



United States
Department of
Agriculture

Agricultural
Research
Service

National
Agricultural
Library

Alternative
Farming
Systems
Information
Center

January 2009



Alternative Crops & Enterprises for Small Farm Diversification



About this list:

This list of alternatives was compiled using AFSIC reference request files, the subject files in our office, as well as previously compiled lists, most notably “Innovative Farming Idea List,” (1987) compiled by Nancy Grudens Schuck, Farming Alternatives Project, Cornell University and “Ideas for Alternative Agricultural Enterprises,” (1996) put together by the Missouri Alternatives Center. [See their Web site’s database of Extension and related on-line publications about alternatives: <http://agebb.missouri.edu/mac>.] This list is not comprehensive, but presents some of the more accessible innovations available to farmers.

What can alternative crops and enterprises do for my farm?

The “Diversifying Cropping Systems” Bulletin for farmers and agricultural educators is a primer on planning diversification with alternative crops, agroforestry, and cover crops. This Sustainable Agriculture Network resource features “factors to consider before diversifying, specific diversification strategies and expert sources of information.”

<http://www.sare.org/publications/diversify.htm>

Where can I find information on agricultural alternatives?

- 1 To find out more about alternatives suited to your area, start by contacting your local or State Extension office. A listing of Extension Office directories and alternative agriculture publication sites is included below.
- 2 AFSIC's publication, *Great Places to Find Information about Farming Alternatives*, offers a selection of information-rich Web sites and organizations.
<http://www.nal.usda.gov/afsic/pubs/findinfo.shtml>
- 3 *Agricultural Sustainability Notes Series: Questions to Ask About Alternative Crops* (Washington State Univ.) lists questions on economic and production issues to explore before selecting a specific crop alternative.
<http://pnw-ag.wsu.edu/AgHorizons/notes/sr3no1.html>
- 4 *Evaluating a Rural Enterprise* (ATTRA) provides more detailed discussion about assessing farming alternatives.
<http://www.attra.org/attra-pub/evalrural.html>
- 5 *Alternative Agriculture in Maryland: A Guide to Evaluate Farm-Based Enterprises* (University of Maryland) provides information, worksheets, and inventories on identifying compatible enterprises and required resources, planning specialty enterprise budgets, and other business and marketing considerations.
<http://agmarketing.extension.psu.edu/Business/PDFs/farmaltworkbk.pdf>
- 6 *A PRIMER for Selecting New Enterprises for Your Farm* (University of Kentucky), a tool for evaluating new enterprises for a farm or family business, is based on worksheets used to evaluate the "Profitability, Resource requirements, Information needs, Marketing decisions, Enthusiasm for, and the Risk associated with a new enterprise."
<http://www.uky.edu/Ag/AgEcon/pubs/ext-aec/ext2000-13.pdf>
- 7 *The Small Farm Today* "The Original How-to Magazine of Alternative and Traditional Crops, Livestock, and Direct Marketing"
<http://www.smallfarmtoday.com/>
- 8 Alternative Crop Suitability Maps (Illinois State Water Survey), presents "climate and soil requirements for alternative and traditional crops."
<http://www.sws.uiuc.edu/data/altcrops/>
- 9 Additional resources on specific agricultural alternatives may be found at your State Department of Agriculture, crop and livestock associations, searchable publication lists and databases, as well as at your local and/or university library.
See *Resources*, below.

Field Crops:

Feed and Forage...

- Bird seed (sunflower, proso millet, canary grass, etc.)
- Forage brassicas - turnips, rutabagas
- Kochia
- Medics
- Sainfoin
- Switchgrass

Fiber, Fuel, Edible and Industrial Oils...

- Borage
- Broomcorn
- Canola
- Castor beans
- Comfrey
- Corn (for oil)
- Crambe
- Cuphea
- Flax
- Guayule
- Jojoba
- Kenaf
- Lesquerella
- Lupine
- Meadowfoam
- Milkweed
- Perilla
- Safflower
- Sesame
- Sunflowers
- Vernonia

Food Grains, Pseudocereals, Legumes, etc...

