Manufacturing industries

IC50 Inhibition concentration (50% inhibition)

LAS Linear alkyl benzene sulphonate LC50 Lethal concentration (50% mortality)

OECD Organization of Economic Cooperation and Development

PCB Polychlorinated biphenyls

PCP Pentachlorphenol TCP Tetrachlorphenol

15. RETAILERS

15.1 GENERAL

15.1.1

A KRAV certified retail shop shall contribute to increased availability of KRAV approved products through:

- A wide range of KRAV approved products;
- Displaying KRAV's name and mark;
- A staff well-informed about KRAV and organic production;

Certification may take place either through a retailer contract according to the Standards in this Chapter or by a processing contract according to Chapter 9. In addition to the Standards in this chapter, KRAV's other standards also apply in the appropriate areas. See Reading Instructions on page 22.

Farm shop

15.1.2

KRAV farmer licensees selling KRAV approved products from another producer must certify the shop according to the Standards in this chapter if:

- the value (at the consumer level) exceeds three base amounts annually of unpackaged KRAV approved products from another producer/supplier and/or.
- the KRAV approved product from another producer/supplier is handled or packaged

The above does not apply to producers who only sell their own produced products in farm shops. Special forms shall be used when making an application to certify a farm shop. Contact KRAV for more information.

Occasional sales

15.1.3

The Standards in this chapter apply when appropriate to occasional sales of KRAV approved products. All such sales shall be reported to KRAV unless it is solely own-produced products.

Examples of occasional sales can be open-air markets, factory outlet sales and markets.

15.2 ASSORTMENT AND HANDLING

KRAV approved products may be sold prepacked (packaged by the producer or supplier), packed in the shop, processed and as single items over the counter or for self-service.

15.2.1

A certified retail shop shall offer KRAV approved products in a quantity that reflects the availability on the market. The retailer shall strive for a continuous development of the breadth of the product range to include more products and product groups.

The objective is that a consumer shall be able to choose a KRAV alternative from all product groups for the shopping cart. A product group means items grouped together such as flour, pasta or fruit concentrates.

Processing in a retail shop

15.2.2

Standards for processed KRAV approved products can be found in Chapters 9 and 16.

Single items

15.2.3

Single item sales of KRAV approved product may occur if there is no obvious danger of mixing with conventional product.

When there is parallel handling of KRAV approved and conventional products single items, and such products cannot be distinguished by their outer appearance, the following applies:

- KRAV approved products must be clearly labelled while in storage (Standards 2.12.6-8)
- The handling shall occur in such in way that there is no danger of mixing or contamination (Standard 2.12.3).

In cases where single item products are individually marked it is not considered to be parallel handling.

15.2.4

Handling and sales as single items over the counter (e.g. cheese, meat) may take place if the packaging (the cheese, the meat etcetera) from which the product is sold is properly labelled. The standards applying to handling are the same as in Standards 15.2.5-7.

Packaged at the retailer

15.2.5

A certified retail shop has the right to pack and repack a KRAV approved product. All such handling shall occur in such a way that there is no danger of mixing with, or contamination from conventional products.

15.2.6

When equipment, utensils, surfaces, etcetera are used handling both KRAV approved and conventional product, the danger of mixing shall be minimized through a clear differentiation in the processes. Equipment, utensils, surfaces, etcetera shall be carefully cleaned before the handling of KRAV approved products begin. There must be written routines to ensure this handling.

The routines be advantageous to integrate into the shop's own inspection program.

In regards to packaging material see Standards 2.12.13-14.

Note that cling film containing PVC and other chloritic plastics are not permitted when handling and packing KRAV approved products.

Cleaning, disinfection and pest control

15.2.8

In regards to cleaning, disinfection, and pest control, see Standards 2.12.9-12

15.3 LABELLING

15.3.1

A KRAV certified retailer has the right to label and pack KRAV approved products with KRAV's mark. With this type of product labelling, the name of the retailer must be on the product. See also Standard section 2.13. If the retailer has entered a written agreement with the supplier (distributor or producer), the retailer may label goods with the name of the KRAV approved supplier. Where goods are re-packed, for example with trimming of vegetables, the retailer may label the product as it was originally labelled.

15.4 DISPLAY

The KRAV approved products shall be easily accessible and highly visible for the customer.

15.4.1

The displays in the retail shop of both KRAV approved and conventional products shall be constructed in such a way that there is no risk of mixing or contamination. All the signboards must clearly indicate which are the KRAV approved products. KRAV approved products shall be displayed so there is no risk of contamination from containers, packing materials or other factors in the surroundings. If special packaging materials have been produced for KRAV approved products, it must be placed near these products so that it cannot be misunderstood for which products the material is intended.

15.4.2

At counters selling only KRAV approved products, the display information may include all products. At counters selling both KRAV approved and conventional single items by weight, every KRAV approved product shall be clearly labelled or displayed. In addition to the KRAV mark, the signboard shall, when possible, indicate the ultimate responsible producer 's name when possible. See also Standards 2.13.3, 2.13.8, and 2.13.17.

15.5 DOCUMENTATION

15.5.1

For documentation concerning bought and sold KRAV approved product, see Standard 2.3.5.

15.6 MARKETING

15.6.1

Certified retail shops may market the business as KRAV certified. See Standard 2.14.4.

15.6.2

The certificate indicating that the retailer is KRAV certified must be placed in a highly visible location for the customer.

15.6.3

At the entrance it shall be apparent that the shop is KRAV certified for example by a decal or equivalent notice.

15.6.4

Information counter(s) for information about KRAV and organic production shall be accessible in the shop in a highly visible location for customers.

Customers must be able to easily find information about KRAV approved products.

15.7 WELL-INFORMED STAFF

The staff shall be well-informed about organic production and KRAV. The retailer shall try to always have some staff in the shop during open hours who completed a course on KRAV and organic production. See also Standard 2.3.4.

Staff who have completed a course should be able to produce a course certificate.

16. RESTAURANTS AND OTHERS INDUSTRIAL KITCHENS

The standards in this chapter include all types of industrial kitchens, restaurants, and cafés. Even smaller production units such as sheltered housing and preschools are included. In the following text, industrial kitchen are used as a collective term.

16.1 GENERAL

т6.т.т

A KRAV certified industrial kitchen and industrial kitchen that has registered KRAV approved food shall contribute to an increased availability of KRAV approved meals and products through:

- A wide range of KRAV approved meals and products;
- Displaying the KRAV name and mark;
- A staff well-informed about KRAV and organic production

16.2 CERTIFICATION OF INDUSTRIAL KITCHENS

16.2.1

An industrial kitchen can certify the entire operation or parts of it such as:

- à la carte
- lunch
- buffet
- breakfast
- cafés

À la carte

16.2.2

An à la carte menu shall offer at least two KRAV approved main courses daily.

