SECTION 6. PLANNING THE 2003 FSIS DOMESTIC MONITORING PLAN: PESTICIDES

PHASE I - GENERATING AND RANKING LIST OF CANDIDATE COMPOUNDS

LIST OF CANDIDATE COMPOUNDS

The candidate pesticides of concern selected by the Environmental Protection Agency (EPA) members of the Surveillance Advisory Team (SAT) are presented in Table 6.1, *Scoring Table for Pesticides*. Since the Food Safety and Inspection Service (FSIS) wishes to prioritize which *analyses* should be conducted, compounds that are, or are likely to be, detected by the same analytical methodology have been grouped together.

RANKING OF CANDIDATE COMPOUNDS

COMPOUND SCORING

Using a simple 4-point scale (4 = high; 3 = moderate; 2 = low; 1 = none), members of the SAT scored each of the pesticides in each of the following categories. Note that some of these categories differ from those used for the veterinary drugs:

- FSIS Historical Testing Information on Violations
- Regulatory Concern
- Lack of FSIS Testing Information on Violations
- Pre-slaughter Interval
- Bioconcentration Factor
- Endocrine Disruption
- Toxicity

Definitions of each of these categories, and the criteria used for scoring, appear at the end of this section in the "*Scoring Key for Pesticides, FSIS 2003 Domestic Residue Program*."

The results of the compound scoring process are presented in Table 6.1. Where compounds were grouped together, the score assigned to each category is the highest score for all members of the group.

COMPOUND RANKING

Background

Repeating Equation (4.1), we have:

$$\begin{aligned} \text{Risk} &= \text{Exposure} \times \text{Toxicity} \\ &= \text{Consumption} \times \text{Residue Levels} \times \text{Toxicity} \\ &= \text{Consumption} \times \text{"Risk Per Unit of Consumption"} \end{aligned} \qquad (6.1)$$

As stated above, FSIS chose to employ techniques and principles from the field of risk assessment to obtain a ranking of the relative public health concern represented by each of the candidate compounds or

compound classes. However, unlike the case with veterinary drugs (see Section 4), FSIS does not have historical data on a sufficient range of different pesticide compounds or compound classes to predict violation scores (and thus risk per unit of consumption) using a regression equation. Therefore, a somewhat different approach (although related to that used for the veterinary drugs) was necessary to estimate the "Risk Per Unit of Consumption" term.

Rating the Pesticides According to Relative Public Health Concern

The categories of "Regulatory Concern," "Pre-slaughter Interval," and "Bioconcentration Factor" were employed as predictors of risk per unit of consumption from pesticides in animal products. As indicated above, the "Regulatory Concern" category reflects EPA's professional judgment of the likelihood that a compound or compound class will exceed EPA's level of concern in meat, poultry, or egg products. Thus, it combines residue level and toxicity information. As with the "Withdrawal Time" category for veterinary drugs, the "Pre-slaughter Interval" category is expected to correlate with residue level because longer pre-slaughter intervals are less likely to be properly observed. When the pre-slaughter interval is not observed, the carcass may contain violative levels of residues, since the time necessary for sufficient metabolism and/or elimination of the pesticide may not have passed. Bioconcentration is a measure of the extent to which a pesticide concentrates within the fat deposits of animals. Pesticides that bioconcentrate are more likely to accumulate to higher levels within animal tissue, thus increasing the potential for human exposure.

The "Toxicity" category reflects both the dose required to achieve a toxic effect and the severity of that effect. It can thus be used directly as a term in Equation (6.1).

By multiplying toxicity times a weighted average of those categories used as indicators of potential residue level, we can obtain a rough estimate of the relative risk per unit of consumption represented by each compound or compound class. And as with the veterinary drugs, we can refine the equation by adding a modifier for "Lack of FSIS Testing Information on Violations." Thus, with appropriate substitution, we obtain the following equation:

Relative Public Health Concern (6.2)
= Estimated relative risk per unit of consumption
x *modifier for* "Lack of FSIS Testing Information on Violations"
= Estimated relative exposure x Relative toxicity
x *modifier for* "Lack of FSIS Testing Information on Violations"
= Weighted average of {"Regulatory Concern," "Pre-slaughter Interval," "Bioconcentration factor"} x "Toxicity" x *modifier for* "Lack of FSIS Testing Information on Violations"

In comparing Equation (6.2), above, to Equation 4.3, it can be seen that the "Weighted average of {'Regulatory Concern,' 'Pre-slaughter Interval,' "Bioconcentration factor'}" has been used in place of "Predicted or Actual Score for 'FSIS Historical Testing Information on Violations'." Endocrine Disruption" was not included in Equation 6.2, because scores for this category were not available for most of the pesticides.

Table 6.1, the pesticides are rated for relative public health concern by combining the scoring categories presented in Equation (6.2), above, using the weighting formula shown in the last column of this table, and presented in Equation (6.3), below. FSIS selected this formula, based on a consensus about the relative importance of each modifier, and of how much each modifier should be allowed to alter the underlying risk-based score for Relative Public Health Concern. The value of the selected mathematical formula is that it formalizes the basis of FSIS's judgement. This enables others to observe and understand

the adjustments that were made, and it ensures consistency in how these adjustments were applied across a wide range of compounds.

Relative public health concern rating, pesticides = {[(2*R+P+B)/4]*T}*{[(L-1)*0.05]+1} (6.3)

Where: R = score for "Regulatory Concern"
P = score for "Pre-slaughter Interval"
B = score for "Bioconcentration Factor"
T = score for "Toxicity"
L = score for "Lack of FSIS Testing Information on Violations"

In this formula, "Regulatory Concern" was weighted twice as heavily as both "Pre-slaughter Interval" and "Bioconcentration Factor," because “Regulatory Concern” was considered a more direct measure of exposure. Moreover, as with the veterinary drugs, the final ratings of compounds or compound classes receiving scores of 4, 3, 2, and 1 in "Lack of FSIS Testing Information on Violations" are increased by 15%, 10%, 5%, and 0% respectively. In other words, the rating of a compound or compound class that had never been tested by FSIS (in the production classes and matrices of concern) would be increased by 15%, while the rating of one that had been recently tested by FSIS (again, in the production classes and matrices of concern) would remain unchanged.

The formulas used here for the pesticides, and in Chapter 6 for the veterinary drugs, have been normalized to give the same maximum value. Because the formula for the pesticides uses different terms (i.e., scoring categories) from that for the veterinary drugs, their scores are not precisely comparable. However, because of the normalization the scores for the pesticides and veterinary drugs are comparable in magnitude, thus enabling at least a rough comparison to be made across these two very different categories of compounds.

In Table 6.2, *Rank and Status for Pesticides*, the pesticides are ranked by their rating scores, as generated using the selected weighting formula (Equation (6.3), above). The scores presented in Table 6.2 enable FSIS to bring consistency, grounded in formal risk-based considerations, to its efforts to differentiate among a very diverse range of pesticides and pesticide classes in a situation that is marked by minimal data on relative exposures**.** These rankings do not account for differences in exposure due to differences in overall consumption. Data on relative consumption are applied subsequently, in Phase IV, when relative exposure values for each compound/production class (C/PC) pair are estimated.

PHASE II - SELECTING PESTICIDES FOR INCLUSION IN THE 2003 NRP

Following the completion of the ranking of the pesticides, the SAT (1) used these rankings to select those compounds and compound classes that should be included in the 2003 NRP, based purely on their relative public health concern and (2) determined which of these compounds and compound classes actually could be included in the 2003 NRP, based on the availability of laboratory resources.

The consensus of the SAT participants was that those compounds and compound classes ranked fifteenth or higher represented a potential public health concern sufficient to justify their inclusion in the 2003 FSIS National Residue Program (NRP).

Once these high-priority compounds and compound classes had been identified, it was necessary for FSIS to apply considerations beyond those related to public health to determine the compounds that would be sampled. The principal consideration not related to public health was the availability of laboratory resources, especially the availability of appropriate analytical methods within the FSIS laboratories. Based on these constraints, only the chlorinated hydrocarbon/chlorinated organophosphate (CHC/COP) compound class can currently be included in the NRP. The 39 compounds that will be analyzed in this class are:

HCB, alpha-BHC, lindane, heptachlor, dieldrin, aldrin, endrin, ronnel, linuron, oxychlordane, chlorpyrifos, nonachlor, heptachlor epoxide A, heptachlor epoxide B, endosulfan I, endosulfan I sulfate, endosulfan II, trans-chlordane, cis-chlordane, chlorfenvinphos, p,p'-DDE, p, p'-TDE, o,p'-DDT, p,p'-DDT, carbophenothion, captan, tetrachlorvinphos [stirofos], kepone, mirex, methoxychlor, phosalone, coumaphos-O, coumaphos-S, toxaphene, famphur, PCB 1242, PCB 1248, PCB 1254, PCB 1260, dicofol*, PBBs*, polybrominated diphenyl ethers*, and deltamethrin* (*identification only; not quantitated)

The sampling status of each compound or compound class in the 2003 Monitoring Plan is provided in Table 6.2. For each highly ranked compound or compound class that was not scheduled for inclusion in the 2003 NRP, a brief explanation of the reason for its exclusion is provided. This table will be used to identify future method development needs for pesticides for the FSIS NRP.

It can be seen that a number of highly ranked pesticides could not be included in the 2003 NRP due to methodological limitations. FSIS will apply methodology capable of capturing chlorinated hydrocarbons and chlorinated and non-chlorinated organophospates when such methodology can be implemented.

PHASE III - IDENTIFYING THE COMPOUND/PRODUCTION CLASS (C/PC) PAIRS

The CHC/COP class includes pesticides that may be present in the foods animals eat, creating the potential for the occurrence of "secondary residues" (i.e., residues that are not the result of direct treatment) in all classes of animals. Other compounds within this class (such as the PCB's) are environmental contaminants to which any animal may be exposed. *For these two reasons, FSIS judged it prudent to sample for CHC's and COP's in all production classes.* FSIS also wishes to continue sampling for these compounds in all production classes as a means of monitoring for the occurrence of accidental contamination incidents.

