Design of the Domestic Scheduled Sampling Plan for Pesticides

I. Selecting and Ranking Candidate Pesticides

The candidate pesticides of concern selected by the Environmental Protection Agency (EPA) members of the Surveillance Advisory Team (SAT) are presented in Table 27, *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.

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 below in the section, "*Scoring Key for Pesticides*."

The results of the compound scoring process are presented in Table 27. Where compounds were grouped together, the score assigned to each category is the highest score for all members of the group.

Compound Ranking

1. Background

   Repeating Equation 1 (page 3), we have:

   Risk = Exposure x Toxicity
   = Consumption x Residue Levels x Toxicity
   = Consumption x "Risk per Unit of Consumption"

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, 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.

2. 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, which is expected to increase the potential for human exposure.

The "Toxicity" category reflects both the dose required to achieve a toxic effect and the severity of that effect. Since the numerical value assigned to toxicity is independent of other parameters, it can be used directly as a term in equation 1.

EPA assigns a value to regulatory concern, pre-slaughter interval and bioconcentration factor to each pesticide compound or class of compounds. These values are multiplied by a weighted average and then by the toxicity value to give an estimate of the relative risk per unit of consumption. As with the veterinary drugs, we can refine the equation by adding a modifier for the category, "Lack of FSIS Testing Information on Violations." With an appropriate substitution, we obtain the following equation:

Relative Public Health Concern Equation 12
= 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"

Comparing Equation 12 to Equation 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 12, because scores for this category were not available for most of the pesticides.

The pesticides in Table 27 are rated according to their relative public health concern by combining the scoring categories presented in Equation 12 using a weighting formula. The formula is presented in Equation 13 and in Table 27. 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} Equation 13

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 Equation 13, the variable for regulatory concern (R) is given twice as much weight as the pre-slaughter interval (P) and bioconcentration factor (B) because FSIS considers regulatory concern to be more of a direct measurement 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.

Equation 13 for pesticides and Equation 4 for veterinary drugs have been normalized to give the same maximum value so that their values appear to be comparable. However, because Equation 13 uses variables that are derived from terms (scoring categories) that are not the same as the terms used in Equation 4, their scores are not precisely comparable. The scores for the pesticides and drugs were normalized to provide a rough comparison between these two different categories of compounds.

In Table 28, *Rank and Status for Pesticides*, the pesticides are ranked by their rating scores, as generated using the selected weighting scheme given in Equation 13. The scores presented in Table 28 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.

II. Prioritizing Candidate Pesticides

Once SAT completed ranking the pesticides according to their relative public health concern, the ranking scores were used to select compounds for the 2005 NRP. Using professional judgment, SAT participants decided that the pesticide compounds and compound classes that received a ranking of fifteen or higher represent a potential public health concern that is sufficient to justify their inclusion in the 2005 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 that was not related to public health was the availability of laboratory resources, especially the availability of appropriate analytical methods within the FSIS laboratories. Based on this constraint, only the chlorinated hydrocarbon/chlorinated organophosphate (CHC/COP) compound class can currently be included in the NRP. There are 39 compounds in this compound class that FSIS will analyze for quantity and chemical identity. There are 4 additional compounds that will only be identified. The compounds 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 2005 scheduled sampling plan is provided in Table 28. For each highly ranked compound or compound class that was not scheduled for

inclusion in the 2005 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 2005 NRP due to methodological limitations. FSIS will apply methodology capable of capturing chlorinated hydrocarbons and chlorinated and non-chlorinated organophosphates when such methodology can be implemented.

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 PCBs) are environmental contaminants to which any animal may be exposed. **For the 2005 NRP, FSIS has suspended scheduled sampling testing for CHCs and COPs for the following production classes: minor species (ducks, geese, ratites, rabbits, squab, and bison); horses; and bob veal. However, horses are of concern for residue violations and inspector generated testing will continue. Not scheduling the minor species will allow FSIS to focus those resources on the development of methodologies in areas that are of high public health concern.** FSIS will continue sampling for CHCs and COPs as a means of scheduled sampling for the occurrence of accidental contamination incidents.