Lunch

16.2.3

A lunch menu shall have at least one KRAV approved main course weekly.

A KRAV approved supper course may replace a KRAV approved lunch course. By main course is meant the main dish ingredients and secondary components thereof.

KRAV approved dish

16.2.4

A KRAV approved dish shall contain 100 percent by weight KRAV approved ingredients. If KRAV approved ingredients cannot be obtained, KRAV permits a lower limit of 70 percent by weight KRAV approved ingredients. This assumes that the main ingredients in the dish are KRAV approved. Note that KRAV's list of the permitted additives (Appendix 7) also applies to conventional ingredients in a KRAV approved dish.

16.2.5

In fish and shellfish dishes, the first choice shall be products from KRAV certified aquaculture and fisheries. When this is not possible, KRAV accepts a lower limit of KRAV approved ingredients of 50 percent by weight in the dish. From

the 1st of January 2006, the lowest possible level will be 70 percent by weight. Conventionally farmed fish are not permitted.

KRAV can supply a recipe template for those who wish it.

T6.2.6

Game not reared in enclosures may be used in KRAV approved dishes on the condition that 100% of the other ingredients in the dish are KRAV approved. When KRAV approved ingredients are not available, KRAV permits a lower limit of 95 percent by weight for other ingredients.

Reindeer is not considered game in Sweden.

16.2.7

As far as possible, the accompaniments to the KRAV approved dish shall be KRAV approved products.

Accompaniments include for exemple beverage, bread, contents of sandwiches, salads, coffee, tea, ketchup and mustard. The objective is to offer the guest a complete KRAV approved meal.

Buffet

16.2.8

In KRAV approved lunch or supper buffets, there must be a complete meal (main course, accompaniments such as for example beverage, salad and bread) composed of KRAV approved products. The buffet shall reflect the availability on the market of KRAV approved products. A significant portion of the offerings on smargasbord and Chritsmas buffés shall be KRAV approved.

Breakfast

16.2.9

At least one KRAV approved alternative must be offered in nine of the following product groups. The restaurant must document which product groups have been chosen.

- Coffee
- Tea
- Milk
- Iuice/nectar
- Sugar/honey
- Sour milk/yogurt
- Bread
- Cheese
- Marmalade/jam
- Breakfast cereals/müsli/bran
- Fruits/vegetables
- Egg

The other product groups shall reflect the availability on the market.

KRAV's objective is that KRAV approved eggs shall be part of KRAV approved breakfast in the future.

Cafés

16.2.10

In the following product groups (in those product groups handled by the coffee bar) at least one KRAV approved alternative shall be offered:

- Coffee
- Tea
- Milk
- Fruit concentrate/juice/nectar
- Sugar/honey
- Sandwiches (The objective shall be that the content consists of 100 percent KRAV approved ingredience.) When KRAV approved ingredience cannot be obtained, KRAV may permit a lower limit of 70 percent by weight KRAV approved ingredients in the sandwich).
- Buns/biscuits (cakes, confections, small biscuits)
- Fruit

The other product groups shall reflect the availability on the market.

Handling

16.2.11

When there is parallel handling of KRAV approved and KRAV non-approved product single items, and such products cannot be distinguished by their outer appearance, the following applies:

- Products shall be well-labelled during storage and serving (Standards 2.12.6-8)
- The handling shall occur in such in way that there is no danger of mixing or contamination (Standard 2.12.3)

16.2.12

When equipment, utensils, surfaces, etcetera are used handling both KRAV approved and conventional products, the danger of mixing and contamination shall be minimized through a clear differentiation in the processes. Equipment, utensils, surfaces etcetera shall be cleaned carefully before handling KRAV approved products may begin. There must be written routines to ensure this handling.

The routines be advantageous to integrate into the industrial kitchen's own inspection program.

16.2.13

In regards to packaging material, see Standards 2.12.13-14.

Note that plastic film containing PVC and other chloritic plastics is not permitted when handling or packing KRAV approved dishes/products.

Cleaning, disinfection and pest control

16.2.14

In regards to cleaning, disinfection and pest control see Standards 2.12.9-12.

Labelling

16.2.15

KRAV's B-mark shall be used for KRAV approved dishes, see section 2.13.

16.2.16

It shall be clearly indicated which ingredients are of KRAV approved origin. If this is not possible, the staff must be able to answer questions about which ingredients in the dish that are KRAV approved.

16.2.17

The menu/bill of fare must clearly indicate the KRAV approved dish. The KRAV approved alternative must be clearly labelled on the buffet, breakfast and in cafés.

16.2.18

KRAV approved product/dish must be displayed so that there is no mixing or contamination of the product/dish with conventional. KRAV approved product may not be contaminated by containers, utensils or other factors in the surroundings.

KRAV approved products shall be easily accessible and highly visible for the guest.

Documentation

16.2.19

For documentation of purchased, used and sold KRAV approved products, see Standard 2.3.5.

KRAV can supply recipe templates for those who wish it.

Marketing

16.2.20

Industrial kitchens that have certified their entire operation may market themselves as KRAV certified. In those cases where industrial kitchens have certified one or more parts of their operation, they may market these parts as KRAV certified.

16.2.21

The certificate indicating that the industrial kitchen is KRAV certified must be placed in a highly visible location for the guests. The certificate indicates in which areas the industrial kitchens are certified.

T6.2.22

At the entrance it shall be apparent that the industrial kitchen is KRAV certified for example by a decal or equivalent notice.

Well-informed staff

16.2.23

Staff shall be well-informed about organic production and KRAV. Industrial kitchens shall try to always have some staff in the kitchen during open hours who have completed a course on KRAV and organic production.

Employees who have completed a course should be able to produce a course certificate.

16.3 REGISTERING OF KRAV APPROVED FOODSTUFFS

16.3.1

Industrial kitchens may register with KRAV if they use one or more KRAV approved foods. The registered foods must be totally replaced with KRAV approved.

16.3.2

KRAV must be informed of any changes, expansions or reduction of the number of KRAV approved registered foodstuffs.

16.3.3

If a KRAV approved registered food is not obtainable, the guest and KRAV must be informed immediately.

Seasonal foods

16.3.4

KRAV approved seasonal foods may be used without registration with KRAV. The purchases shall be documented.

16.3.5

The guest shall be informed of which KRAV approved seasonal foods are used.