PHASE IV - ALLOCATION OF SAMPLING RESOURCES

Since only the CHC/COP compound class will be included in the 2003 NRP, this phase is relatively straightforward. FSIS has sufficient analytical capability to implement CHC/COP analysis in all production classes. To establish a relative sampling priority for each C/PC pair, the ranking score for the CHC/COP's (as calculated in Table 6.1) was multiplied by the estimated relative percent of domestic consumption for each production class (presented in Table 4.4). This is identical to Equation (4.6), which was used to calculate the relative sampling priorities for the veterinary drugs:

$$(\text{Rel. sampling priority})_{C/PC} = (\text{Ranking score})_{C} \times (\text{Est. rel. \% domestic consumption})_{PC} \qquad (6.4)$$

As stated above for veterinary drugs, Equation (6.4) is analogous to the equation used to estimate risk (Equation (6.1)), in which risk per unit of consumption is multiplied by consumption. While the results of Equation (6.4) do not constitute an estimate of risk, they provide a numerical representation of the relative public health concern associated with each C/PC pair, and thus can be used to prioritize FSIS analytical sampling resources according to the latter. Note that the risk ranking provided by Equation (6.4) is based upon average consumption across the entire U.S. population, rather than upon maximally exposed individuals.

A ranking of the C/PC pairs within this single compound class could be obtained merely using the estimated relative percent of domestic consumption for each production class. In other words, the *rank order and the relative magnitude of the score* assigned to each of the C/PC pairs within this compound class is not changed by multiplying all the relative consumption values by the ranking score, since the ranking score is a constant term. Nevertheless, to maintain a rough parity between the sampling numbers assigned to the veterinary drugs and those assigned to the pesticides, all of the relative consumption figures were multiplied by the ranking score for the CHC/COP compound class. Then, rather than simply dividing the production classes into quartiles, the initial sampling levels were chosen using the same cutoff numbers employed in Table 4.5 for the veterinary drugs. The cutoff scores are as follows: >29.00 = 460 samples; 2.51 – 29.00 = 300 samples; 0.14 - 2.50 = 230 samples; < 0.14 = 90 samples. The results of this are presented in Table 6.3, *Pesticide Compound/Production Class Pairs, Sorted by Sampling Priority Score, with Adjusted Number of Analyses*. As described in Section 3, above, these sampling levels provide varying probabilities of detecting residue violations. Thus the larger sample sizes, which provide the greater chance of detecting violations, are directed towards those C/PC pairs that have been identified as representing higher levels of relative public health concern.

Because the numbers of squab produced and consumed are very limited, and because quantitative data on squab production were not available, squab were not included in the above determination, and were instead assigned a sampling frequency of 45 animals. This number was judged to be appropriate relative to the estimated annual U.S. production of squab.

ADJUSTING RELATIVE SAMPLING NUMBERS

Adjusting for historical data on violation rates of individual C/PC pairs

Extensive FSIS historical testing information on violations, subdivided by production class, is available for the CHC/COP compound class. This information has been used to further refine the relative priority of sampling each C/PC pair. Table 6.3 lists, for the period 1/1/92 -12/31/01, the total number of samples analyzed by FSIS in each production class under its Monitoring Plan (i.e., random sampling only), and the percent of samples found to be violative (i.e., present at a level in excess of the action level or regulatory tolerance; or, for those compounds that are prohibited, present at any detectable level). Using these data, the following rules were applied to adjust the sampling numbers:

1. Less than 300 samples from the C/PC pair tested over the 10-year period: +1 level (i.e., increase by one sampling level, e.g., from 230 samples to 300 samples).
2. At least 300 samples tested over the 10-year period, violation rate $\geq$ 0.25%: +1 level.
3. At least 300 samples tested over the 10-year period, violation rate = 0.00%: -1 level.
4. The maximum number of samples to be scheduled for testing is 460.

The three exceptions to this system are:

1. Geese are not scheduled for more than 90 samples. Sampling destroys the entire goose carcass. Because very few geese are produced, and because virtually all geese are slaughtered by a very limited number of establishments, collecting a larger number of samples would present an unfair burden to these establishments.
2. As explained above, squab are automatically assigned 45 samples for each analysis performed.
3. Because the use of the CHC/COP method to test for phenylbutazone did not start until recently, FSIS has limited data on the occurrence of this drug in the production classes of interest. Therefore, all production classes for which phenylbutazone was designated as of potential concern (in Table 4.3, with a "●") were assigned a minimum of 300 samples.

All of the above adjustments were applied. The sampling numbers obtained following these adjustments are listed in Table 6.3 under the heading "INITIAL ADJ. #" (initial adjusted number of samples).

Adjusting for laboratory capacity

Following this, it was necessary to make a final set of adjustments to match the total sampling numbers for CHC's/COP's with the analytical capabilities of the FSIS laboratories. For CHC's/COP's, FSIS laboratory capacity is less than the proposed number of samples. To accommodate this discrepancy, all 460-sample production classes were reduced to 300 samples (except for young chickens, which are the largest production class and thus represent the highest potential exposure), and all 300-sample production classes were reduced to 230 samples. This enabled FSIS to avoid eliminating any production classes of concern from CHC/COP sampling, while maintaining an adequate level of data quality for the most important production classes.

SCORING KEY FOR PESTICIDES
2003 FSIS DOMESTIC RESIDUE PROGRAM

FSIS Historical Testing Information on Violations (1/1/92 - 12/31/01)

Violation rate scores were calculated by two different methods, A and B, using violation rate data from FSIS random sampling of animals entering the food supply:

Method A: Maximum Violation Rate. Identify the production class exhibiting the highest average violation rate (the number of violations over the period from 1992 - 2001, divided by the total number of samples analyzed). Score as follows:

4 = > 0.5%
3 = 0.25% - 0.5 %
2 = 0.07% - 0.24%
1 = < 0.07%
NT = Not tested by FSIS.
NA = Tested by FSIS, but violation information does not apply.

Method B: Violation Rate Weighted by Size of Production Class. For each production class analyzed, multiply the average violation rate (defined above) by the relative consumption value for that class (weight annual U.S. production for that class, divided by total production for all classes for which FSIS has regulatory responsibility). Add together the values for all production classes. Score as follows:

4 = > 0.08%
3 = 0.035% - 0.08%
2 = 0.003% - 0.034%
1 = < 0.003%
NT = Not tested by FSIS.
NA = Tested by FSIS, but violation information does not apply.

The final score is determined by assigning, to each pesticide or pesticide class, the greater of the scores from Method A and Method B.

It can be seen that Method A identifies those pesticides that are of regulatory concern because they exhibit high violation rates, independent of the relative consumption value of the production class in which the violations have occurred. Method B identifies those pesticides that may not have the highest violation rates, but would nevertheless be of concern because they exhibit moderate violation rates in a relatively large proportion of the U.S. meat supply. By employing Methods A and B together, and assigning a final score based on the highest score received from each, both of the above concerns are captured.

Regulatory Concern

These scores represent EPA's professional assessment of the extent to which the acute or chronic dietary exposure to this compound may exceed EPA's level of concern. For compounds other than carcinogens, this was determined by comparing a compound's Acute or Chronic Population Adjusted Dose (PAD) (whichever was lower) to the estimated level of exposure. The Acute and Chronic PAD's are calculated as follows:

The Acute Reference Dose (Acute RfD) is an estimate (with uncertainty spanning an order of magnitude or greater) of a single oral exposure level for the human population, including sensitive subpopulations, that is likely to be without an appreciable risk of deleterious effects.

The Chronic Reference Dose (Chronic RfD) is an estimate (with uncertainty spanning an order of magnitude or greater) of a daily oral exposure level for the human population, including sensitive subpopulations, that is likely to be without an appreciable risk of deleterious effects during a lifetime.

The Acute and Chronic RFD's are calculated by dividing the No Observed Adverse Effect Level (NOAEL) (i.e., the highest dose that gave no observable adverse effect) or the Lowest Observed Adverse Effect Level (LOAEL) (i.e., the lowest dose at which an adverse effect was seen) by Uncertainty Factors (UF). UF's are used to account for differences between different humans (intraspecies variability) and for differences between the test animals and humans (interspecies extrapolation). If the LOAEL is used, an additional UF is required.

RfD = (NOAEL or LOAEL)/Total UF

The Acute and Chronic Population Adjusted Dose (PAD) are the Acute and Chronic RfD, respectively, modified by the FQPA Safety Factor:

Acute or Chronic PAD = (Acute or Chronic RfD)/FQPA Safety Factor

The acute and chronic dietary risks are expressed as a percentage of the Acute or Chronic PAD. A dietary risk of 100% of the Acute or Chronic PAD (*whichever is lower*) is the target level of exposure that should not be exceeded (i.e., the estimated risk associated with any exposure that is less than 100% of the PAD has been judged not to be of concern). In the following, "PAD" is the lower of the Acute and Chronic PAD's.

4 = PAD exceeder or carcinogen.

3 = Close to PAD.

2 = Exposure estimated to be a low percentage of PAD.

1 = Exposure estimated to be a very low percentage of PAD.

Lack of FSIS Testing Information on Violations

This represents the extent to which FSIS analytical testing information on a residue is limited, absent or obsolete.

4 = FSIS has not included this compound in its sampling program within the past 10 years (1/1/92 - 12/31/01); or FSIS has included this compound within its program only between 6 and 10 years ago (1/1/92 - 12/31/96), but the sampling does not meet the criteria specified for a "3;" or FSIS has included this compound in its sampling program, but the information is not at all useful in predicting future violation rates, because of subsequent significant changes in the conditions of use of the compound (e.g., the reduction in withdrawal time for carbadox), or because regulatory intelligence information indicates that the situation has changed significantly since the last time the compound was sampled; or because the compound is of concern in several production classes of interest, but testing has been carried out in only one.