- Adzuki beans
- Amaranth (food and feed)
- Barley
- Buckwheat
- Dry edible beans (fieldbeans)
- Einkorn
- Emmer
- Field peas (food and feed)
- Garbanzo beans (chickpeas)
- Hops
- Indian corn
- Jerusalem artichokes (food and feed)
- Kamut
- Lentils
- Malting barley
- Mung beans
- Organically grown grains of all types
- Peanuts
- Pearl millet
- Popcorn, white and colored
- Psyllium (medicinal)
- Quinoa
- Seed production - registered and certified seed, turfgrass, etc.
- Sesame (seeds)
- Sorghum (syrup)
- Soybeans, incl. natto soybeans for tofu, tempeh; and Edible soybeans (edamame)
- Spelt
- Triticale
- Wheatgrass
- Wild rice

Specialty and Ethnic Vegetables:

[See also **Field Crops**]

- Asparagus
- Baby vegetables
- Cabbage
- Carrots
- Celery
- Chinese water chestnuts
- Cole crops (broccoli, cauliflower, Brussels sprouts, kohlrabi)
- Corn, miniature
- Fenugreek
- Edible flowers
- Garlic
- Gourds, ornamental
- Gourmet vegetables
- Greenhouse production for out-of-season crops
- Heirloom varieties of any vegetable
- Herbs - culinary and medicinal
- Horseradish
- Luffa gourds
- Mushrooms- agaricus, shiitake, oyster, morel, etc.
- Onions (transplants, shallots, sweet, early)
- Organically grown vegetables of all types
- Oriental vegetables
- Peas and pea shoots
- Peppers - specialty types (purple, hot, etc.)
- Pumpkins
- Red beets
- Salad greens - mesclun
- Sprouts (alfalfa, bean, etc.)
- Squash
- Sweet corn
- Sweet potatoes
- Tomatoes - specialty types
- Truffles
- Wasabi

Fruits and Nuts:

- Apples, esp. Heirloom varieties
- Asian pears
- Brambles - blackberries, raspberries, loganberries, blackraspberries, etc.
- Blueberries
- Cranberries, currants
- Elderberries
- Gooseberries
- Kiwi, hardy
- Lingonberries
- Melons - specialty types
- Paw paw
- Rhubarb products
- Strawberries, day neutral types
- Table grapes, seeded and seedless
- Wine grapes for home brewing market

Horticultural/Nursery:

- Bedding plants - annual flowers, herbs, etc.
- Field grown cut flowers
- Field grown mums
- Flowers for drying
- Greenhouse production
- Hydroponic production
- Organically grown bedding plants and fruit trees
- Potted annuals
- Native plants/wild flowers and seeds
- Regionally hardy shrubs and perennial flowers

Agroforestry/Forest Products:

- Bamboo
- Christmas trees
- Firewood
- Paulownia
- Sawlogs
- Tree seed collection
- Wild nuts

Livestock/Animals:

Game Related...

- Beefalo (hybrid of buffalo and beef)
- Buffalo (American Bison)
- Deer - fallow deer, red deer
- Elk (wapiti) for meat and antlers
- Fish bait - worms, minnows
- Pheasant for release/restocking programs and meat

Exotic Livestock/Minor Breeds/Special Uses...

- Alpacas and llamas for pack animals, hair, and pets
- Boar
- Butterflies (for gardeners)
- Fox, red, silver, and blue
- Goats for milk, meat, and hair (Angora)
- Horses - draft horse breeding, miniatures, exotics
- Mink
- Mules and donkeys
- Ostriches, rheas, emus
- Rabbits for meat, lab animals, and hair (Angora)
- Reindeer
- Sheep/Lambs for meat, wool, milk (for cheese)
- Snails
- Veal, conventional and certified
- Water buffalo
- Worms (for composting)

Poultry...

- Balut (duck eggs partially incubated)
- Chicken eggs partially developed (for Asian markets)
- Doves
- Duck - meat and paté
- Free range poultry of all types
- Geese
- Guinea fowl
- Organically raised poultry of all types
- Peafowl/Peacocks (feathers)
- Pigeons
- Quail/Squab
- Turkey

Aquaculture/Fishfarming...