Cleaning, disinfection and pest control

In regards to cleaning, disinfection and pest control, see Standards 2.12.9-12.

Labelling

16.3.7

KRAV's B-mark shall be used for KRAV approved foods.

Foodstuffs not mixed with other foods in the industrial kitchen and which are marked with KRAV's A-mark on the original packaging may continue to be marked with the A-mark.

Documentation

16.3.8

The quantities of purchased registered KRAV approved foods shall be documented. There must also be records of the quantities used. The documentation shall be saved for at least two years.

Marketing

16.3.9

Certificate indicating the foodstuffs the industrial kitchen has registered must be placed in a highly visible location for the guests.

16.3.10

At the entrance it shall be apparent that the industrial kitchen has registered KRAV approved foodstuffs by for example a decal or equivalent notice.

Well-informed staff

16.3.11

The staff shall be well-informed about organic production and KRAV.

16.4 TEMPORARY CERTIFICATION

16.4.1

In certain cases, permission may be granted to use KRAV's name and mark when serving KRAV approved dishes or foods.

Contact KRAV for more information about applying for temporary permission.

17. RECERTIFICATION OF PRODUCTS THAT ARE APPROVED BY OTHER CERTIFICATION BODIES

KRAV wishes to stimulate consumption and increase the supply of organic products. KRAV therefore strives to increase the volume of organic production by facilitating global trade with organic products.

The KRAV recertification is based on that the product in question is produced according to KRAV standards or equivalent. In the assessment KRAV take into consideration

- The IFOAM intention with organic production
- The KRAV goal with organic production
- The KRAV assessment of the certification body

Production that is certified or products that are approved by another IAC program recertifies directly by KRAV. For other recertification, a comprehensive assessment is made based primarily on our own experience and that of others. KRAV is of the opinion that a vegetable product inspected according to the (EEC) no 2092/91 can on the whole be recertified directly without additional requirements. An animal product requires deeper analysis and this is primarily based on that KRAV values animal welfare questions highly.

Permitted additives and processing aids are those that are specified in the IBS.

According to 17.3.1.1 KRAV uses an assessment list in the recertification process. The assessment list has been compiled with the help of a fact-based comparison of standards between the (EEC) no 2092/91 and the IBS. The assessment list is kept updated mainly based on our own experience and that of others on how inspection and certification function outside of Sweden. By requesting information is meant that we contact the actual certification body to obtain reports on the manner of production. If KRAV considers it necessary, we go further to the next step in the production process. KRAV can deny a recertification on the basis of that the assessment list is not fulfilled or if we judge that a recertification could in some way damage KRAV's credibility or label.

17.1 GENERAL INFORMATION ON RECERTIFICATION

17.1.1

Recertification occurs either through a certification based on other certification bodies' certificates (certification transference) or through certification based on inspection reports. When recertification is based on certification transference, KRAV requires that the actual certification body be recognized by KRAV according to 17.2 .

17.1.2

When applying to have a production certified or a product approved, it is required that the production or product is certified according to 17.3 and 17.4.

For registration to recertification, the relevant sections of Chapter 2 are also applicable.

17.2 RECOGNITION OF CERTIFICATION BODY

17.2.1

For recognition, the certification body shall be either IFOAM accredited or ISO 65/EN45011 accredited. For recognition, KRAV also makes a comprehensive assessment of the certification body.

For recertification of production or products certified by a certification body that applies other quality assurance systems than IAC or ISO 65/EN45011, KRAV makes an independent evaluation of the certification body.

The comprehensive assessment is based primarily on our own experience and that of others. At the KRAV web site, www.krav.se, there is a list of certification bodies that KRAV recognizes and also all of the programs that KRAV recognizes.

17.3 RECERTIFICATION OF PRODUCTION OR PRODUCT

17.3.1 GENERAL REGULATIONS

17.3.1.1

For a production or a product to be recertified, it must be certified according to an IFOAM accredited program or approved according to the (EEC) no 2092/91. When recertifying a production or product certified according to a program not IFOAM accredited, KRAV uses an assessment list in the recertification process.

For certification of a production or approval of a product, the relevant sections of Chapter 2 are applicable.

At the KRAV web site, www.krav.se, you will find the current assessment list.

17.3.2 VEGETABLE PRODUCT

17.3.2.1

KRAV can recertify an organic vegetable product if it is:

Standard/program	Additional requirements
Certified according to an IFOAM accredited program	No additional requirements

or

KRAV may require information on the following when recertifying a vegetable product: • General reliability (including social aspects), see
in addition 2.3.9-10 and 2.9.5

At the KRAV web site, www.krav.se, you will find the current assessment list.

17.3.3 ANIMAL PRODUCT

17.3.3.1

KRAV can recertify an organic animal product if it is:

Standard/program	Additional requirements
Certified according to an IFOAM accredited program	No additional requirements

or

Approved according to the (EEC) no 2092/91	KRAV may request information about the following:
	General reliability (including social aspects), see in addition 2.3.9-10 and 2.9.5
	KRAV will ask for information on the following:
	Grazing opportunity at the time of fattening indoors during summer Transport of animals Keeping established animal groups together
	with recertification of animal product

At the KRAV web site, www.krav.se, you will find the current assessment list.

17.4 PERMITTED ADDITIVES AND PROCESSING AIDS

17.4.1

The following additives and processing aids are permitted when recertifying products intended for human consumption:

• Additives and processing aids according to the IBS.

18. KRAV INSPECTED AND CERTIFIED FOREIGN PRODUCTION

18.1.1

All relevant parts of KRAV's standards apply. Where these are not applicable due to different circumstances, exceptions may be made if such exceptions comply with IFOAM's Basic Standards and/or the EU standards for organic production.

In addition to the applicable standards, KRAV may issue special guidelines/ instructions for certification to ensure an ecologically sustainable production. This may concern e.g. measures to prevent erosion, improve water management, protect biodiversity etc. As far as possible, such standards shall be based on consultation with local organizations in organic farming, conservation and environmental protection.

19. FISHING

The Standards include all parts of the chain of custody from the fishery to the retailers.

Every section of the standards begins with a principle that describes the starting point for the standards in the section. The section describes what is hoped to be gained on a visionary level, even if this is not possible to realize at the present in the form of detailed standards. Principles are founded primarily on the objectives used in the development of these standards.

After the principles follows a rationale. This describes what the standards cover at the present and why the specific issues are considered.

After the rationale there is a list of the requirements that the certified organization must fulfil.