3 = FSIS has tested within the past 5 years (1/1/97 - 12/31/01), but in fewer than 75% of the production classes of interest; or the only testing was between 6 and 10 years ago, where FSIS has analyzed at least 75% of production classes of interest for at least 2 of these 5 years, with a total of at least 500 samples per production class during this 5-year period and, in the case of a multi-residue method, the method used covers all compounds of interest within the compound class; or, the compound would normally have qualified for a "1" or "2," but the method used was not sufficiently sensitive to permit accurate determination of the true violation rate.

2 = FSIS has included this compound in its sampling program within the past 5 years in at least 75%, but less than 100% of the production classes of interest; or 100% of the production classes of interest have been sampled, but the amount and duration of sampling has been insufficient to qualify for a "1."

1 = FSIS has included this compound in its sampling program within the past 5 years, and has analyzed each production class of interest for at least 2 of these 5 years, with a total of at least 500 samples per production class during this 5-year period, and in the case of a multi-residue method, the method used covers all compounds of interest within the compound class.

Pre-Slaughter Interval

Pesticides accepted for direct dermal application have a minimum specified pre-slaughter interval. This is the interval between the last dermal application and the time of slaughter.

4 = Dermal application permitted, pre-slaughter interval 1 day or greater.

3 = Dermal application permitted, pre-slaughter interval 0 days.

2 = No direct dermal application permitted, but treatment of premises (e.g., holding cells, feedlots, barns, etc.) is permitted.

1 = No direct dermal application or premise treatment permitted.

Bioconcentration Factor

This is a measure of the compound's relative affinity for fat, as measured by the $K_{o/w}$. The $K_{o/w}$ is defined as the logarithm of the partition coefficient between octanol and water. Compounds that have a high affinity for octanol (and thus a high $K_{o/w}$) tend to bioaccumulate in body fat.

4 = log $K_{o/w}$ greater than 3

3 = log $K_{o/w}$ between 2 and 3

2 = log $K_{o/w}$ between 1 and 2

1 = log $K_{o/w}$ less than 1

Endocrine Disruption

This is a measure of the extent to which the compound changes endocrine function and causes adverse effects to individual organisms and/or their progeny, or to organism populations and subpopulations.

4 = Likely.

3 = Suspected.

NT = Not yet tested.

Toxicity

This represents EPA's professional judgment of the toxicity of the compound, including both the dose required to achieve a toxic effect, and the severity of the toxic effect. In the following, "RfD" is the lower of the Acute and Chronic RfD's. [An explanation of Acute and Chronic RfD is provided in the description of Regulatory Concern, above.]

4 = Cholinesterase inhibitor, carcinogen, or low RfD.

3 = Medium RfD.

2 = High RfD.

1 = Very low toxicity concern or eligible for exemption from the requirement of a tolerance.

Table 6.1
Scoring Table for Pesticides
2003 FSIS NRP, Domestic Monitoring Plan

COMPOUND/COMPOUND CLASS	HIST. VIOL. (FSIS)	REG. CON. (R) (EPA)	PSI (P) (EPA)	BIOCON. (B) (EPA)	ENDO. DISRUP. (EPA)	TOX. (T) (EPA)	LACK INFO. (L) (FSIS)	*{[(2*R+P+B)/4]*T} *{[(L-1)*0.05]+1}*
Benzimidazole Pesticides in FSIS Benzimidazole MRM (5-hydroxythiabendazole, benomyl (as carbendazim), thiabendazole)	1	3	1	4	3	4	3	***12.1***
Carbamates in FSIS Carbamate MRM (aldicarb, aldicarb sulfoxide, aldicarb sulfone, carbaryl, carbofuran, carbofuran 3-hydroxy)	NA	4	4	2	3	4	4	***16.1***
Carbamates NOT in FSIS Carbamate MRM (carbaryl 5,6-dihydroxy, chlorpropham, propham, thiobencarb, 4-chlorobenzylmethylsulfone,4-chlorobenzylmethylsulfone sulfoxide)	NT	4	1	3	NV	4	4	***13.8***
CHC's and COP's in FSIS CHC/COP MRM (HCB, alpha-BHC, lindane, heptachlor, dieldrin, aldrin, endrin, ronnel, linuron, oxychlordane, chlorpyrifos, nonachlor, heptachlor epoxide A, heptachlor epoxide B, endosulfan I, endosulfan I sulfate, endosulfan II, trans-chlordane, cis-chlordane, chlorfenvinphos, p,p'-DDE, p, p'-TDE, o,p'-DDT, p,p'-DDT, carbophenothion, captan, tetrachlorvinphos [stirofos], kepone, mirex, methoxychlor, phosalone, coumaphos-O, coumaphos-S, toxaphene, famphur, PCB 1242, PCB 1248, PCB 1254, PCB 1260, dicofol*, PBBs*, polybrominated diphenyl ethers*, deltamethrin*) (*identification only)	3	4	4	4	NV	4	1	***16.0***
COP's and OP's NOT in FSIS CHC/COP MRM (azinphos-methyl, azinphos-methyl oxon, chlorpyrifos, coumaphos, coumaphos oxon, diazinon, diazinon oxon, diazinon met G-27550, dichlorvos, dimethoate, dimethoate oxon, dioxathion, ethion, ethion monooxon, fenthion, fenthion oxon, fenthion oxon sulfone, fenthion oxon sulfoxide, fenthion sulfone, fenthion sulfoxide, malathion, malathion oxon, naled, phosmet, phosmet oxon, pirimiphos-methyl, trichlorfon, tetrachlorvinphos, tetrachlorvinphos-4 metabolites, acephate, methamidophos, chlorpyrifos-methyl, fenamiphos, fenamiphos sulfoxide,fenamiphos sulfone, fenamiphos sulfoxide desisopropyl, fenamiphos sulfone desisopropyl, isofenphos, isofenphos oxon, isofenphos desisopropyl, isofenphos oxon desisopropyl, methidathion, ODM, parathion (ethyl), parathion oxon, parathion methyl, parathion methyl oxon, phorate, phorate oxon, phorate oxon sulfone, phorate oxon sulfoxide, phorate sulfone, phorate sulfoxide, profenofos, sulprofos, sulprofos oxon, sulprofos oxon sulfone, sulprofos oxon sulfoxide, sulprofos sulfone, sulprofos sulfoxide, tribufos (DEF))	NT	4	4	4	NV	4	4	***18.4***
Synthetic Pyrethrins in FSIS Synthetic Pyrethrin MRM (cypermethrin, cis-permethrin, trans-permethrin, fenvalerate, zeta-cypermethrin)	1	3	4	4	3	4	3	***15.4***
Triazines in FSIS Triazine MRM (atrazine, simazine, propazine, terbuthylazine)	1	4	2	3	4	4	3	***14.3***
Triazines NOT in FSIS Triazine MRM (atrazine chloro metabolites, metribuzin, metribuzin DADK, metribuzin DA, metribuzin DK, amitraz, amitraz 2,4-DMA metabs., desdiethyl simazine, desethyl simazine, simazine chloro metabs.)	NT	4	4	3	4	4	4	***17.3***
1-(2,4-dichlorophenyl)-2-(1H-imidazole-1-yl)-1-ethanol	NT	3	4	4	NV	4	4	***16.1***
1,1-(2,2-dichloroethylidene)bis(4-methoxybenzene)	NT	3	4	4	NV	4	4	***16.1***

Table 6.1 – *Continued*
Scoring Table for Pesticides
2003 FSIS NRP, Domestic Monitoring Plan