- Aquaponics (combining aquaculture and hydroponic operations)
- Bass, Trout, Catfish, Crayfish, Tilapia
- Watercress and other aquatic plants

Pet and Medicine Related...

- Dogs (guardian)
- Guinea pigs
- Pet foods - crickets, mealworms, etc.

Farm and Home Enterprises:

Services...

- Antique shop/Antique restoration
- Boat storage
- Direct marketing operations - U-pick, Community Supported Agriculture (CSA), farmstand
- Child care in country setting
- Composting services and products
- Custom machinery work
- Custom planting and care of window boxes and container annuals
- Custom planting and care of vegetable gardens
- Custom slaughter
- Farm sitting
- Gift shops
- Pet motels for large as well as small animals
- Religious services held on farm, e.g. sunrise Easter services, weddings
- Restaurant
- Seed and supplies distributor
- Small engine repair
- Taxidermy

Recreation and Education...

- Barn dances
- Bed and breakfast
- Campground
- Chuck wagon
- Fee hunting and fishing/game farms
- Hunting, fishing, and nature hike guides
- Lectures on herbs, gardening at farm
- Museum of old farm equipment on working farm
- Petting zoo
- Sleigh rides with work horses
- Tours for public, school children
- Trail rides
- Vacations on farm
- Wagon trains

Value-added Products/On-farm Processing...

- Cheese
- Cider and other apple products
- Confections and candles
- Corn snack foods
- Crafts
- Dried flowers, cultivated, arid, wild
- Dried Fruits
- Fresh or stone ground grains
- Furniture, e.g. outdoor chairs, picnic tables
- Honey and beeswax products
- Meat processing, e.g., jerky
- Sawmill
- Soapmaking
- Tanning hides
- Toys from wood
- Wheatweaving
- Winemaking
- Wool processing and spinning

Resources

Extension Office or Land Grant University Directories and Publication Sites

- 1 Cooperative State Research, Education, and Extension Service contacts
http://www.csrees.usda.gov/qlinks/partners/state_partners.html
- 2 E-answers is a searchable Web site for research-based information on a wide range of Extension or Outreach-oriented subjects.
<http://e-answers.adec.edu/>
- 3 Missouri Alternatives Center
<http://agebb.missouri.edu/mac/index.htm>

MAC Link List of Extension information on Alternatives
<http://agebb.missouri.edu/mac/links/index.htm>
- 4 Alabama Cooperative Extension (Auburn Univ.)
Publications (see Agriculture)
<http://www.aces.edu/department/extcomm/publications/>
- 5 Univ. of Arkansas
Arkansas Agriculture: Specialty Agricultural Production
<http://www.aragriculture.org/specialty/>

Searchable Publications Database
http://www.uaex.edu/Other_Areas/publications/default.asp
- 6 Univ. of California
Agriculture and Natural Resources Publications
<http://anrcatalog.ucdavis.edu/default.aspx>

Agronomy Research and Information Center
<http://agric.ucdavis.edu/home.htm>

Sustainable Agriculture Research and Education Program
<http://www.sarep.ucdavis.edu/>
- 7 Colorado State Univ. Cooperative Extension
Publications by title
<http://www.ext.colostate.edu/pubs/pubsb.html#ag>

Specialty Crops Program
<http://www.specialtycrops.colostate.edu/>

- 8 Univ. of Florida. Cooperative Extension
Small Farms Alternative Enterprises
<http://smallfarms.ifas.ufl.edu/>

EDIS topics, including alternative crops and livestock
<http://edis.ifas.ufl.edu/topic.html>

Alternative Opportunities for Small Farms
http://edis.ifas.ufl.edu/TOPIC_SERIES_Alternative_Opportunities_for_Small_Farms
- 9 Univ. of Georgia. Cooperative Extension
College of Agriculture and Environmental Sciences. Publications
<http://pubs.caes.uga.edu/caespubs/pubs/pubsubj.html>
- 10 Univ. of Hawaii
College of Tropical Agriculture and Human Resources. Free Publications
<http://www.ctahr.hawaii.edu/ctahr2001/PIO/FreePubs.asp>
- 11 Univ. of Idaho
Animal Science
<http://www.extension.uidaho.edu/animals.asp>