19.1 COMPETENCY REQUIREMENTS FOR KRAV AND COMPLIANCE WITH THESE STANDARDS

Principle

These standards are created to drive development in the fishing industry towards a sustainable fishing and processing. Standards have been developed during a long process involving experts in many areas. To ensure that the standards are actually complied with, KRAV must be able to inspect that all standards are followed in the entire chain of custody with great certainty.

Consumers must be able to trust eco-labelling and the standards shall encourage and facilitate trade with KRAV approved fish- and shellfish products. KRAVs procedures for where and how decisions are taken to certify fishing activities must be transparent. It shall also be transparent as to the identity of those making the decisions. The standards shall facilitate trade with products produced in compliance with these Standards. There must be room for standards to be further refined if this is necessary. Standards are developed for conditions in Scandinavia and are neither tested nor intended for other areas.

Those who wish to have their production KRAV certified are responsible to prove that they comply with the requirements. Therefore, businesses or organisations that wish to have a stock certified shall deliver the documentation and pay for the work for assessing the stock.

Rationale

The competency requirements in these standards ensure that KRAV maintains a system that guarantees their independence and competence.

At present, the standards do not directly protect against bycatches of marine mammals. KRAV shall therefore gather knowledge and statistics of catches of marine mammals to collect sufficient documentation to consider changes in the standards, if necessary

The application of the standards is geographically limited because the work resulting in these standards could not take into consideration the conditions outside of the areas that have been defined. No one has investigated if this system leads to a more sustainable fishing outside of the defined areas.

19.1.1 Quality assurance

19.1.1.1 Certification for marketing

These standards shall only be applicable in their entirety. A certification according to the standards may be called "KRAV certified", "KRAV certified according to 2004 standards for fisheries" or the equivalent in other languages. A product derived from a certified operation and fulfilling all parts of the standards may be marketed as "from a KRAV certified fishing" or the equivalent in other languages. Standards may be applied together with other voluntary labelling systems.

19.1.1.2 Where do the Standards apply?

Standards in chapters 19.2, 19.3 and 19.4 are applicable in fishing waters within 200 nautical miles from a Scandinavian country.

19.1.1.3 Statistics covering non-target species, bycatches

KRAV shall maintain statistics of bycathches of marine mammals and birds. The organization shall publicize the statistics annually.

19.1.2 Decision-making organization

19.1.2.1 Task of the Fish Committee

The KRAV Board of Directors appoints a Fish Committee that shall have a documented terms of reference according to IAC or ISO65. The Fish Committee's main task is to advise KRAV whether or not fishing of the indicated stock using the stated methods shall be approved.

19.1.2.2 Working procedures of the Fish Committee

A researcher with documented knowledge of marine ecology leads the Fish Committee. The Fish Committee shall be competent to jointly to judge fishing effects on the marine environment. Thus, there must be competence in the areas of marine ecology, fisheries biology, environmental preservation, ethology, fishing methods, and development of fishing gear. The KRAV Board of Directors shall also be represented in the Fish Committee.

The Fish Committee shall also have experience of fishing and have competence within eco-labelling of food products. The Fish Committee contacts other experts as needed. The Fish Committees' decision shall be unanimous.

19.1.2.3 Opinions from stakeholders

Prior to KRAV taking a decision to permit or not permit KRAV certified fishing, the stakeholders shall be allowed to express their opinions concerning the suggested decision. The recommendation of the Fish Committee shall accompany the suggested decision.

19.1.2.4 Decision by KRAV

KRAV decides which stock shall be open for KRAV certified fishing and what methods and gear that may be used in KRAV certified fishing on the stocks.

19.1.2.5 Announcing the decision

KRAV shall put the decision to allow fishing on a stock in the public domain. The decision shall include answers to the following questions: What stock is approved? Where is fishing permitted? Which gear and methods are permitted? What size limits apply for captured fish? What other limits apply?

19.1.2.6 Time limits

The decision to permit a stock to be open for KRAV certified fishery is normally valid for three years. In special cases, the decision can be reconsidered within a shorter time period. Examples of such cases can be when a scientific investigation shows that the stock is nearing exhaustion or that the methods and gear used are accompanied by serious effects on the marine ecosystem or that the fishery results in unacceptable bycatches.

19.1.3 Application for assessment

19.1.3.1 Information in the application

Those who wish to operate a certified fishery according to these standards, on a stock not assessed earlier, may apply for an assessment of the fishery by KRAV. This also applies for a renewal of the assessment when the previous approval has expired. It is the responsibility of the applicant to supply the information that the Fish Committee deem necessary to make an accurate assessment of the stock. If necessary, the Fish Committee also has the right to request supplemental information from the applicant about the stock and the suggested methods and gear.

19.1.3.2 Application fees

KRAV has the right to charge a fee to cover the costs in connection with estimating the stock. KRAV shall inform the applicant of the amount of the fees and an explanation of the costs before the work is begun.

19.1.3.3 Appealing the decision

KRAV's decision (see Standard 19.1.2.4) to approve or deny approval for KRAV certified fishing can be appealed according to KRAV's appeal procedures, se 2.10.2.

19.2 STOCK - BASIC PRINCIPLES AND STANDARDS FOR ASSESSING FISH AND SHELLFISH STOCKS

Principle

Certified fisheries are operated on stocks that are sustainable in the long-term and conducted in such a way that captures do not exceed the biological capacity. Consumers shall be able to eat KRAV approved fish safely.

Gear shall be designed so that it does not endanger the stock's tenability or cause long-lasting damage to the environment.

Rationale

At this time, we do not know everything about any fish stock. Neither do we believe that all stocks can be assessed using the same criteria because the biological conditions are too varied. The best we can do is convene a group with high competence, give them guidelines, and circulate their conclusions for comments. This section contains the guidelines for the Fish Committee' assessment of the stock's status.

Environmental toxins are a complex problem in Scandinavian waters. This applies mainly to heavy metals and dioxins. A simple assessment of the stock's load of environmental toxins shall be performed.

19.2.1 Assessment of the size of stock

19.2.1.1 Extent of fisheries

The collective fishing pressure on a stock may not exceed its production capacity or endanger the balance in the marine ecosystem.

19.2.1.2 Precautionary approach

Assessments of the size of stock shall apply the precautionary approach. See the definition section.

19.2.1.3 Ensure reproduction

The precautionary approach means that fishery may not endanger the stock's future reproduction. A certified fishery can be permitted if the stock is assessed to be within safe biological limits. Safe biological limits means that the stock must contain the minimum critical spawning biomass and that fishery is not allowed to exceed the critical mortality. Biological criteria shall provide the basis for assessing the "spawning biomass" and fish mortality.