COMPOUND/COMPOUND CLASS	HIST. VIOL. (FSIS)	REG. CON. (R) (EPA)	PSI (P) (EPA)	BIOCON. (B) (EPA)	ENDO. DISRUP. (EPA)	TOX. (T) (EPA)	LACK INFO. (L) (FSIS)	*{[(2*R+P+B)/4]*T}*{[(L-1)*0.05]+1}*
1,1,3,3,-tetrakis(2-methyl-2-phenylpropyl)-1,3-dihydroxydistannoxane	NT	2	1	4	NV	3	4	***7.8***
1-methoxy-4-(1,2,2,2-tetrachloroethyl)benzene)	NT	3	4	4	NV	4	4	***16.1***
1-methyl cyromazine	NT	3	4	2	NV	4	4	***13.8***
2-((2-ethyl-6-methylphenyl)-amino)-1-propanol	NT	3	1	3	3	4	4	***11.5***
2-(1-hydroxyethyl)-6-ethylaniline	NT	4	1	3	3	4	4	***13.8***
2-(4-((6-chloro-2-benzoxazolyl)oxy)phenoxy)propanoic acid	NT	3	1	4	NV	4	4	***12.7***
2,3-dihydro-3,3-dimethyl-2-oxo-5-benzofuranyl methyl sulfonate	NT	2	1	2	NV	2	4	***4.0***
2,4-D	NT	3	2	1	3	2	4	***5.2***
2,5-dichloro-4-methoxyphenol	NT	1	1	2	NV	3	4	***4.3***
2,6-diethylaniline	NT	4	1	3	3	4	4	***13.8***
2-aminobenzimidazole	NT	3	1	2	3	4	4	***10.4***
2-amino-n-isopropylbenzamide	NT	3	1	2	NV	3	4	***7.8***
2-carboxyisopropyl-4-(2,4-dichloro)-5-isopropoxyphenyl)-1,3,4-oxadiazolin-5-one	NT	3	1	4	NV	4	4	***12.7***
2-hydroxy-2,3-dihydro-3,3-dimethyl-5-benzofuranyl methyl sulfonate	NT	2	1	2	NV	2	4	***4.0***
2-t-butyl-4-(2,4-dichloro-5-hydroxyphenyl)-delta 2-1,3,4-oxadiazolin-1,3,4,5-one	NT	3	1	4	NV	4	4	***12.7***
3-(1-(2,4-dichlorophenyl)-2-(1H-imidazole-1-yl)ethoxy)-1,2-propane diol	NT	3	4	4	NV	4	4	***16.1***
3-(2-chloro-4-hydroxyphenyl)-6-(2-chlorophenyl)-1,2,4,5-tetrazine	NT	3	1	1	NV	4	4	***9.2***
3-(3,4-dichlorophenyl)-1-methoxyurea	NT	3	2	3	NV	4	4	***12.7***
3,4-dichloroaniline	NT	3	2	3	NV	4	4	***12.7***
3,4-dichlorophenylurea	NT	3	2	3	NV	4	4	***12.7***
3-carboxy-5-ethoxy-1,2,4-thiadiazole	NT	3	1	4	NV	3	4	***9.5***
3-t-butyl-5-chloro-6-hydroxymethyluracil	NT	1	1	1	NV	3	4	***3.5***
4-(2-ethyl-6-methylphenyl)-2-hydroxy-5-methyl-3-morpholinone	NT	3	1	3	3	4	4	***11.5***
4-chloro-2-trifluoromethylaniline	NT	3	1	4	NV	3	4	***9.5***
4-hydrocythidiazuron	NT	2	1	2	NV	4	4	***8.1***
6-chloro-2,3-dihydro-3,3,7-trimethyl-5H-oxazolo(3,2a)pyrimidin-5-one	NT	1	1	1	NV	3	4	***3.5***
6-chloro-2,3-dihydro-7-hydroxymethyl-3,3-dimethyl-5H-oxazolo(3,2-a)pyrimidin-5-one	NT	1	1	1	NV	3	4	***3.5***
6-chloro-2,3-dihydro-benzoxazol-2-one	NT	3	1	4	NV	4	4	***12.7***
6-chloronicotinic acid	NT	3	1	1	NV	3	4	***6.9***
6-chloropicolinic acid	NT	1	1	4	NV	3	4	***6.0***
6-methyl-2,3-quinoxalinedithiol	NT	3	1	2	NV	4	4	***10.4***
Abamectin	NT	2	1	4	NV	4	4	***10.4***
Abamectin delta 8,9 geometric isomer	NT	2	1	4	NV	4	4	***10.4***
Acifluorfen, amino analog	NT	3	1	2	NV	3	4	***7.8***
Alachlor	NT	4	1	3	3	4	4	***13.8***
Allophanate	NT	3	1	2	NV	4	4	***10.4***

Table 6.1 – *Continued*
Scoring Table for Pesticides
2003 FSIS NRP, Domestic Monitoring Plan

COMPOUND/COMPOUND CLASS	HIST. VIOL. (FSIS)	REG. CON. (R) (EPA)	PSI (P) (EPA)	BIOCON. (B) (EPA)	ENDO. DISRUP. (EPA)	TOX. (T) (EPA)	LACK INFO. (L) (FSIS)	*{[(2*R+P+B)/4]*T}*{[(L-1)*0.05]+1}*
Aminomethylphosphonic acid	NT	1	2	1	NV	1	4	***1.4***
Arsanilic acid	NT	4	1	4	NT	4	4	***15.0***
Azoxystrobin	NT	1	1	3	NV	2	4	***3.5***
Azoxystrobin Z isomer	NT	1	1	3	NV	2	4	***3.5***
Benoxacor	NT	1	1	3	NV	4	4	***6.9***
Bensulfuron methyl ester	NT		1	1	NV	2	4	***1.2***
Bentazon, 6-hydroxy bentazon, 8-hydroxy bentazon	NT	3	1	2	NV	3	4	***7.8***
Bifenthrin	NT	3	1	4	NV	4	4	***12.7***
Bifenthrin, 4'-hydroxy	NT	3	1	4	NV	4	4	***12.7***
Bis(trichloromethyl)disulfide	NT	3	1	4	NV	4	4	***12.7***
Bromoxynil	NT	3	1	1	NV	4	4	***9.2***
Buprofezin	NT	2	1	2	NV	4	4	***8.1***
Butylamine, sec-	NT	2	1	2	NV	2	4	***4.0***
Cacodylic acid	NT	3	3	3	3	4	4	***13.8***
Captan epoxide	NT	3	1	4	NV	4	4	***12.7***
Carboxin	NT	3	1	2	NV	4	4	***10.4***
Carboxin sulfoxide	NT	3	1	2	NV	4	4	***10.4***
Carfentrazone Ethyl	NT	1	1	4	NT	1	4	***2.0***
CGA 150829	NT	2	1	1	NV	4	4	***6.9***
CGA 161149	NT	1	1	1	NV	3	4	***3.5***
CGA 171683	NT	2	1	1	NV	4	4	***6.9***
CGA 195654	NT	1	1	1	NV	3	4	***3.5***
Chlorfenapyr	NT	1	1	2	NV	4	4	***5.8***
Chlorobenzilate	NT	3	1	4	NV	3	4	***9.5***
Chloroneb	NT	1	1	2	NV	3	4	***4.3***
Chloroneb, hydroxy-	NT	1	1	2	NV	3	4	***4.3***
Chlorsulfuron	NT	3	1	2	NV	3	4	***7.8***
Chlorsulfuron, 5-hydroxy-	NT	3	1	2	NV	3	4	***7.8***
Clethodim	NT		1	2	NV	3	4	***2.6***
Clofencet	NT	1	1	2	NV	3	4	***4.3***
Clofentezine	NT	3	1	1	NV	4	4	***9.2***
Cloprop	NT	1	1	1	NV	3	4	***3.5***
Clopyralid	NT	1	2	1	NV	2	4	***2.9***
Compound 125670	NT	2	1	2	NV	2	4	***4.0***
CP 101394	NT	4	1	3	3	4	4	***13.8***
CP 108064	NT	4	1	3	3	4	4	***13.8***
CP 108065	NT	4	1	3	3	4	4	***13.8***
CP 108267	NT	4	1	3	3	4	4	***13.8***

Table 6.1 – *Continued*
Scoring Table for Pesticides
2003 FSIS NRP, Domestic Monitoring Plan

COMPOUND/COMPOUND CLASS	HIST. VIOL. (FSIS)	REG. CON. (R) (EPA)	PSI (P) (EPA)	BIOCON. (B) (EPA)	ENDO. DISRUP. (EPA)	TOX. (T) (EPA)	LACK INFO. (L) (FSIS)	*{[(2*R+P+B)/4]*T} *{[(L-1)*0.05]+1}*
CP 51214	NT	4	1	3	3	4	4	***13.8***
Cyclanilide	NT	3	1	4	NV	4	4	***12.7***
Cyclohexylstannoic acid	NT	2	1	2	NV	4	4	***8.1***
Cyfluthrin	NT	3	4	2	NV	3	4	***10.4***
Cyhalothrin, lambda-	NT	3	4	2	NV	4	4	***13.8***
Cyhexatin	NT	2	1	2	NV	4	4	***8.1***
Cyromazine	NT	3	4	2	NV	4	4	***13.8***
Dalapon	NT	2	2	2	NV	3	4	***6.9***
Dialifor	NT	3	1	4	NV	4	4	***12.7***
Dialifor oxon	NT	3	1	4	NV	4	4	***12.7***
Dicamba	NT	3	2	3	NV	4	4	***12.7***
Dicyclohexyltin oxide	NT	2	1	2	NV	4	4	***8.1***
Difenoconazole	NT	3	1	4	NV	3	4	***9.5***
Difenzoquat	NT	1	1	1	NV	4	4	***4.6***
Diflubenzuron	NT	3	4	4	NV	2	4	***8.1***
Dimethenamid	NT	2	1	1	NT	2	4	***3.5***
Dimethipin	NT	1	1	1	NV	3	4	***3.5***
Dioxathion	NT	3	1	3	NV	4	4	***11.5***
Diphenamid	NT	3	1	1	NV	3	4	***6.9***
Diphenamid, desmethyl	NT	3	1	1	NV	3	4	***6.9***
Diphenylamine	NT	3	3	1	NV	3	4	***8.6***
Dipropyl isocinchomerate	NT	3	4	4	NV	2	4	***8.1***
Diquat dibromide	NT	1	1	3	NV	4	4	***6.9***
Diuron	NT	3	2	3	NV	4	4	***12.7***
Dodine	NT	2	1	1	NV	3	4	***5.2***
Emamectin	NT	2	1	4	NT	3	4	***7.8***
Esfenvalerate	NT	3	4	3	NV	3	4	***11.2***
Ethalfluralin	NT	3	1	2	NV	4	4	***10.4***
Ethephon	NT	3	1	1	NV	2	4	***4.6***
Ethofumesate	NT	2	1	2	NV	2	4	***4.0***
Etridiazole .	NT	3	1	4	NV	3	4	***9.5***
ETU	NT	3	1	2	3	4	4	***10.4***
Fenarimol	NT	1	1	4	NV	3	4	***6.0***
Fenarimol metabolite B	NT	1	1	4	NV	3	4	***6.0***
Fenarimol metabolite C	NT	1	1	4	NV	3	4	***6.0***
Fenbuconazole	NT	3	1	4	NT	3	4	***9.5***
Fenbutatin Oxide	NT	2	1	4	NV	3	4	***7.8***
Fenoxaprop ethyl	NT	3	1	4	NV	4	4	***12.7***

Table 6.1 – *Continued*
Scoring Table for Pesticides
2003 FSIS NRP, Domestic Monitoring Plan