IV. Allocation of Sampling Resources

Since only the CHC/COP compound class will be included in the 2005 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/COPs were calculated (see Table 27) and multiplied by the estimated relative percent of domestic consumption for each production class (presented in Table 4) and shown in Equation 14. This is identical to Equation 6, which was used to calculate the relative sampling priorities for the veterinary drugs:

$$(\text{Rel. sampling priority})_{C/PC} = (\text{Ranking score})_{C} \times (\text{Est. rel. \% domestic consumption})_{PC} \qquad \text{Equation 14}$$

As stated above for veterinary drugs, Equation 14 is analogous to the equation used to estimate risk in Equation 1, in which risk per unit of consumption is multiplied by consumption. While the results of Equation 14 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 14 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 5 for the veterinary drugs. The cutoff scores are as follows: > 84 = 460 samples; 5.54 – 47.66 = 300 samples; 0.2 – 2.68 = 230 samples; < 0.17 = 90 samples. The results are

presented in Table 29, *Pesticide Compound/Production Class Pairs, Sorted by Sampling Priority Score, with Adjusted Number of Analyses*. These sampling levels provide varying probabilities of detecting residue violations. 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.

Bob veal, Horses, rabbits, ratites, squab, geese, ducks, and bison will not be scheduled for the 2005 domestic scheduled sampling program for the 2005 NRP because the minor species are low production animals. However, horses are of concern for residue violations and inspector generated testing will continue. Not scheduling the minor species will allow FSIS to focus those resources on the development of methodologies in areas that are of high public health concern.

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 29 lists, for the period 01/01/1994 -12/31/2003 the total number of samples analyzed by FSIS in each production class under its scheduled sampling 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.

Exceptions to these rules are:

1. 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 29, with a "●") were assigned a minimum of 300 samples.
2. **For the 2005 NRP, FSIS has suspended scheduled sampling testing for for CHCs and COPs for the following production classes: minor species (ducks, geese, ratites, rabbits, squab, and bison); horses; and bob veal** (marked with a "■" In Table 29).

All of the above adjustments were applied. The sampling numbers obtained following these adjustments are listed in Table 29 under the heading, "Initial Adjust," (initial adjusted number of samples).

Adjusting for laboratory capacity

No adjustment for laboratory capacity was necessary for the 2005 NRP.

Adjustment for the Number of Slaughter Facilities

An adjustment to the total number of scheduled sampling samples was made based on the number of production facilities (Table 29). For this adjustment, FSIS considered the total number of production facilities (USDA Inspected Establishments for 2003) for each production class. If the total number of production facilities for a production class was found to be low relative to other production classes, the total number of scheduled sampling samples was reduced for that production class. The number of samples selected for the reduction is based on FSIS professional judgment. If the number of facilities is less than 100, but greater than 10, the number of scheduled sampling samples was adjusted down by 1 level. If the total number of facilities is less than 10, the number of scheduled sampling samples was adjusted down by 2 levels. Based on these parameters, the number of scheduled sampling samples was adjusted for the following production classes: "Young Turkeys", "Mature Chickens", "Ducks", "Mature Turkeys" and "Horses." As mentioned above, testing for horses and ducks has been suspended for the 2005 NRP.

V. Scoring Key for Pesticides

FSIS Historical Testing Information on Violations (01/01/1994 - 12/31/2003)

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 1994 - 2003, 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

A numerical value of 1, 2, 3 or 4 is assigned to a pesticide compound (or a group of compounds) for the category "Lack of Testing Information on Violations" (Table 27). To determine the numerical value, FSIS considers how long a pesticide substance has been in the scheduled sampling program, the number of production classes that were tested, the number of samples analyzed and any change in how the pesticide compound is used. These factors are assessed and a numerical score is assigned as follows:

- A value of 4 is assigned when:
  - FSIS has not included this compound in its sampling program within the past 10 years (1/1/94 - 12/31/03); or,
  - FSIS has included this compound within its program only between 6 and 10 years ago (1/1/94 - 12/31/98), 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 useful in predicting future violation rates because of 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,
  - The compound is of concern in several production classes of interest, but testing has been carried out in only one.