19.2.1.4 Basis for assessment

Assessment must be based on available data and relevant knowledge of the stock, methods, and gear. The Fish Committee may recommend that the fishery be not approved, due to insufficient knowledge.

19.2.1.5 ICES counsel

The Fish Committee shall consider the ICES counsel: if ICES has assessed the stock. The Fish Committee shall demonstrate how it has considered the ICES counsel in their own recommended decision.

19.2.1.6 Gear and methods

The Fish Committee shall determine what gear and methods are permitted when fishing a certain stock. Gear shall mainly catch sexually mature individuals of the target species but at the same time sort out inferior individuals. Fishing methods that cause long-lasting or irreversible damage to the environment (such as damage to coral reefs or very sensitive biotopes) may not be approved.

19.2.1.7 Unwanted substances

Sweden's and Finland's exception in article 1 in the Commission Regulation 466/ 2001 does not apply when concerning unwanted substances in fish and shellfish from stocks approved for fishing according to these Standards. The maximum permitted levels are defined the Appendix to the regulation.

The Fish Committee may refuse to approve a stock because of high levels of unwanted substances. Liver and roe from fish from the Baltic Sea, Gulf of Bothnia, and Gulf of Finland may not be sold as KRAV approved.

19.3. FISHING VESSELS

Principle

The fishing vessels' operations must be planned and run to result in the least possible environmental impact. Environmental impact results from the vessel's operations (fuel, maintenance, etc.) and activities (fishing and transport). The environmental impact is to a great degree controlled by the competence of the crew and shipowner. These standards shall promote vessels exerting the least possible environmental burden.

Rationale

Consumers' confidence in the products is essential for the standards. The emphasis is placed on the basic functions, such as compliance with current legislation, development of competence and other measures that are all considered to have positive effects on the environmental impact in the long run. Impure fuel and two-stroke engines cause considerable discharges that cannot be tolerated in KRAV certified fisheries. Some bottom paints are so toxic that they are also not permitted. The most toxic are legally prohibited in Sweden, but may be permitted in other countries - therefore these are mentioned here.

19.3.1 Requirements - fishing vessel

19.3.1.1 Certifying the vessel

KRAV certifies the fishery that occurs on an individual fishing vessel. Certification means that the vessel may land fish or shellfish as KRAV approved. The bearer of the vessel's commercial registration is responsible for ensuring compliance of all standards when fishing according to these standards.

19.3.1.2 Documentation and routines

There must be documentation and methods to show that vessel complies with the environmental, fishing and occupational safety legislation, se 2.3.9. There must be procedures to ensure that the responsible person is made aware of changes in legislation and pending fishing stops.

19.3.1.3 Personal development

Fishing vessels that are certified according to these standards shall have a plan for employee personal development to ensure that personnel receive the appropriate continued education.

19.3.1.4 Diesel motors

Fishing vessels with diesel motors shall use diesel of quality E10 gasoil with a maximum of 0.05% sulphur.

19.3.1.5 Outboard motors

Fishing vessels with outboard motors shall change to a four-stroke engine when replacing a motor. All outboard motors on fishing vessels certified according to these standards shall have a four-stroke engine no later than 2007-01-01.

19.3.1.6 Hydraulic oil and lubricating greases

Hydraulic oils used on-board shall be eco-labelled or approved according the standard "Hydraulic fluids - Requirements and Testing Methods SS 15 54 34"

Lubricants used on-board shall be eco-labelled or approved according the standard "Lubricating greases - Requirements and Testing Methods SS 15 54 70".

KRAV may only give exemption from this standard if the vessel can show documentation that the oil or lubricant of that quality is not available for purchase on the market.

19.3.1.7 Cleaning agents

Heavy-duty cleaners used on-board may not contain ingredients classified as carcinogenic, causing mutations or disruptive of reproduction. Surfactants and other agents may not interfere with the separation of oil and water or cause the filtering tank to malfunction. Heavy-duty cleaners shall otherwise be as environmentally adapted as possible.

19.3.1.8 Waste

The vessel shall have clearly defined procedures for handling different type of waste.

19.3.1.9 Bottom paints

Paints containing tin may not be used for painting the bottom of fishing vessels.

19.4. FISHING METHODS

Principle

Methods shall be adapted so that the fishermen only capture the intended catch. Methods shall also be gentle to the surroundings. We should generally endeavour to use the catch method that causes the least suffering to the animals prior to death.

Catching and landing fish always results an environmental impact. If a parts of the catch is lost due to inappropriate handling, the impact has become meaningless and is disrespectful to the catch. Therefore, the standards must also have measures to promote quality.

Consumers must always be able to trust that the catch is taken from the indicated location.

Rationale

Standards focus on traceability, to avoid ghost fishing and avoid bycatches of organisms that cannot or may not be sold. The requirements for equipment for ensuring traceability are reduced for small vessels with a limited range. The reason is that these vessels cannot cover such large areas so that they change stock.

At the present, vessels are permitted to fish both KRAV certified and non-KRAV certified - but only when these are of different species. In this way, more vessels have the financial possibility to convert to KRAV certified fishing.

19.4.1 Requirements for all fishing

19.4.1.1 Adhere to laws and standards

All fishing shall be carried out according to the applicable legislation, se 2.3.9. This means that if authorities close a fishing area, it is automatically closed for KRAV certified fishing.

19.4.1.2 Permitted stock, gear and methods

Certified fishing is only is permitted within the limits defined by KRAV according to 19.2.1.6.

19.4.1.3 Other gear on-board

A vessel fishing KRAV certified for a specific target species may not have forbidden gear on-board that is usually intended for the target species.

19.4.1.4 Fishing trip

A vessel may not fish on the same certified stock with both approved and unapproved gear and methods. During a transitional period though, a certified vessel may carry out KRAV certified fishing on approved stock and with approved methods on one target species and non-approved fishing on another target species. The vessel, however, may not operate a fishery on a stock that is obviously threatened or with methods that are clearly environmentally inappropriate.

19.4.1.5 Documentation of the fishing trip

The vessel shall document the fishing trip so that there is no doubt as to where the catch was taken. The accuracy of the information shall be 10 nautical miles or better. Both the setting location and lifting location for the trawl or other gear must be documented. The time of the catch must also be documented.

19.4.1.6 System for reporting of position

Vessels with the longest length greater than 12 meters shall be equipped with a VMS system or other system that cannot be manipulated

Vessels with the longest length greater than 15 meters shall report information on the position, course and speed to an organization that gathers data at least once every hour. Vessels between 12 and 15 meters shall report information on the day's trip at least once every fishing day. KRAV shall have access to the information from the organization gathering the data.