COMPOUND/COMPOUND CLASS	HIST. VIOL. (FSIS)	REG. CON. (R) (EPA)	PSI (P) (EPA)	BIOCON. (B) (EPA)	ENDO. DISRUP. (EPA)	TOX. (T) (EPA)	LACK INFO. (L) (FSIS)	*{[(2*R+P+B)/4]*T} *{[(L-1)*0.05]+1}*
Fenpropathrin	NT	2	1	1	NV	3	4	***5.2***
Fenridazon	NT	2	1	2	NV	3	4	***6.0***
Fipronil	NT	3	4	4	NV	4	4	***16.1***
Fluazifop-butyl	NT	3	1	2	NV	3	4	***7.8***
Fludioxanil	NT	1	1	4	NT	1	4	***2.0***
Flufenacet (thiafluamide)	NT	3	1	4	NT	3	4	***9.5***
Fluridone	NT	2	1	2	NV	3	4	***6.0***
Fluroxypyr	NT	2	1	1	NT	2	4	***3.5***
Fluthiacet-Methyl (CGA-248757)	NT	1	1	1	NT	1	4	***1.2***
Flutolanil	NT	2	1	4	NV	2	4	***5.2***
Fluvalinate	NT	3	1	4	NV	3	4	***9.5***
Glufosinate-Ammonium	NT	1	2	1	NV	3	4	***4.3***
Glyphosate	NT	1	2	1	NV	1	4	***1.4***
Glyphosate-Trimesium	NT	1	1	1	NV	2	4	***2.3***
Halosulfuron	NT	1	1	2	NV	2	4	***2.9***
Hexazinone	NT	3	1	2	NV	3	4	***7.8***
HOE-061517	NT	1	2	1	NV	3	4	***4.3***
HOE-099730	NT	1	2	1	NV	3	4	***4.3***
Imazalil	NT	3	4	4	NV	4	4	***16.1***
Imidacloprid	NT	3	1	1	NV	3	4	***6.9***
IN-A3928	NT	3	1	2	NV	3	4	***7.8***
IN-B2838	NT	3	1	2	NV	3	4	***7.8***
Indoxacarb (DPX-MP062)	NT		1		NT		4	*--*
IN-T3935	NT	3	1	2	NV	3	4	***7.8***
IN-T3936	NT	3	1	2	NV	3	4	***7.8***
IN-T3937	NT	3	1	2	NV	3	4	***7.8***
Iprodione	NT	3	1	3	NV	4	4	***11.5***
Iprodione isomer	NT	3	1	3	NV	4	4	***11.5***
Iprodione metabolite	NT	3	1	3	NV	4	4	***11.5***
Iprodione metabolite 2	NT	3	1	3	NV	4	4	***11.5***
Isoxaflutole	NT	4	1	3	NT	3	4	***10.4***
Kresoxim-methyl	NT	4	1	4	NT	3	4	***11.2***
Maleic hydrazide	NT	3	1	4	NV	1	4	***3.2***
Mancozeb	NT	3	1	2	3	4	4	***10.4***
Maneb	NT	3	1	2	3	4	4	***10.4***
MB 45950	NT	3	4	4	NV	4	4	***16.1***
MB 46136	NT	3	4	4	NV	3	4	***12.1***
MB 46513	NT	3	4	4	NV	4	4	***16.1***

Table 6.1 – *Continued*
Scoring Table for Pesticides
2003 FSIS NRP, Domestic Monitoring Plan

COMPOUND/COMPOUND CLASS	HIST. VIOL. (FSIS)	REG. CON. (R) (EPA)	PSI (P) (EPA)	BIOCON. (B) (EPA)	ENDO. DISRUP. (EPA)	TOX. (T) (EPA)	LACK INFO. (L) (FSIS)	*{[(2*R+P+B)/4]*T} *{[(L-1)*0.05]+1}*
MCPA	NT	1	1	1	NV	4	4	***4.6***
Mepiquat chloride	NT	3	1	1	NV	4	4	***9.2***
Methoprene	NT	2	1	3	NV	2	4	***4.6***
Methoxychlor olefin	NT	3	4	4	4	4	4	***16.1***
Methyl 3,5-dichlorobenzoate	NT	3	1	4	NV	3	4	***9.5***
Metiram	NT	3	1	2	3	4	4	***10.4***
Metolachlor	NT	3	1	3	3	4	4	***11.5***
Metsulfuron Methyl	NT	1	1	1	NV	2	4	***2.3***
Myclobutanil, myclobutanil alcohol metabolite, myclobutanol dihydroxy metabolite	NT	3	1	2	NV	2	4	***5.2***
N-(3,4-dichlorophenyl)-N'-methylurea	NT	3	2	3	NV	4	4	***12.7***
N-(4-chloro-2-trifluoromethylphenyl)-propoxyacetamide	NT	3	1	4	NV	3	4	***9.5***
Nicotine	NT	1	1	3	NV	4	4	***6.9***
Nitrapyrin	NT	1	1	4	NV	3	4	***6.0***
Norfluraxon, desmethyl-	NT	3	1	1	NV	4	4	***9.2***
Norflurazon	NT	3	1	1	NV	4	4	***9.2***
N-phenylurea	NT	2	1	2	NV	4	4	***8.1***
NTN33823	NT	3	1	1	NV	3	4	***6.9***
NTN35884	NT	3	1	1	NV	3	4	***6.9***
Octyl bicycloheptene dicarboximide (MGK-264)	NT	3	4	4	NV	3	4	***12.1***
Oxadiazon	NT	3	1	4	NV	4	4	***12.7***
Oxyfluorfen	NT	3	1	4	NV	4	4	***12.7***
Oxythioquinox	NT	3	1	1	NV	4	4	***9.2***
Paraquat dichloride	NT	3	1	1	NV	4	4	***9.2***
PB-7	NT	2	1	1	NV	4	4	***6.9***
PB-9	NT	2	1	2	NV	4	4	***8.1***
Phosalone oxon	NT	4	1	3	NV	4	4	***13.8***
Picloram	NT	1	2	1	NV	2	4	***2.9***
Piperonyl butoxide	NT	3	4	2	NV	3	4	***10.4***
PP 890	NT	3	4	2	NV	4	4	***13.8***
Primisulfuron-methyl	NT	2	1	1	NV	4	4	***6.9***
Propanil	NT	1	1	3	NV	4	4	***6.9***
Propargite	NT	3	1	2	NV	3	4	***7.8***
Propargite	NT	3	1	2	NV	3	4	***7.8***
Propiconazole	NT	3	1	3	NV	4	4	***11.5***
Propiconazole metabolite 1,2,4-triazole	NT	3	1	3	NV	4	4	***11.5***
Propiconazole metabolite CGA 118244	NT	3	1	3	NV	4	4	***11.5***
Propiconazole metabolite CGA 91305	NT	3	1	3	NV	4	4	***11.5***
Propyzamide	NT	3	1	4	NV	3	4	***9.5***

Table 6.1 – *Continued*
Scoring Table for Pesticides
2003 FSIS NRP, Domestic Monitoring Plan

COMPOUND/COMPOUND CLASS	HIST. VIOL. (FSIS)	REG. CON. (R) (EPA)	PSI (P) (EPA)	BIOCON. (B) (EPA)	ENDO. DISRUP. (EPA)	TOX. (T) (EPA)	LACK INFO. (L) (FSIS)	*{[(2*R+P+B)/4]*T}*{[(L-1)*0.05]+1}*
Prosulfuron	NT	1	1	3	NV	3	4	***5.2***
Pymetrozine	NT	1	1	1	NT	1	4	***1.2***
Pyrazon	NT	3	1	1	NV	4	4	***9.2***
Pyrazon metabolite A	NT	3	1	2	NV	4	4	***10.4***
Pyrazon metabolite B	NT	3	1	2	NV	4	4	***10.4***
Pyrethrin I	NT	2	4	4	NV	3	4	***10.4***
Pyridaben	NT	2	1	2	NV	4	4	***8.1***
Pyriproxifen	NT	1	1	4	NT	1	4	***2.0***
Quinclorac	NT	2	1	2	NV	2	4	***4.0***
Quizalofop-ethyl	NT	3	1	2	NV	4	4	***10.4***
SD 31723	NT	2	1	4	NV	3	4	***7.8***
SD 33608	NT	2	1	4	NV	3	4	***7.8***
SD 54597	NT	3	4	3	NV	3	4	***11.2***
Sethoxydim	NT	2	1	2	NV	2	4	***4.0***
Sethoxydim hydroxylate sulfone	NT	2	1	2	NV	2	4	***4.0***
Sethoxydim sulfoxide	NT	2	1	2	NV	2	4	***4.0***
Sodium acifluorfen	NT	3	1	2	NV	3	4	***7.8***
Spinosad	NT	1	1	4	NT	1	4	***2.0***
Sulfosulfuron	NT	2	1	1	NT	2	4	***3.5***
TCP=3,5,6-trichloro-2-pyridinol	NT	3	2	1	NV	4	4	***10.4***
Tebuconazole	NT	3	1	2	NV	3	4	***7.8***
Tebufenozide	NT	3	1	4	NV	3	4	***9.5***
Tebuthiuron	NT	2	1	2	NV	3	4	***6.0***
Teflubenzuron	NT		1		NT		4	*--*
Terbacil	NT	1	1	1	NV	3	4	***3.5***
Tetradifon	NT	1	1	2	NV	4	4	***5.8***
Thidiazuron	NT	2	1	2	NV	4	4	***8.1***
Thiophanate methyl	NT	3	1	2	NV	4	4	***10.4***
THPI	NT	3	1	4	NV	4	4	***12.7***
Tralkoxydim	NT	2	1	2	NT	2	4	***4.0***
Triadimefon	NT	3	1	4	NV	4	4	***12.7***
Triadimefon metabolite KWG 1323	NT	3	1	4	NV	4	4	***12.7***
Triadimefon metabolite KWG 1342	NT	3	1	4	NV	4	4	***12.7***
Triadimefon metabolite KWG 1732	NT	3	1	4	NV	4	4	***12.7***
Triadimenol (for metabolites see triadimefon)	NT	3	1	4	NV	4	4	***12.7***
Triasulfuron	NT	1	1	1	NV	3	4	***3.5***
Triclopyr	NT	3	2	1	NV	4	4	***10.4***
Triflumazole	NT	3	1	4	NV	3	4	***9.5***