- A value of 3 is assigned when:
  - FSIS has tested within the past 5 years (1/1/99 - 12/31/03), but in fewer than 75% of the production classes of interest; or,
  - 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.

- A value of 2 is assigned when:
  - 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."

- A value of 1 is assigned when:
  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

A numerical value of 1, 2, 3 or 4 is assigned by EPA to pesticides for the category "Pre-Slaughter Interval" (Table 27). Pesticides in this category have been accepted for direct dermal application and have a minimum pre-slaughter interval, which is the interval between the last dermal application and the time of slaughter. FSIS determines a value for a pesticide in this category as follows:

- A value of 4 is assigned when dermal application is permitted and the pre-slaughter interval is 1 day or greater.

- A value of 3 is assigned when dermal application is permitted and pre-slaughter interval 0 days.

- A value of 2 is assigned when dermal application is not permitted, but the treatment of premises (e.g., holding cells, feedlots, barns, etc.) is permitted.

- A value of 1 is assigned when neither dermal application nor premise treatment are permitted.

Bioconcentration Factor

A numerical value of 1, 2, 3 or 4 is assigned by EPA to pesticides for the category "Bioconcentration Factor" (Table 27). Bioconcentration is a measure of a 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 (log $P_{o/w}$). Compounds that have a high affinity for octanol (and thus a high $K_{o/w}$) tend to bioaccumulate in body fat. A bioconcentration value is determined according to the following criteria:

- A value of 4 is assigned if the log $K_{o/w}$ is greater than 3.

- A value of 3 is assigned if the log $K_{o/w}$ is between 2 and 3.

- A value of 2 is assigned if the log $K_{o/w}$ is between 1 and 2.

- A value of 1 is assigned if the log $K_{o/w}$ is less than 1.

Endocrine Disruption

A numerical value of 3 or 4 (or NT if not tested) is assigned by EPA to pesticides for the category "Endocrine Disruption" (Table 27). Endocrine disruption 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. A value for endocrine disruption is assigned as follows:

- A value of 4 is assigned if endocrine disruption is likely.

- A value of 3 is assigned if endocrine disruption is suspected.

- NT is reported if the compound has not been tested.

Toxicity

A numerical value of 1, 2, 3 or 4 is assigned by EPA to pesticides for the category "Toxicity" (Table 27). The toxicity value 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.] A value for toxicity is determined as follows:

- A value of 4 is assigned if the pesticide compound is a cholinesterase inhibitor, carcinogen or has a low RfD.

- A value of 3 is assigned if the pesticide compound has a medium RfD.
- A value of 2 is assigned if the pesticide compound has a high RfD.
- A value of 1 is assigned if the pesticide compound has a high RfD.

Table 27
Scoring Table for Pesticides
2005 FSIS NRP, Domestic Scheduled Sampling Plan

Compound / Compound Class	Hist. Viol. (FSIS)	Reg. Con. (R) (EPA)	PSI (P) (EPA)	Bioconc. (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)	NT	3	1	4	3	4	4	**12.7**
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, coumaphos, coumaphos oxon, 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, 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)	NT	3	4	4	3	4	4	**16.1**
Triazines in FSIS Triazine MRM (atrazine, simazine, propazine, terbuthylazine)	NT	4	2	3	4	4	4	**15.0**
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**
1-methoxy-4-(1,2,2,2-tetrachloroethyl)benzene)	NT	3	4	4	NV	4	4	**16.1**

Table 27 *continued*
Scoring Table for Pesticides
2005 FSIS NRP, Domestic Scheduled Sampling Plan

Compound / Compound Class	Hist. Viol. (FSIS)	Reg. Con. (R) (EPA)	PSI (P) (EPA)	Bioconc. (B) (EPA)	Endo. Disrup. (EPA)	Tox. (T) (EPA)	Lack Info. (L) (FSIS)	*{[(2*R+P+B)/4]*T} *{[(L-1)*0.05]+1}*
1-methyl cyromazine	NT	3	4	2	NV	4	4	**13.8**
1,2,4-Triazole	NT	4	1	3	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**
Aminomethylphosphonic acid	NT	1	2	1	NV	1	4	**1.4**