If the system ceases to function during a fishing trip, no portion of the catch may be sold as KRAV approved.

Vessels returning to the home harbour within 24 hours from the beginning of the fishing trip are exempted from this standard point.

19.4.1.7 Storing the catch

The catch shall be stored in fish boxes labelled to ensure complete traceability. Such labelling includes the KRAV name and/or mark, species, fishing area, time for catch and similar. See also section 2.13. Information on position shall be according to 19.4.1.5.

19.4.1.8 Labelling of gear

All gear shall be clearly labelled directly on the gear. Marking shall make it possible to trace the gear to the owner.

19.4.1.9 Damaged gear

Damaged gear shall be taken ashore for repairs or destruction.

19.4.1.10 Bycatches of marine mammals, birds and invertebrates All bycatches of non-target species of marine mammals, birds and invertebrates shall be reported in the logbook. All bycatches of marine mammals shall be reported to KRAV within two weeks.

Catches of invertebrates may be reported in the logbook with an estimate of the weight, or in another appropriate way that describes the quantity.

19.4.1.11 Duration of fishing trip

The duration of the fishing trip from the harbour to the fishing area may not be longer than that the catch can be sold for human consumption.

19.4.2 Requirements - trawling

19.4.2.1 Limits

Trawling is permitted within the limits set by KRAV according to 19.2.1.6.

19.4.2.2 Selecting devices - Cod (Gadus morhua) and bottom-feeding fish Trawlers for Cod (Gadus morhua) and bottom-feeding species shall be equipped with a Bacoma window or other selective device with equivalent effects. The devices shall allow undersized fish to escape.

19.4.2.3 Selecting devices - shellfish

Trawlers for fishing shellfish must be supplied with an appropriate selection grid or selecting device with equivalent effects.

19.4.2.4 Prohibited beam trawlers

Beam trawlers are not permitted for KRAV certified fishing.

19.4.3 Requirements - net fishing

19.4.3.1 Limits

Net fishing is permitted within the limits set by KRAV if according to 19.2.1.6.

19.4.3.2 Duration for nets in the water

Nets must be lifted so often so that the fish will never be caught in the net for more than 24 hours. KRAV may determine special restrictions in the question of specific fishing.

19.4.3.3 Drifting nets and marine mammals

All drifting nets shall be designed so that marine animals can avoid them.

19.4.3.4 Drifting nets in the Baltic Sea and the Gulf of Bothnia

KRAV certified salmon fishing with drifting nets in the Baltic Sea and the Gulf of Bothnia are only permitted if the nets have a maximum length of 2.5 km.

19.4.4 Requirements - fishing with line and hooks

19.4.4.1

Fishing with line and hooks is permitted within the limits set by KRAV according to 19.2.1.6. KRAV can also decide on the duration for how long hooks can remain in the water.

19.4.5 Requirement - fishing with fishing traps and fyke nets

19.4.5.1 Limits

Fishing with fishing traps and fyke nets is permitted within the limits set by KRAV according to 19.2.1.6.

19.4.5.2 Time periods

Fishing traps and fyke nets shall be lifted at least twice per week.

19.4.5.3 Candling of crabs

Crabs shall be candled by transmitted light at sea during crab fishing. Non-meaty crabs shall be returned to the sea undamaged. There shall be documentation that the candling equipment or other handling does not damage the crabs.

19.4.5.4 Nets or panels of degradable fibres

Degradable panels, or an equivalent construction, must be a part of all traps and all fishing houses in fyke nets.

19.4.5.5 Selection

Fyke nets should be designed to select for the target species. Vessels that lift eel fyke nets shall have the best available equipment so that the boat can effectively select between eel and other fish. The other fish shall be returned undamaged to the sea

19.5. LANDING AND PROCESSING

Principle

In connection with the landing, auction and further transport to the wholesalers and processing industry, KRAV approved fish and shellfish shall be kept separately from non-KRAV approved fish and shellfish. Additives and other raw materials not originating from the sea, processing aids, flavour enhancers and similar shall come from natural sources or be produced with environmentallyadapted methods. Disposal of waste must meet the highest possible requirements for sorting and recycling.

Transports and processing shall use minimal amounts of energy by choosing the best available fuels and technologies and by choosing the shortest possible rout from the sea to the consumer. Using cheap fossil energy to make long detours to use cheap processing labour with unsatisfactory conditions is not consistent with KRAV certified processing.

Rationale

These standards make the traceability of the product a priority. By means of traceability, the consumer can trust the fact that the fish has been caught and handled in compliance with the KRAV standards.

19.5.1 Requirements - landing

19.5.1.1 Basic standards for handling and processing

The KRAV approved fish shall be handled and processed according to Chapter 9 Food Processing.

19.5.1.2 Initial recipient's responsibility

The initial recipient is responsible to ensure that the relevant parts of the standards are followed during landing and further sales, and shall be certified according to these standards to market the products as KRAV approved.

19.5.1.3 Accounts

The initial recipient's accounts shall be examined and approved by a certified accountant.

19.5.1.4 Boxes and packaging materials

Boxes or other packaging materials for products from KRAV certified fishing shall be labelled to ensure complete traceability. Such labelling includes the KRAV name and/or mark, species, fishing area, time for catch and similar information. See also section 2.13. Information on positions shall be in accordance with 19.4.1.5.

19.5.1.5 Handling and storage

The initial receiver shall handle and store the labelled fish and shellfish so as to ensure that catches from different vessels are not mixed. Catches from different vessels may be mixed if every individual is labelled with KRAV's name and/or label and indicating which vessel has captured the individual. See also section 2.13.

19.5.1.6 Inspection of source

The initial receiver is responsible for ensuring that the KRAV approved fish that the company has received are sourced from fisheries certified according to these standards.

19.5.2 Requirements - processing

19.5.2.1 The processor's responsibility

The processor is responsible to ensure compliance with relevant portions of these standards during those parts of the chain of custody under processor's control and shall be affiliated to KRAV to be able to market the processed products as KRAV approved.

19.5.2.2 Requirements for the processor

Processors shall have clear environmental targets, both in short and long terms as well an action plan to reach the targets. The processor shall also have an internal audit scheme or equivalent to follow up the targets and the action plans. See also 2.11.3.

19.5.2.3 Documentation and assessing raw materials

The processor shall be informed of and document where the fish used as raw material was caught. The processor shall consider environmental aspects when choosing fish used as raw material.