Table 6.1 – *Continued*
Scoring Table for Pesticides
2003 FSIS NRP, Domestic Monitoring Plan

COMPOUND/COMPOUND CLASS	HIST. VIOL. (FSIS)	REG. CON. (R) (EPA)	PSI (P) (EPA)	BIOCON. (B) (EPA)	ENDO. DISRUP. (EPA)	TOX. (T) (EPA)	LACK INFO. (L) (FSIS)	*{[(2*R+P+B)/4]*T}*{[(L-1)*0.05]+1}*
Triphenyltin hydroxide	NT	1	1	4	NV	4	4	***8.1***
WAK4103	NT	3	1	1	NV	3	4	***6.9***

Key:
MRM = Multiresidue method
CHC = Chlorinated hydrocarbon
COP = Chlorinated organophosphate
OP = Organophosphate
NT = Not Tested by FSIS (1/1/92 - 12/31/01)
NA = Compound has been tested by FSIS (1/1/92 - 12/31/01), but the information is Not Applicable (e.g., compound has not been tested in the appropriate matrix)
NV = Value not available
(FSIS) = Scores in this column supplied by FSIS
(EPA) = Scores in this column supplied by EPA
HIST. VIOL. = FSIS Historical Testing Information on Violations
REG. CON. (R) = Regulatory Concern
LACK INFO. (L) = Lack of FSIS Testing Information on Violations
PSI (P) = Pre-slaughter Interval
BIOCON. (B) = Bioconcentration Factor
ENDO. DISRUP. = Endocrine Disruption
TOX. (T) = Toxicity
In the first column, where compounds have been grouped together for analysis or potential analysis by an MRM, the title of that group has been bolded (e.g., "Carbamates in FSIS Carbamate MRM").

Table 6.2
Rank and Status for Pesticides
2003 FSIS NRP, Domestic Monitoring Plan

RANK	COMPOUND/COMPOUND CLASS	SCORE	STATUS IN 2002 NRP
1	**COP's and OP's NOT in FSIS CHC/COP MRM** (azinphos-methyl, azinphos-methyl oxon, chlorpyrifos, coumaphos, coumaphos oxon, diazinon, diazinon oxon, diazinon met G-27550, dichlorvos, dimethoate, dimethoate oxon, dioxathion, ethion, ethion monooxon, fenthion, fenthion oxon, fenthion oxon sulfone, fenthion oxon sulfoxide, fenthion sulfone, fenthion sulfoxide, malathion, malathion oxon, naled, phosmet, phosmet oxon, pirimiphos-methyl, trichlorfon, tetrachlorvinphos, tetrachlorvinphos-4 metabolites, acephate, methamidophos, chlorpyrifos-methyl, fenamiphos, fenamiphos sulfoxide, fenamiphos sulfone, fenamiphos sulfoxide desisopropyl, fenamiphos sulfone desisopropyl, isofenphos, isofenphos oxon, isofenphos desisopropyl, isofenphos oxon desisopropyl, methidathion, ODM, parathion (ethyl), parathion oxon, parathion methyl, parathion methyl oxon, phorate, phorate oxon, phorate oxon sulfone, phorate oxon sulfoxide, phorate sulfone, phorate sulfoxide, profenofos, sulprofos, sulprofos oxon, sulprofos oxon sulfone, sulprofos oxon sulfoxide, sulprofos sulfone, sulprofos sulfoxide, tribufos (DEF))	**18.4**	NIP; need regulatory method.
2	**Triazines NOT in FSIS Triazine MRM** (atrazine chloro metabolites, metribuzin, metribuzin DADK, metribuzin DA, metribuzin DK, amitraz, amitraz 2,4-DMA metabs., desdiethyl simazine, desethyl simazine, simazine chloro metabs.)	**17.3**	NIP; need regulatory method.
3	**Carbamates in FSIS Carbamate MRM** (aldicarb, aldicarb sulfoxide, aldicarb sulfone, carbaryl, carbofuran, carbofuran 3-hydroxy)	**16.1**	NIP; need to adjust sample-handling procedures to prevent degradation.
4	1-(2,4-dichlorophenyl)-2-(1H-imidazole-1-yl)-1-ethanol	**16.1**	NIP; need regulatory method.
5	1,1-(2,2-dichloroethylidene)bis(4-methoxybenzene)	**16.1**	NIP; need regulatory method.
6	1-methoxy-4-(1,2,2,2-tetrachloroethyl)benzene)	**16.1**	NIP; need regulatory method.
7	3-(1-(2,4-dichlorophenyl)-2-(1H-imidazole-1-yl)ethoxy)-1,2-propane diol	**16.1**	NIP; need regulatory method.
8	Fipronil	**16.1**	NIP; need regulatory method.
9	Imazalil	**16.1**	NIP; need regulatory method.
10	MB 45950	**16.1**	NIP; need regulatory method.
11	MB 46513	**16.1**	NIP; need regulatory method.
12	Methoxychlor olefin	**16.1**	NIP; need regulatory method.
13	**CHC's and COP's in FSIS CHC/COP MRM** (HCB, alpha-BHC, lindane, heptachlor, dieldrin, aldrin, endrin, ronnel, linuron, oxychlordane, chlorpyrifos, nonachlor, heptachlor epoxide A, heptachlor expoxide B, endosulfan I, endosulfan I sulfate, endosulfan II, trans-chlordane, cis-chlordane, chlorfenvinphos, p,p'-DDE, p, p'-TDE, o,p'-DDT, p,p'-DDT, carbophenothion, captan, tetrachlorvinphos [stirofos], kepone, mirex, methoxychlor, phosalone, coumaphos-O, coumaphos-S, toxaphene, famphur, PCB 1242, PCB 1248, PCB 1254, PCB 1260, dicofol*, PBBs*, polybrominated diphenyl ethers*, deltamethrin*) (*identification only)	**16.0**	Monitoring Plan, MRM, all domestic production classes except roaster pigs. Import residue plan, all import production classes.
14	**Synthetic Pyrethrins in FSIS Synthetic Pyrethrin MRM** (cypermethrin, cis-permethrin, trans-permethrin, fenvalerate, zeta-cypermethrin)	**15.4**	NIP; laboratory resources not available.
15	Arsanilic acid	**15.0**	NIP; laboratory resources not available.

Table 6.2 – *Continued*
Rank and Status for Pesticides
2003 FSIS NRP, Domestic Monitoring Plan

RANK	COMPOUND/COMPOUND CLASS	SCORE	STATUS IN 2002 NRP
BASED ON CONSULTATION WITH EPA AND OTHER AGENCIES, COMPOUNDS BELOW THIS POINT WERE NOT CONSIDERED TO REPRESENT A BROAD POTENTIAL PUBLIC HEALTH RISK. HOWEVER, SOME OF THESE MAY BE SAMPLED ON A SPECIFIC, AS-NEEDED BASIS.			
16	**Triazines in FSIS Triazine MRM** (atrazine, simazine, propazine, terbuthylazine)	**14.3**	NIP; low priority, method available.
17	**Carbamates NOT in FSIS Carbamate MRM** (carbaryl 5,6-dihydroxy, chlorpropham, propham, thiobencarb, 4-chlorobenzylmethylsulfone,4-chlorobenzylmethylsulfone sulfoxide)	**13.8**	NIP; low priority.
18	1-methyl cyromazine	**13.8**	NIP; low priority.
19	2-(1-hydroxyethyl)-6-ethylaniline	**13.8**	NIP; low priority.
20	2,6-diethylaniline	**13.8**	NIP; low priority.
21	Alachlor	**13.8**	NIP; low priority, method available.
22	Cacodylic acid	**13.8**	NIP; low priority.
23	CP 101394	**13.8**	NIP; low priority.
24	CP 108064	**13.8**	NIP; low priority.
25	CP 108065	**13.8**	NIP; low priority.
26	CP 108267	**13.8**	NIP; low priority.
27	CP 51214	**13.8**	NIP; low priority.
28	Cyhalothrin, lambda-	**13.8**	NIP; low priority.
29	Cyromazine	**13.8**	NIP; low priority, method available.
30	Phosalone oxon	**13.8**	NIP; low priority.
31	PP 890	**13.8**	NIP; low priority.
32	2-(4-((6-chloro-2-benzoxazolyl)oxy)phenoxy)propanoic acid	**12.7**	NIP; low priority.
33	2-carboxyisopropyl-4-(2,4-dichloro)-5-isopropoxyphenyl)-1,3,4-oxadiazolin-5-one	**12.7**	NIP; low priority.
34	2-t-butyl-4-(2,4-dichloro-5-hydroxyphenyl)-delta 2-1,3,4-oxadiazolin-1,3,4,5-one	**12.7**	NIP; low priority.
35	3-(3,4-dichlorophenyl)-1-methoxyurea	**12.7**	NIP; low priority.
36	3,4-dichloroaniline	**12.7**	NIP; low priority.
37	3,4-dichlorophenylurea	**12.7**	NIP; low priority.
38	6-chloro-2,3-dihydro-benzoxazol-2-one	**12.7**	NIP; low priority.
39	Bifenthrin	**12.7**	NIP; low priority.
40	Bifenthrin, 4'-hydroxy	**12.7**	NIP; low priority.
41	Bis(trichloromethyl)disulfide	**12.7**	NIP; low priority.
42	Captan epoxide	**12.7**	NIP; low priority.
43	Cyclanilide	**12.7**	NIP; low priority.
44	Dialifor	**12.7**	NIP; low priority.
45	Dialifor oxon	**12.7**	NIP; low priority.
46	Dicamba	**12.7**	NIP; low priority.
47	Diuron	**12.7**	NIP; low priority.
48	Fenoxaprop ethyl	**12.7**	NIP; low priority.
49	N-(3,4-dichlorophenyl)-N'-methylurea	**12.7**	NIP; low priority.
50	Oxadiazon	**12.7**	NIP; low priority.