Table 27 *continued*
Scoring Table for Pesticides
2005 FSIS NRP, Domestic Scheduled Sampling Plan

Compound / Compound Class	Hist. Viol. (FSIS)	Reg. Con. (R) (EPA)	PSI (P) (EPA)	Bioconc. (B) (EPA)	Endo. Disrup. (EPA)	Tox. (T) (EPA)	Lack Info. (L) (FSIS)	*{[(2*R+P+B)/4]*T}*{[(L-1)*0.05]+1}*
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**
CP 51214	NT	4	1	3	3	4	4	**13.8**

Table 27 *continued*
Scoring Table for Pesticides
2005 FSIS NRP, Domestic Scheduled Sampling Plan

Compound / Compound Class	Hist. Viol. (FSIS)	Reg. Con. (R) (EPA)	PSI (P) (EPA)	Bioconc. (B) (EPA)	Endo. Disrup. (EPA)	Tox. (T) (EPA)	Lack Info. (L) (FSIS)	*{[(2*R+P+B)/4]*T}*{[(L-1)*0.05]+1}*
Cyclanilide	NT	3	1	4	NV	4	4	**12.7**
Cyclohexylstannoic acid	NT	2	1	2	NV	4	4	**8.1**
Cyfluthrin	NT	4	4	2	NV	3	4	**12.1**
Cyhalothrin, lambda-	NT	4	4	2	NV	4	4	**16.1**
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	4	1	4	NV	3	4	**11.2**
Difenzoquat	NT	1	1	1	NV	4	4	**4.6**
Diflubenzuron	NT	3	4	4	NV	2	4	**8.1**
Diflufenzopyr	NT	1	1	2	NV	4	4	**5.8**
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**
Ethoxyquin	NT	4	2	4	NV	2	4	**8.1**
Etridiazole .	NT	4	1	4	NV	3	4	**11.2**
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	4	1	4	NT	3	4	**11.2**
Fenbutatin Oxide	NT	2	1	4	NV	3	4	**7.8**

Table 27 *continued*
Scoring Table for Pesticides
2005 FSIS NRP, Domestic Scheduled Sampling Plan

Compound / Compound Class	Hist. Viol. (FSIS)	Reg. Con. (R) (EPA)	PSI (P) (EPA)	Bioconc. (B) (EPA)	Endo. Disrup. (EPA)	Tox. (T) (EPA)	Lack Info. (L) (FSIS)	*{[(2*R+P+B)/4]*T}*{[(L-1)*0.05]+1}*
Fenoxaprop ethyl	NT	3	1	4	NV	4	4	**12.7**
Fenpropathrin	NT	4	1	1	NV	3	4	**8.6**
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	4	1	4	NV	3	4	**11.2**
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	4	4	4	NV	4	4	**18.4**
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	**0.0**
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**

Table 27 *continued*
Scoring Table for Pesticides
2005 FSIS NRP, Domestic Scheduled Sampling Plan

Compound / Compound Class	Hist. Viol. (FSIS)	Reg. Con. (R) (EPA)	PSI (P) (EPA)	Bioconc. (B) (EPA)	Endo. Disrup. (EPA)	Tox. (T) (EPA)	Lack Info. (L) (FSIS)	*{[(2*R+P+B)/4]*T} *{[(L-1)*0.05]+1}*
MB 46513	NT	3	4	4	NV	4	4	**16.1**
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	4	1	3	NV	4	4	**13.8**
Propiconazole metabolite 1,2,4-triazole	NT	4	1	3	NV	4	4	**13.8**
Propiconazole metabolite CGA 118244	NT	4	1	3	NV	4	4	**13.8**
Propiconazole metabolite CGA 91305	NT	4	1	3	NV	4	4	**13.8**

Table 27 *continued*
Scoring Table for Pesticides
2005 FSIS NRP, Domestic Scheduled Sampling Plan