Crop Production
<http://www.extension.uidaho.edu/crops.asp>
- 12 Univ. of Illinois
Illinois Agronomy Handbook: Alternative Crops (See chapter 7)
<http://iah.ipm.uiuc.edu/>
- 13 Iowa State Univ.
Agriculture and Natural Resources. Extension Topics
<http://www.extension.iastate.edu/ag/topics.html>

Extension Publications
<https://www.extension.iastate.edu/store/>
- 14 Kansas State Univ. Extension Publications
<http://www.oznet.ksu.edu/library/>

Kansas Center for Sustainable Agriculture and Alternative Crops (KCSAAC)
<http://www.kansassustainableag.org/>

Reference Library
<http://www.kansassustainableag.org/library.htm>

- 15 Univ. of Kentucky
Cooperative Extension Service and Kentucky Agriculture Experiment Station. Online publications
<http://www.ca.uky.edu/agc/pubs/pubs.htm>

New Crop Opportunities Center. Crop Profiles
<http://www.uky.edu/Ag/NewCrops/intro.html>
- 16 Louisiana State University Ag Center. Research and Extension
Crops and Livestock
http://www.lsuagcenter.com/en/crops_livestock/
- 17 Univ. of Maine
Cooperative Extension
<http://extension.umaine.edu/>

Animal, Veterinary and Animal Sciences Links
<http://www.umaine.edu/livestock/links.htm>
- 18 Univ. of Maryland. Extension Publications
<http://pubs.agnr.umd.edu/>
- 19 Univ. of Massachusetts
Extension Agriculture and Landscape Program
<http://www.umass.edu/agland/> (Select subject, then select the “take me directly to...” link.)
- 20 Michigan State Univ. Extension
Area of Expertise Teams
<http://web1.msue.msu.edu/aoe/>

Searchable Extension Database
[http://www.msue.msu.edu/portal/default.cfm?pageset_id=25744&page_id=25794
&msue_portal_id=25643](http://www.msue.msu.edu/portal/default.cfm?pageset_id=25744&page_id=25794&msue_portal_id=25643)
- 21 Univ. of Minnesota. Extension
Farm: Crops, Specialty and Alternative
<http://www.extension.umn.edu/topics.html?topic=4&subtopic=3>

Farm: Alternative Animal Enterprises
<http://www.extension.umn.edu/topics.html?topic=4&subtopic=118>
- 22 Mississippi State Univ. Cooperative Extension.
Mississippi Agricultural and Forestry Experiment Station. MSUCares
<http://msucares.com/search.html>

- 23 Univ. of Missouri
XPLOR – Agriculture Publications
<http://extension.missouri.edu/xplor/agguides/>
- Alternative Crops Page
http://www.psu.missouri.edu/cropsys/Alternative_Crops/
- 24 Montana State Univ.
Cooperative Extension Service. Agriculture publications
<http://extn.msu.montana.edu/publications.asp>
- Specialty Crops*
<http://ag.montana.edu/warc/research/horticulture/speciality.htm>
- 25 Univ. of Nebraska. Institute of Agriculture and Natural Resources
Specialty Crops
<http://lancaster.unl.edu/ag/crops/special.shtml>
- Specialty Livestock*
<http://lancaster.unl.edu/ag/livespec.shtml>
- Publication Catalog Index
<http://www.ianrpubs.unl.edu/epublic/pages/index.jsp>
- 26 Rutgers State Univ. of New Jersey Cooperative Extension. Publications
<http://njaes.rutgers.edu/pubs/default.asp>
- 27 Cornell Univ. Small Farms Program
Alternative Enterprises
http://media.cce.cornell.edu/hosts/agfoodcommunity/afs_temp3.cfm?topicID=407
- 28 North Carolina State Univ. and Cooperative Extension
Horticulture Information Leaflets
<http://www.ces.ncsu.edu/hil/>
- Web Resources - Alternative Crops*
<http://www.ces.ncsu.edu/chatham/ag/SustAg/altcropslinks.html>
- Specialty Crops*
http://www.cals.ncsu.edu/specialty_crops
- 29 North Dakota State Univ. Extension
New and Alternative Crops
<http://www.ag.ndsu.edu/pubs/alternative.html>