Table 6.2 – *Continued*
Rank and Status for Pesticides
2003 FSIS NRP, Domestic Monitoring Plan

RANK	COMPOUND/COMPOUND CLASS	SCORE	STATUS IN 2002 NRP
51	Oxyfluorfen	**12.7**	NIP; low priority.
52	THPI	**12.7**	NIP; low priority.
53	Triadimefon	**12.7**	NIP; low priority.
54	Triadimefon metabolite KWG 1323	**12.7**	NIP; low priority.
55	Triadimefon metabolite KWG 1342	**12.7**	NIP; low priority.
56	Triadimefon metabolite KWG 1732	**12.7**	NIP; low priority.
57	Triadimenol (for metabolites see triadimefon)	**12.7**	NIP; low priority.
58	**Benzimidazole Pesticides in FSIS Benzimidazole MRM** (5-hydroxythiabendazole, benomyl (as carbendazim), thiabendazole)	**12.1**	NIP; low priority, method available.
59	MB 46136	**12.1**	NIP; low priority.
60	Octyl bicycloheptene dicarboximide (MGK-264)	**12.1**	NIP; low priority.
61	2-((2-ethyl-6-methylphenyl)-amino)-1-propanol	**11.5**	NIP; low priority.
62	4-(2-ethyl-6-methylphenyl)-2-hydroxy-5-methyl-3-morpholinone	**11.5**	NIP; low priority.
63	Dioxathion	**11.5**	NIP; low priority.
64	Iprodione	**11.5**	NIP; low priority.
65	Iprodione isomer	**11.5**	NIP; low priority.
66	Iprodione metabolite	**11.5**	NIP; low priority.
67	Iprodione metabolite 2	**11.5**	NIP; low priority.
68	Metolachlor	**11.5**	NIP; low priority.
69	Propiconazole	**11.5**	NIP; low priority.
70	Propiconazole metabolite 1,2,4-triazole	**11.5**	NIP; low priority.
71	Propiconazole metabolite CGA 118244	**11.5**	NIP; low priority.
72	Propiconazole metabolite CGA 91305	**11.5**	NIP; low priority.
73	Esfenvalerate	**11.2**	NIP; low priority.
74	Kresoxim-methyl	**11.2**	NIP; low priority.
75	SD 54597	**11.2**	NIP; low priority.
76	2-aminobenzimidazole	**10.4**	NIP; low priority.
77	6-methyl-2,3-quinoxalinedithiol	**10.4**	NIP; low priority.
78	Abamectin	**10.4**	NIP; low priority.
79	Abamectin delta 8,9 geometric isomer	**10.4**	NIP; low priority.
80	Allophanate	**10.4**	NIP; low priority.
81	Carboxin	**10.4**	NIP; low priority.
82	Carboxin sulfoxide	**10.4**	NIP; low priority.
83	Cyfluthrin	**10.4**	NIP; low priority.
84	Ethalfluralin	**10.4**	NIP; low priority.
85	ETU	**10.4**	NIP; low priority.
86	Isoxaflutole	**10.4**	NIP; low priority.
87	Mancozeb	**10.4**	NIP; low priority.
88	Maneb	**10.4**	NIP; low priority.
89	Metiram	**10.4**	NIP; low priority.
90	Piperonyl butoxide	**10.4**	NIP; low priority.
91	Pyrazon metabolite A	**10.4**	NIP; low priority.
92	Pyrazon metabolite B	**10.4**	NIP; low priority.

Table 6.2 – *Continued*
Rank and Status for Pesticides
2003 FSIS NRP, Domestic Monitoring Plan

RANK	COMPOUND/COMPOUND CLASS	SCORE	STATUS IN 2002 NRP
93	Pyrethrin I	**10.4**	NIP; low priority.
94	Quizalofop-ethyl	**10.4**	NIP; low priority.
95	TCP=3,5,6-trichloro-2-pyridinol	**10.4**	NIP; low priority.
96	Thiophanate methyl	**10.4**	NIP; low priority.
97	Triclopyr	**10.4**	NIP; low priority.
98	3-carboxy-5-ethoxy-1,2,4-thiadiazole	**9.5**	NIP; low priority.
99	4-chloro-2-trifluoromethylaniline	**9.5**	NIP; low priority.
100	Chlorobenzilate	**9.5**	NIP; low priority.
101	Difenoconazole	**9.5**	NIP; low priority.
102	Etridiazole .	**9.5**	NIP; low priority.
103	Fenbuconazole	**9.5**	NIP; low priority.
104	Flufenacet (thiafluamide)	**9.5**	NIP; low priority.
105	Fluvalinate	**9.5**	NIP; low priority.
106	Methyl 3,5-dichlorobenzoate	**9.5**	NIP; low priority.
107	N-(4-chloro-2-trifluoromethylphenyl)-propoxyacetamide	**9.5**	NIP; low priority.
108	Propyzamide	**9.5**	NIP; low priority.
109	Tebufenozide	**9.5**	NIP; low priority.
110	Triflumazole	**9.5**	NIP; low priority.
111	3-(2-chloro-4-hydroxyphenyl)-6-(2-chlorophenyl)-1,2,4,5-tetrazine	**9.2**	NIP; low priority.
112	Bromoxynil	**9.2**	NIP; low priority.
113	Clofentezine	**9.2**	NIP; low priority.
114	Mepiquat chloride	**9.2**	NIP; low priority.
115	Norfluraxon, desmethyl-	**9.2**	NIP; low priority.
116	Norflurazon	**9.2**	NIP; low priority.
117	Oxythioquinox	**9.2**	NIP; low priority.
118	Paraquat dichloride	**9.2**	NIP; low priority.
119	Pyrazon	**9.2**	NIP; low priority.
120	Diphenylamine	**8.6**	NIP; low priority.
121	4-hydrocythidiazuron	**8.1**	NIP; low priority.
122	Buprofezin	**8.1**	NIP; low priority.
123	Cyclohexylstannoic acid	**8.1**	NIP; low priority.
124	Cyhexatin	**8.1**	NIP; low priority.
125	Dicyclohexyltin oxide	**8.1**	NIP; low priority.
126	Diflubenzuron	**8.1**	NIP; low priority.
127	Dipropyl isocinchomerate	**8.1**	NIP; low priority.
128	N-phenylurea	**8.1**	NIP; low priority.
129	PB-9	**8.1**	NIP; low priority.
130	Pyridaben	**8.1**	NIP; low priority.
131	Thidiazuron	**8.1**	NIP; low priority.
132	Triphenyltin hydroxide	**8.1**	NIP; low priority.
133	1,1,3,3,-tetrakis(2-methyl-2-phenylpropyl)-1,3-dihydroxydistannoxane	**7.8**	NIP; low priority.
134	2-amino-n-isopropylbenzamide	**7.8**	NIP; low priority.
135	Acifluorfen, amino analog	**7.8**	NIP; low priority.

Table 6.2 – *Continued*
Rank and Status for Pesticides
2003 FSIS NRP, Domestic Monitoring Plan

RANK	COMPOUND/COMPOUND CLASS	SCORE	STATUS IN 2002 NRP
136	Bentazon, 6-hydroxy bentazon, 8-hydroxy bentazon	**7.8**	NIP; low priority.
137	Chlorsulfuron	**7.8**	NIP; low priority.
138	Chlorsulfuron, 5-hydroxy-	**7.8**	NIP; low priority.
139	Emamectin	**7.8**	NIP; low priority.
140	Fenbutatin Oxide	**7.8**	NIP; low priority.
141	Fluazifop-butyl	**7.8**	NIP; low priority.
142	Hexazinone	**7.8**	NIP; low priority.
143	IN-A3928	**7.8**	NIP; low priority.
144	IN-B2838	**7.8**	NIP; low priority.
145	IN-T3935	**7.8**	NIP; low priority.
146	IN-T3936	**7.8**	NIP; low priority.
147	IN-T3937	**7.8**	NIP; low priority.
148	Propargite	**7.8**	NIP; low priority.
149	Propargite	**7.8**	NIP; low priority.
150	SD 31723	**7.8**	NIP; low priority.
151	SD 33608	**7.8**	NIP; low priority.
152	Sodium acifluorfen	**7.8**	NIP; low priority.
153	Tebuconazole	**7.8**	NIP; low priority.
154	6-chloronicotinic acid	**6.9**	NIP; low priority.
155	Benoxacor	**6.9**	NIP; low priority.
156	CGA 150829	**6.9**	NIP; low priority.
157	CGA 171683	**6.9**	NIP; low priority.
158	Dalapon	**6.9**	NIP; low priority.
159	Diphenamid	**6.9**	NIP; low priority.
160	Diphenamid, desmethyl	**6.9**	NIP; low priority.
161	Diquat dibromide	**6.9**	NIP; low priority.
162	Imidacloprid	**6.9**	NIP; low priority.
163	Nicotine	**6.9**	NIP; low priority.
164	NTN33823	**6.9**	NIP; low priority.
165	NTN35884	**6.9**	NIP; low priority.
166	PB-7	**6.9**	NIP; low priority.
167	Primisulfuron-methyl	**6.9**	NIP; low priority.
168	Propanil	**6.9**	NIP; low priority.
169	WAK4103	**6.9**	NIP; low priority.
170	6-chloropicolinic acid	**6.0**	NIP; low priority.
171	Fenarimol	**6.0**	NIP; low priority.
172	Fenarimol metabolite B	**6.0**	NIP; low priority.
173	Fenarimol metabolite C	**6.0**	NIP; low priority.
174	Fenridazon	**6.0**	NIP; low priority.
175	Fluridone	**6.0**	NIP; low priority.
176	Nitrapyrin	**6.0**	NIP; low priority.
177	Tebuthiuron	**6.0**	NIP; low priority.
178	Chlorfenapyr	**5.8**	NIP; low priority.