Compound / Compound Class	Hist. Viol. (FSIS)	Reg. Con. (R) (EPA)	PSI (P) (EPA)	Bioconc. (B) (EPA)	Endo. Disrup. (EPA)	Tox. (T) (EPA)	Lack Info. (L) (FSIS)	*{[(2*R+P+B)/4]*T}*{[(L-1)*0.05]+1}*
Propyzamide	NT	3	1	4	NV	3	4	**9.5**
Prosulfuron	NT	1	1	3	NV	3	4	**5.2**
Pymetrozine	NT	1	1	1	NT	1	4	**1.2**
Pyradostrobin	NT	1	1	3	NV	2	4	**3.5**
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	4	1	2	NV	3	4	**9.5**
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	**0.0**
Terbacil	NT	1	1	1	NV	3	4	**3.5**
Tetradifon	NT	1	1	2	NV	4	4	**5.8**
Thiamethoxam	NT	4	2	1	NV	4	4	**12.7**
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**

Table 27 *continued*
Scoring Table for Pesticides
2005 FSIS NRP, Domestic Scheduled Sampling Plan

Compound / Compound Class	Hist. Viol. (FSIS)	Reg. Con. (R) (EPA)	PSI (P) (EPA)	Bioconc. (B) (EPA)	Endo. Disrup. (EPA)	Tox. (T) (EPA)	Lack Info. (L) (FSIS)	*{[(2*R+P+B)/4]*T} *{[(L-1)*0.05]+1}*
Triasulfuron	NT	1	1	1	NV	3	4	**3.5**
Triazole analine	NT	4	1	3	NV	4	4	**13.8**
Triazole lactic acid	NT	4	1	3	NV	4	4	**13.8**
Triclopyr	NT	3	2	1	NV	4	4	**10.4**
Trifloxystrobin	NT	1	1	3	NV	2	4	**3.5**
Triflumazole	NT	4	1	4	NV	3	4	**11.2**
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 (01/01/94 - 12/31/2003)
NA = Compound has been tested by FSIS (01/01/94 - 12/31/2003), 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 28
Rank and Status for Pesticides
2005 FSIS NRP, Domestic Scheduled Sampling Plan

Rank	Compound / Compound Class	Score	Status in the 2005 NRP
1	**COPs and OPs NOT in FSIS CHC/COP MRM** (azinphos-methyl, azinphos-methyl oxon, chlorpyrifos, 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
2	Imazalil	18.4	NIP
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.)	17.3	NIP
4	**Carbamates in FSIS Carbamate MRM** (aldicarb, aldicarb sulfoxide, aldicarb sulfone, carbaryl, carbofuran, carbofuran 3-hydroxy)	16.1	NIP
5	1-(2,4-dichlorophenyl)-2-(1H-imidazole-1-yl)-1-ethanol	16.1	NIP
6	1,1-(2,2-dichloroethylidene)bis(4-methoxybenzene)	16.1	NIP
7	1-methoxy-4-(1,2,2,2-tetrachloroethyl)benzene)	16.1	NIP
8	3-(1-(2,4-dichlorophenyl)-2-(1H-imidazole-1-yl)ethoxy)-1,2-propane diol	16.1	NIP
9	Fipronil	16.1	NIP
10	MB 45950	16.1	NIP
11	MB 46513	16.1	NIP
12	Methoxychlor olefin	16.1	NIP
13	Cyhalothrin, lambda-	16.1	NIP
14	**Synthetic Pyrethrins in FSIS Synthetic Pyrethrin MRM** (cypermethrin, cis-permethrin, trans-permethrin, fenvalerate, zeta-cypermethrin)	16.1	NIP
15	**CHCs and COPs in FSIS CHC/COP MRM** (HCB, alpha-BHC, coumaphos, coumaphos oxon, 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)	16.0	Scheduled Sampling Plan, MRM, all domestic production classes except: minor species (rabbits, ratites, squab, geese, ducks, and bison); horses; and bob-veal. Import residue plan, all import production classes.