19.5.2.4 Yield

The processor shall ensure the best possible yield of fish in relation to final product. This shall be accomplished by measures taken in the processors own production as well as by requirements directed at suppliers.

19.5.2.5 Handling and other raw materials

Handling of the KRAV approved fish shall otherwise be carried out according to Chapter 9 Food Processing. This also applies to use of other raw materials than fish and shellfish in connection with processing of products that will be KRAV approved according to this system.

19.5.2.6 Other additives

In addition to the additions approved according to Chapter 9 Food Processing, the following additives are approved for use in processing of KRAV approved fish and shellfish. The additives may only be used in cool tins where the raw material

comes from KRAV certified fishing.

- acetic acid (E260)
- potassium and calcium sorbates/sorbic acid (E200, E202-203)
- benzoic acid/benzoates (E211-213)

The additives are needed due to food safety. KRAV strive though towards to replace them after evaluation and discussion with the industry.

19.5.2.7 Other eco-labelling systems

KRAV may allow processors to use fish and shellfish source materials that are certified according to other eco-labelling systems. In such cases, KRAV applies the IAC's criteria for "Acceptance of prior certification".

19.5.2.8 Packaging

KRAV approved fish and shellfish products may only be packed in recyclable packaging. The packaging must be produced by a company affiliated with REPA - the Swedish company managing the producer responsibility for packaging recycling (or the equivalent outside of Sweden). Recyclable means that packaging is designed so that it can be recycled. Recycling by means of extracting energy is not approved, with the exception of burning wooden boxes and barrels that may not be reused.

APPENDICES

APPENDIX 1 RECOMMENDATIONS FOR CARE OF THE ENVIRON-MENT, NATURE AND CULTURE CONSERVATION

STANDARD 2.4.1

For all producers registered with KRAV

Producers who are registered with KRAV shall act to protect the environment to the greatest possible extent.

Care of the environment

- Environmentally adapted products shall be the first choice. If these are not available, the least harmful choice with regard to the environment shall be
- Oils and fuels shall, if possible, be of non-fossil, plant or animal origin
- Cleaning products, rust-proofing agents and degreasers shall be environmentally adapted
- Environmentally adapted paints and solvents shall be the first choice
- Impregnated wood (creosote, copper or arsenic) shall be avoided

Energy consumption

- Energy consumption shall be minimized
- Renewable energy shall be used where possible
- Energy consumption shall be documented
- Providers of energy shall be environmentally labelled

Documentation of environmental measures

Documentation of the company's environmental measures shall be produced. For agriculture, see standard 3.1.6. For processors, see standard 2.4.3.

Special standards for agriculture

Plant nutrients

- KRAV recommends that a current soil analysis and a nutrient balance shall he available

Conservation

- Protected meadows and wooded pastures should be maintained
- Fences shall be established in order to enable grazing of headlands between fields, forests, uncultivated spots and ditch-banks
- Additional feeding shall be avoided when stock is on natural pasture
- Crop bearing fruit/nut trees etc., pollarded trees and avenues shall be preserved or replaced with new trees
- Substances containing avermectins shall not be used when stock is grazing in natural pastures

APPENDIX 2 SIZE REQUIREMENTS FOR ANIMAL HOUSING

STANDARD 5.2.8

The following standards apply to animal housing built after 24 August 1999 and after 31 December 2010 for older buildings. The indoor space is that space accessible to the animal. Shelters from wind and huts may be smaller. The Swedish animal welfare standards for lying area and other details apply.

1 A Beef cattle and sheep

A limit of 50 percent of the indoor area can be slatted flooring. See standards 5.2.2 - 5.2.18 for ruminants

	Indoor spaces		Outdoor space (exercise yard, not pasture)
	Least live weight (kg)	m²/animal	m²/anima l
Beef cattle and horses, breeding fattening animals	no more than 100 no more than 200 no more than 350 more than 350	1.5 2.5 4.0 5 and no less than 1 m ² /100 kg	1.1 1.9 3 3.7 no less than 0.75 m²/100 kg
Dairy cows		6	4,5
Breeding bulls		10	30
Adult sheep and goats		1,5	2,5
Gestating ewe	more than 65	1,5 1,7	2,5
Lamb / kid	no more than 20 more than 20 more than 30 more than 40	0,35 0,5 0,75 1,0	0,5 0,75 1,0
Regenerating goat		0,75	0,75

1 B Pigs

Outdoor exercise yard may be partially covered by a roof. See standards 5.2.3 - 5.2.18

	INDOOR SPACES		OUTDOOR SPACES
Brood-sows with up to 40-day old piglets		7,5 sow	2,5
Growing pigs	no more than 50 no more than 85 no more than 110	0,9 1,2 1,5	0,6 0,8 1
Piglets	more than 40 days and no more than 30 kg	0,6	0,4
Breeding pigs		2,5 females 7,0 males	1,9 8,0

2 Poultry

The opening between the poultry yard and the housing shall have a total length of 4m/100m² of the building area accessible to the birds indoors.

Max no. of animals/house:		Max housing areaproduction unit
Laying hens	3.000	
Chicken	4.800	1.600 m^2
Guinea fowl	5.200	,,
Duck	3.200	,,
Geese	2.500	,,
Turkeys	2.500	,,

	Indoor space (accessible to the animals)			Outdoor space (m2 are accessible in rotation/animal)
	No. animals/m ²	cm/perch /animal	Living	m ² animal
Laying hens	6 including laying nest	18	6 laying hens per nest or with a shared nest box, 120 cm ² /bird	4, on condition that the 170 kg N/ha/year limit is not exceeded
Poultry raised for meat	10 at no more than 20 kg live weight/m ²	20 (only for guinea fowl)		4 broilers and guinea fowl 4.5 ducks 10 turkeys 15 geese The limit of 170 kg N/ha/year limit may not be exceeded for the above species.
Poultry raised for meat (in movable enclosures)	16 (*) in movable enclosues with no more than 30 kg			2.5 on condition that the 170 kg N/ha/year limit is not exceeded

^(*) Only if the enclosure has no more than 150 m2 floor space and is open during the night.

APPENDIX 3

Limits in foods:

The limit for cadmium in cereal grains for human consumption is 100 ug/kg dry matter (ppb).

Application of heavy metals to arable lands:

STANDARDS 4.2.5, 12.3 AND 12.4

The highest average applications (during 5 years) of applied fertilizer, soil conditioners, pest control agents, and other products that are sooner or later applied to the soil (such as feed, feed minerals and medicines) are:

Substance	g/ha/year
Lead	50
Cadmium	0.75
Copper	500
Chromium	50
Mercury	1
Nickel	50
Zinc	700

Note: Application of 1 ton/ha/year of a product containing 1 ppm of certain substance means an application of 1 g/ha/year. When several different agents are applied the amounts must be added together.