- 30 Ohio State Univ. Extension
Crops and Livestock
http://extension.osu.edu/crops_and_livestock/index.php
- College of Food, Agriculture and Environmental Sciences (Farm resources)
<http://ohioline.osu.edu/lines/farm.html>
- 31 Oklahoma State Univ.
OSU Extension Facts
<http://pods.dasnr.okstate.edu/docushare/dsweb/View/Collection-297>
- 32 Oregon State Univ. Extension Service
Agriculture Publications and Multimedia Catalog
<http://extension.oregonstate.edu/catalog/results.php?cat=Agriculture>
- Crop Extension Programs
<http://cropandsoil.oregonstate.edu/extension/crops.html>
- Commercial Production Vegetable Guides
<http://hort-devel-nwrec.hort.oregonstate.edu/vegindex.html>
- Extension Service Publications
<http://extension.oregonstate.edu/catalog/results.php?cat=Agriculture>
- Northwest Berry and Grape Information Network
<http://berrygrape.oregonstate.edu/>
- Oregon Small Farms
<http://smallfarms.oregonstate.edu/>
- 33 Penn State Univ.
Agricultural Alternatives magazine
<http://agalternatives.aers.psu.edu/>
- Cooperative Extension. Agricultural Alternatives
http://susag.cas.psu.edu/prod_alternatives.htm
- College of Agricultural Sciences. Publication Subject Index
<http://pubs.cas.psu.edu/Publications.asp>
- 34 Clemson Univ. Cooperative Extension
South Carolina Growing
<http://www.clemson.edu/scg/>
- Publication search
<http://dprod4.clemson.edu/olos/asp/searchmain.asp>

- 35 Univ. of Tennessee/Tennessee Farm Bureau
Center for Profitable Agriculture
<http://cpa.utk.edu/default.htm>
- 36 Texas A & M Univ.
Alternative Agricultural Enterprises
<http://aggie-horticulture.tamu.edu/alternatives/alternativelinks.html>
- Horticultural Alternatives for Texas Agriculture*
<http://aggie-horticulture.tamu.edu/alternatives/hortalternatives.html>
- Specialty Vegetables in Texas*
<http://aggie-horticulture.tamu.edu/extension/specialty/index.html>
- 37 Virginia State Univ., and the Virginia Polytechnic Institute and State Univ.
Cooperative Extension resources by subject
<http://www.ext.vt.edu/resources/>
- 38 Washington State Univ. Cooperative Extension. Publications
<http://cru84.cahe.wsu.edu/cgi-bin/pubs/> (see “topics” on left sidebar)
- Specialty Crops Information Sheets*
<http://www.island.wsu.edu/CROPS/>
- 39 West Virginia Univ. Cooperative Extension
Center for Agriculture, Natural Resources and Community Development
<http://www.wvu.edu/~agexten/>
- 40 Univ. of Wisconsin Cooperative Extension
NewFarm Resource Directory
<http://www.newfarm.org/cms/resource.php>

Other Resources for Agricultural Alternatives

- 1 The National Agricultural Library's AGRICOLA database
<http://agricola.nal.usda.gov>
- 2 The Agricultural Network Information Center (AgNIC) includes a searchable database.
<http://www.agnic.org>
- 3 The Agricultural Marketing Resource Center (AgMRC) identifies directories of value-added agriculture resources.
http://www.agmrc.org/directories_state_resources/
- 4 Appropriate Technology Transfer for Rural Areas (ATTRA)
<http://www.attra.org/>
- 5 Aquaculture information sources include:
AFSIC's Aquaculture Resources Web page (http://afsic.nal.usda.gov/nal_display/index.php?info_center=2&tax_level=2&tax_subject=295&level3_id=0&level4_id=0&level5_id=0&topic_id=1410&&placement_default=0), the Aquaculture Network Information Center (AquaNIC) (<http://www.aquanic.org/>) and ATTRA's publication, *Evaluating an Aquaculture Enterprise* (<http://www.attra.org/attra-pub/aquaculture.html>).
- 6 The American Livestock Breeds Conservancy
<http://www.albc-usa.org/>
- 7 Mid-Atlantic Regional Fruit Loop. (Cooperative project of State universities)
<http://www.caf.wvu.edu/kearneysville/fruitloop.html>
- 8 State Departments of Agriculture (USA.gov)
http://www.usa.gov/Agencies/State_and_Territories.shtml
- 9 U.S. Department of Agriculture, Natural Resources Conservation Service
Plants Database
<http://plants.usda.gov/>
- 10 Univ. of California
Fruit & Nut Research and Information Center
<http://fruitsandnuts.ucdavis.edu/> (select Fruits & Nuts)