Table 28 *continued*
Rank and Status for Pesticides
2005 FSIS NRP, Domestic Scheduled Sampling Plan

Rank	Compound / Compound Class	Score	Status in the 2005 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 compounds may be samples on a specific, as-needed basis.			
16	**Triazines in FSIS Triazine MRM** (atrazine, simazine, propazine, terbuthylazine)	15.0	NIP; low priority
17	Arsanilic acid	15.0	NIP; low priority
18	Alachlor	13.8	NIP; low priority
19	Cyromazine	13.8	NIP; low priority
20	**Carbamates NOT in FSIS Carbamate MRM** (carbaryl 5,6-dihydroxy, chlorpropham, propham, thiobencarb, 4-chlorobenzylmethylsulfone,4-chlorobenzylmethylsulfone sulfoxide)	13.8	NIP; low priority
21	1-methyl cyromazine	13.8	NIP; low priority
22	2-(1-hydroxyethyl)-6-ethylaniline	13.8	NIP; low priority
23	2,6-diethylaniline	13.8	NIP; low priority
24	Cacodylic acid	13.8	NIP; low priority
25	CP 101394	13.8	NIP; low priority
26	CP 108064	13.8	NIP; low priority
27	CP 108065	13.8	NIP; low priority
28	CP 108267	13.8	NIP; low priority
29	CP 51214	13.8	NIP; low priority
30	Phosalone oxon	13.8	NIP; low priority
31	PP 890	13.8	NIP; low priority
32	Propiconazole	13.8	NIP; low priority
33	Propiconazole metabolite 1,2,4-triazole	13.8	NIP; low priority
34	Propiconazole metabolite CGA 118244	13.8	NIP; low priority
35	Propiconazole metabolite CGA 91305	13.8	NIP; low priority
36	1,2,4-Triazole	13.8	NIP; low priority
37	Triazole analine	13.8	NIP; low priority
38	Triazole lactic acid	13.8	NIP; low priority
39	Thiamethoxam	12.7	NIP; low priority
40	**Benzimidazole Pesticides in FSIS Benzimidazole MRM** (5-hydroxythiabendazole, benomyl (as carbendazim), thiabendazole)	12.7	NIP; low priority
41	2-(4-((6-chloro-2-benzoxazolyl)oxy)phenoxy)propanoic acid	12.7	NIP; low priority
42	2-carboxyisopropyl-4-(2,4-dichloro)-5-isopropoxyphenyl)-1,3,4-oxadiazolin-5-one	12.7	NIP; low priority
43	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
44	3-(3,4-dichlorophenyl)-1-methoxyurea	12.7	NIP; low priority
45	3,4-dichloroaniline	12.7	NIP; low priority
46	3,4-dichlorophenylurea	12.7	NIP; low priority
47	6-chloro-2,3-dihydro-benzoxazol-2-one	12.7	NIP; low priority
48	Bifenthrin	12.7	NIP; low priority
49	Bifenthrin, 4'-hydroxy	12.7	NIP; low priority
50	Bis(trichloromethyl)disulfide	12.7	NIP; low priority

Table 28 c*ontinued*
Rank and Status for Pesticides
2005 FSIS NRP, Domestic Scheduled Sampling Plan