The limits for KRAV certified production inputs marketed as sowing and potting soils must not have higher levels of heavy metals than the following:

Substance	mg/kg dry matter in soil
Lead	40
Cadmium	0.4
Copper	40
Chromium	60
Mercury	0.3
Nickel	30
Zinc	150

APPROVED ADDITIVES IN PESTICIDES APPENDIX 4 AND CROP PROTECTION AGENTS

Standard 4.4.4

Substance Function

Na Laureate ether sulphate Anionic surfactant Non-ionic surfactant Fatty acid ethoxilate EO 6

Carboxy methyl cellulose Thickener Methyl parahydrobenzoate Preservative Propyl parabenzoate Preservative

Citric acid Preservative, pH adjustment

Polysorbate **Emulsifier** Propylene glycol Disperger

Bitrex Repellent for use in insect traps Acid Blue Dye for use in insect traps

Nipacide salt Preservative

Poly sodium acrylate Carrier (approved until 1 January 2003)

APPENDIX 5 PROCESSED FEED APPROVED BY KRAV

Standard 5.3.8

- By-products from the food industry (sugar beet pellets, cake, whey, brewery and distiller grains etc. which are not extracted using chemical solvents, e.g. hexane)
- Grain, legumes, oil-producing plants or meadow plants which have been processed in some way (e.g. dried)
- Products extracted from plants e.g. potato protein and maize gluten

APPENDIX 6 LIMITS FOR LEVELS OF UNDESIRED SUBSTANCES IN SOIL

Standard 8.1.6

Limits for cesium levels in soil for de-certification of products

Product Cesium in soil Berries (not cloudberry) 60kBq/m2 40 kBq/m2 Cloudberry Mushrooms 5 kBq/m2

APPENDIX 7 ABOUT FOOD ADDITIVES

The following technological food additives may be added to a KRAV approved products:

- Sulphur dioxide (E220), only for wine
- Lactic acid (E270)
- Carbon dioxide (E290)
- Ascorbic acid (E300)
- Lecithin (E322), produced using KRAV approved processing aids
- Citric acid (E330)
- Calcium citrate (E 333)
- Tartaric acid (E334)
- Sodium tartrate (E335)
- Potassium tartrate (E336)
- Monocalcium phosphate (E341), only in flour as a rising agent
- Sodium alginate (E401)
- Agar (E406)
- Carrageenan (E407)
- Locust bean gum (E410)
- Guar gum (E412)
- Xanthan gum (E415)
- Pectin (E440(I)), amidated pectin is not permitted
- Calcium carbonates (E170) (not for dyeing)
- Sodium carbonates (E500)
- Potassium carbonate (E501)
- Ammonium carbonate(E503)
- Calcium chloride (E509) (Permitted in dairy products)
- Beeswax (E901)
- Carnauba wax (E903)
- Argon (E938)
- Nitrogen (E941)
- Oxygen (E948)

Common salt (sodium chloride) is not tested by KRAV and may contain anticaking agents normaly used. KRAV recommends that common salt without additives is used when possible.

APPENDIX 8

Agents Only for the areas of use Pectinase Berry concentrates Sodium hydroxide (E524) Oil purification (rape seed oil); sugar refining Citric acid (E330) Oil purification Sulphuric acid (E513) Sugar refining Vegetable oil Anti-foam Lactic acid (E270) Brewing beer Calcium chloride (E509) Coagulating agent

Diatomit (Kiselgur)

Calcium sulphate (gypsum) (E516) Coagulating agent

Bentonite (E558)

Perlite Berry concentrates and beer

Ethylene Maturing process Amylase Bread and ethanol

Protease Bread

Activated carbon

Yeast

Cheese rennet

APPENDIX 9 CRITERIA FOR THE ENVIRONMENTAL AND HEALTH HAZARDS OF CHEMICALS

Oil

General Standards for consideration

The precautionary principle, the principle of choice of product, and the principle of the best available technique is always in force, that is, the choice between two comparable methods or products is always guided by the practice of choosing the least hazardous product for human health and the environment.

Swedish laws governing chemical pest control agents and biotechnical organisms

The Swedish National Chemicals Inspectorate must approve the pest control agents (plant protection substances and biocides) for sale and use. There are also standards for caution governing the use of chemical products or biotechnical organisms. For more information please see Chapter 14 \\$17 of the Swedish Environmental Code Miljöbalken (SFS 1998:808).

About safety datasheets for chemical products hazardous to health or the environment

The producer/importer of chemical products hazardous to health or the environment must provide Safety datasheet (earlier the declaration of contents) in Swedish. The health and environmental properties are described. For more information please see the Swedish National Chemicals Inspectorate regulations on chemical products and biotechnical organisms (KIFS 1998:8). The safety datasheet, in particular point 15 "Applicable regulations", indicate the properties of the product that determine the type of labelling and risk phrases (R).

About labelling and classification

It is the responsibility of the producer/importer to obtain information about the properties of the chemicals and label the products with the symbols of danger and risk phrases (R) in effect. These are governed by the Swedish National Chemicals Inspectorate's regulations on the classification and labelling of chemical products (KIFS 1994:12).

STANDARD 12.1

According to Standard 12.1.1, production inputs may not be certified if they are classified as hazardous to health or the environment according to the risk phrases below:

Risk phrases Dangerous to the environment

- R 50 Very toxic to aquatic organisms
- R 51 Toxic to aquatic organisms
- R 52 Harmful to aquatic organisms
- R 53 May cause long-term adverse effects in the aquatic environment
- R 54 Toxic to flora
- R 55 Toxic to fauna
- R 56 Toxic to soil organisms
- R 57 Toxic for bees
- R 58 May cause long-term adverse effects in the environment
- R 59 Dangerous for the ozone layer

Risk phrases Danger to health

R 28/27/26 Very toxic if swallowed, in contact with skin or by inhalation

R25/24/23 Toxic if swallowed, in contact with skin, by inhalation

- R 33 Danger of cumulative effects
- R 39 Danger of very serious irreversible effects
- R 40 Suspected risk for cancer
- R 45 May cause cancer
- R 46 May cause heritable genetic damage
- R 49 May cause cancer by inhalation
- R 60 May impair fertility
- R 61 May cause harm to the unborn child
- R 62 Possible risk of impaired fertility
- R 63 Possible risk of harm to the foetus
- R 68 Possible risk of irreversible effects