Small Farm Center
Specialty and Minor Crops Handbook
http://www.sfc.ucdavis.edu/Docs/specialty_crops.html
Library
<http://www.sfc.ucdavis.edu/library/>
and free online publications
<http://www.sfc.ucdavis.edu/docs/free.html>

- 11 Univ. of Florida, Southwest Florida Research & Education Center
Vegetable Crop Budgets
<http://www.imok.ufl.edu/LIV/groups/economic/budglnks.htm>
- 12 Illinois State Water Survey
Alternative Crop Suitability Maps
<http://www.sws.uiuc.edu/data/altcrops/>
- 13 Maryland Small Ruminant Page
<http://www.sheepandgoat.com/>
- 14 Univ. of Minnesota
Minnesota Grown Opportunities. Agricultural Diversification
Fruits, Vegetables and Other Crops
<http://www.mda.state.mn.us/protecting/sustainable/mfocrops.htm>

Livestock and Poultry Options
<http://www.mda.state.mn.us/protecting/sustainable/mfoanimals.htm>
- 15 Univ. of Minnesota. Minnesota Institute for Sustainable Agriculture
Alternative Crops
http://www.misa.umn.edu/Alternative_Crops.html

Alternative Livestock Systems
http://www.misa.umn.edu/Alternative_Livestock.html
- 16 Ohio State Univ.
PlantFacts Factsheet Database
<http://hcs.osu.edu/plantfacts/>
- 17 Oklahoma State Univ.
Breeds of Livestock
<http://www.ansi.okstate.edu/breeds/>
- 18 *Permaculture Information Web* database
<http://permaculture.info/>
- 19 Plants For A Future database
http://www.ibiblio.org/pfaf/D_search.html
<http://www.pfaf.org/>
- 20 Purdue Univ., Center for New Crops and Plant Products
NewCROP
<http://www.hort.purdue.edu/newcrop/default.html>

CropSEARCH
<http://www.hort.purdue.edu/newcrop/SearchEngine.html>

- 21 Univ. of Wisconsin Cooperative Extension, Univ. of Minnesota Extension Service, and the Center for Alternative Plant and Animal Products
Alternative Field Crops Manual
<http://www.hort.purdue.edu/newcrop/afcm/index.html>
- 22 Alberta Agriculture
Agriculture Diversification Ventures
[http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/apa2312](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/apa2312)
- Special Crops Web site*
<http://www.agric.gov.ab.ca/app21/seltopic?cat1=Crops&cat2=Special+Crops&page=true>
- 23 Manitoba Agriculture and Food
Alternative Crops
<http://www.gov.mb.ca/agriculture/crops/index.html>

This publication was produced by the Alternative Farming Systems Information Center (AFSIC), National Agricultural Library (NAL). For more information, contact:



AFSIC
10301 Baltimore Ave., Room 132
Beltsville MD 20705

301-504-6559
afsic@nal.usda.gov
<http://afsic.nal.usda.gov/>

The use of trade, firm, or corporation names in this publication (or page) is for the information and convenience of the reader. Such use does not constitute an official endorsement or approval by the United States Department of Agriculture or the Agricultural Research Service of any product or service to the exclusion of others that may be suitable. For more information about National Agricultural Library policy and disclaimers:
<http://www.nal.usda.gov/disclaimers/disclaimers.shtml>