Table 6.2 – *Continued*
Rank and Status for Pesticides
2003 FSIS NRP, Domestic Monitoring Plan

RANK	COMPOUND/COMPOUND CLASS	SCORE	STATUS IN 2002 NRP
179	Tetradifon	**5.8**	NIP; low priority.
180	2,4-D	**5.2**	NIP; low priority.
181	Dodine	**5.2**	NIP; low priority.
182	Fenpropathrin	**5.2**	NIP; low priority.
183	Flutolanil	**5.2**	NIP; low priority.
184	Myclobutanil, myclobutanil alcohol metabolite, myclobutanol dihydroxy metabolite	**5.2**	NIP; low priority.
185	Prosulfuron	**5.2**	NIP; low priority.
186	Difenzoquat	**4.6**	NIP; low priority.
187	Ethephon	**4.6**	NIP; low priority.
188	MCPA	**4.6**	NIP; low priority.
189	Methoprene	**4.6**	NIP; low priority.
190	2,5-dichloro-4-methoxyphenol	**4.3**	NIP; low priority.
191	Chloroneb	**4.3**	NIP; low priority.
192	Chloroneb, hydroxy-	**4.3**	NIP; low priority.
193	Clofencet	**4.3**	NIP; low priority.
194	Glufosinate-Ammonium	**4.3**	NIP; low priority.
195	HOE-061517	**4.3**	NIP; low priority.
196	HOE-099730	**4.3**	NIP; low priority.
197	2,3-dihydro-3,3-dimethyl-2-oxo-5-benzofuranyl methyl sulfonate	**4.0**	NIP; low priority.
198	2-hydroxy-2,3-dihydro-3,3-dimethyl-5-benzofuranyl methyl sulfonate	**4.0**	NIP; low priority.
199	Butylamine, sec-	**4.0**	NIP; low priority.
200	Compound 125670	**4.0**	NIP; low priority.
201	Ethofumesate	**4.0**	NIP; low priority.
202	Quinclorac	**4.0**	NIP; low priority.
203	Sethoxydim	**4.0**	NIP; low priority.
204	Sethoxydim hydroxylate sulfone	**4.0**	NIP; low priority.
205	Sethoxydim sulfoxide	**4.0**	NIP; low priority.
206	Tralkoxydim	**4.0**	NIP; low priority.
207	3-t-butyl-5-chloro-6-hydroxymethyluracil	**3.5**	NIP; low priority.
208	6-chloro-2,3-dihydro-3,3,7-trimethyl-5H-oxazolo(3,2a)pyrimidin-5-one	**3.5**	NIP; low priority.
209	6-chloro-2,3-dihydro-7-hydroxymethyl-3,3-dimethyl-5H-oxazolo(3,2-a)pyrimidin-5-one	**3.5**	NIP; low priority.
210	Azoxystrobin	**3.5**	NIP; low priority.
211	Azoxystrobin Z isomer	**3.5**	NIP; low priority.
212	CGA 161149	**3.5**	NIP; low priority.
213	CGA 195654	**3.5**	NIP; low priority.
214	Cloprop	**3.5**	NIP; low priority.
215	Dimethenamid	**3.5**	NIP; low priority.
216	Dimethipin	**3.5**	NIP; low priority.
217	Fluroxypyr	**3.5**	NIP; low priority.
218	Sulfosulfuron	**3.5**	NIP; low priority.
219	Terbacil	**3.5**	NIP; low priority.

Table 6.2 – *Continued*
Rank and Status for Pesticides
2003 FSIS NRP, Domestic Monitoring Plan

RANK	COMPOUND/COMPOUND CLASS	SCORE	STATUS IN 2002 NRP
220	Triasulfuron	**3.5**	NIP; low priority.
221	Maleic hydrazide	**3.2**	NIP; low priority.
222	Clopyralid	**2.9**	NIP; low priority.
223	Halosulfuron	**2.9**	NIP; low priority.
224	Picloram	**2.9**	NIP; low priority.
225	Clethodim	**2.6**	NIP; low priority.
226	Glyphosate-Trimesium	**2.3**	NIP; low priority.
227	Metsulfuron Methyl	**2.3**	NIP; low priority.
228	Carfentrazone Ethyl	**2.0**	NIP; low priority.
229	Fludioxanil	**2.0**	NIP; low priority.
230	Pyriproxifen	**2.0**	NIP; low priority.
231	Spinosad	**2.0**	NIP; low priority.
232	Aminomethylphosphonic acid	**1.4**	NIP; low priority.
233	Glyphosate	**1.4**	NIP; low priority.
234	Bensulfuron methyl ester	**1.2**	NIP; low priority.
235	Fluthiacet-Methyl (CGA-248757)	**1.2**	NIP; low priority.
236	Pymetrozine	**1.2**	NIP; low priority.
237	Indoxacarb (DPX-MP062)	**--**	NIP; low priority.
238	Teflubenzuron	**--**	NIP; low priority.

Key:
MRM = Multiresidue Method
NIP = Not Included in 2003 FSIS National Residue Program
CHC = Chlorinated hydrocarbon
COP = Chlorinated organophosphate
OP = Organophosphate
In the second column, where multiple compounds have been grouped together for analysis or potential analysis by a single MRM, the title of that group has been bolded (e.g., "Carbamates in FSIS Carbamate MRM").

Table 6.3
Pesticide Compound/Production Class Pairs, Sorted by Sampling Priority Score, with Adjusted Number of Analyses
2003 FSIS NRP, Domestic Monitoring Plan

COMPOUND CLASS	PRODUCTION CLASS	PRIORITY SCORE	# SAMP.	%VIOL.	UNADJ. #	ADJUST-MENT	INITIAL ADJ.#	ADJUST-MENT	FINAL ADJ.#
CHC's/COP's	Young chickens	587.610	3892	0.03	460		460		460
CHC's/COP's	Market hogs	338.063	7368	0.03	460		460	-1	300
CHC's/COP's	Steers	256.414	4002	0.05	460		460	-1	300
CHC's/COP's	Heifers	156.971	3960	0.03	460		460	-1	300
CHC's/COP's	Young turkeys	103.611	4043	0.00	460	-1	300	-1	230
CHC's/COP's	Egg products	43.589	665	0.00	460	-1	300	-1	230
CHC's/COP's	Beef cows	31.031	4079	0.07	460		460	-1	300
CHC's/COP's	Dairy cows	30.766	3841	0.03	460		460	-1	300
CHC's/COP's	Sows	17.870	3891	0.10	300		300	-1	230
CHC's/COP's	Bulls	10.405	3312	0.12	300		300	-1	230
CHC's/COP's	Mature chickens	9.694	3125	0.00	300	-1	230		230
CHC's/COP's	Lambs	3.898	4204	0.05	300		300	-1	230
CHC's/COP's	Formula-fed veal	3.793	3568	0.00	300	-1	230		230
CHC's/COP's	Ducks	2.333	2697	0.00	230	-1	230		230
CHC's/COP's	Boars/Stags	1.351	3279	0.27	230	+1	300	-1	230
CHC's/COP's	Mature turkeys	0.915	1728	0.06	230		230		230
CHC's/COP's	Bob veal	0.570	1849	0.11	230		230		230
CHC's/COP's	Horses	0.529	3496	0.46	230	+1	300	-1	230
CHC's/COP's	Goats	0.527	3866	0.34	230	+1	300	-1	230
CHC's/COP's	Heavy calves	0.351	3295	0.21	230		230		230
CHC's/COP's	Bison	0.223	43	0.00	230	+1	300	MAX 90	90
CHC's/COP's	Roaster pigs	0.210	NT	NT	230	+1	300	-1	230
CHC's/COP's	Non-formula-fed veal	0.170	2744	0.15	230		230		230
CHC's/COP's	Sheep	0.168	3214	0.06	230		230		230
CHC's/COP's	Ratites	0.154	89	0.00	230	+1	300	MAX 90	90
CHC's/COP's	Geese	0.037	180	0.00	90	NO ADJ	90		90
CHC's/COP's	Rabbits	0.025	945	0.11	90		90		90
CHC's/COP's	Squab	---	33	0.00	45	NO ADJ	45		45
TOTAL # SAMPLES					**8165**		**8125**		**6275**

Key: #SAMP. = Total number of samples analyzed by the FSIS Monitoring Plan and/or Special Projects (i.e., random sampling only), 1/1/92 - 12/31/01.
%VIOL. = Percent violative, i.e., the percent of samples with residue concentrations exceeding the tolerance or action level (or, for a drug whose use was not permitted in the production class in which it was detected, the percent of samples with any detectable residue).
UNADJ. # = Unadjusted number of samples, obtained using cutoff values established for Table 4.5.
INITIAL ADJ.# = Number of samples proposed following adjustment for historical violation rate information or lack of testing information.
FINAL ADJ.# = Final sample numbers, obtained following any adjustments needed to match sample volume to laboratory capacity.
+1 level = Increase by one sampling level, e.g., from 300 to 460 (refer to text, Chapter 6, for explanation).
Note: Adjustments for laboratory capacity (2^{nd} adjustment column): All 460-sample production classes (except for young chickens, which are the largest production class and thus represent the highest potential exposure) were reduced to 300 samples; all 300-sample production classes were reduced to 230 samples.