Rank	Compound / Compound Class	Score	Status in the 2005 NRP
51	Captan epoxide	12.7	NIP; low priority
52	Cyclanilide	12.7	NIP; low priority
53	Dialifor	12.7	NIP; low priority
54	Dialifor oxon	12.7	NIP; low priority
55	Dicamba	12.7	NIP; low priority
56	Diuron	12.7	NIP; low priority
57	Fenoxaprop ethyl	12.7	NIP; low priority
58	N-(3,4-dichlorophenyl)-N'-methylurea	12.7	NIP; low priority
59	Oxadiazon	12.7	NIP; low priority
60	Oxyfluorfen	12.7	NIP; low priority
61	THPI	12.7	NIP; low priority
62	Triadimefon	12.7	NIP; low priority
63	Triadimefon metabolite KWG 1323	12.7	NIP; low priority
64	Triadimefon metabolite KWG 1342	12.7	NIP; low priority
65	Triadimefon metabolite KWG 1732	12.7	NIP; low priority
66	Triadimenol (for metabolites see triadimefon)	12.7	NIP; low priority
67	Cyfluthrin	12.1	NIP; low priority
68	MB 46136	12.1	NIP; low priority
69	Octyl bicycloheptene dicarboximide (MGK-264)	12.1	NIP; low priority
70	2-((2-ethyl-6-methylphenyl)-amino)-1-propanol	11.5	NIP; low priority
71	4-(2-ethyl-6-methylphenyl)-2-hydroxy-5-methyl-3-morpholinone	11.5	NIP; low priority
72	Dioxathion	11.5	NIP; low priority
73	Iprodione	11.5	NIP; low priority
74	Iprodione isomer	11.5	NIP; low priority
75	Iprodione metabolite	11.5	NIP; low priority
76	Iprodione metabolite 2	11.5	NIP; low priority
77	Metolachlor	11.5	NIP; low priority
78	Difenoconazole	11.2	NIP; low priority
79	Esfenvalerate	11.2	NIP; low priority
80	Etridiazole .	11.2	NIP; low priority
81	Fenbuconazole	11.2	NIP; low priority
82	Fluvalinate	11.2	NIP; low priority
83	Kresoxim-methyl	11.2	NIP; low priority
84	SD 54597	11.2	NIP; low priority
85	Triflumazole	11.2	NIP; low priority
86	2-aminobenzimidazole	10.4	NIP; low priority
87	6-methyl-2,3-quinoxalinedithiol	10.4	NIP; low priority
88	Abamectin	10.4	NIP; low priority
89	Abamectin delta 8,9 geometric isomer	10.4	NIP; low priority
90	Allophanate	10.4	NIP; low priority
91	Carboxin	10.4	NIP; low priority
92	Carboxin sulfoxide	10.4	NIP; low priority
93	Ethalfluralin	10.4	NIP; low priority

Table 28 *continued*
Rank and Status for Pesticides
2005 FSIS NRP, Domestic Scheduled Sampling Plan

Rank	Compound / Compound Class	Score	Status in the 2005 NRP
94	ETU	10.4	NIP; low priority
95	Isoxaflutole	10.4	NIP; low priority
96	Mancozeb	10.4	NIP; low priority
97	Maneb	10.4	NIP; low priority
98	Metiram	10.4	NIP; low priority
99	Piperonyl butoxide	10.4	NIP; low priority
100	Pyrazon metabolite A	10.4	NIP; low priority
101	Pyrazon metabolite B	10.4	NIP; low priority
102	Pyrethrin I	10.4	NIP; low priority
103	Quizalofop-ethyl	10.4	NIP; low priority
104	TCP=3,5,6-trichloro-2-pyridinol	10.4	NIP; low priority
105	Thiophanate methyl	10.4	NIP; low priority
106	Triclopyr	10.4	NIP; low priority
107	3-carboxy-5-ethoxy-1,2,4-thiadiazole	9.5	NIP; low priority
108	4-chloro-2-trifluoromethylaniline	9.5	NIP; low priority
109	Chlorobenzilate	9.5	NIP; low priority
110	Flufenacet (thiafluamide)	9.5	NIP; low priority
111	Methyl 3,5-dichlorobenzoate	9.5	NIP; low priority
112	N-(4-chloro-2-trifluoromethylphenyl)-propoxyacetamide	9.5	NIP; low priority
113	Propyzamide	9.5	NIP; low priority
114	Tebuconazole	9.5	NIP; low priority
115	Tebufenozide	9.5	NIP; low priority
116	3-(2-chloro-4-hydroxyphenyl)-6-(2-chlorophenyl)-1,2,4,5-tetrazine	9.2	NIP; low priority
117	Bromoxynil	9.2	NIP; low priority
118	Clofentezine	9.2	NIP; low priority
119	Mepiquat chloride	9.2	NIP; low priority
120	Norfluraxon, desmethyl-	9.2	NIP; low priority
121	Norflurazon	9.2	NIP; low priority
122	Oxythioquinox	9.2	NIP; low priority
123	Paraquat dichloride	9.2	NIP; low priority
124	Pyrazon	9.2	NIP; low priority
125	Diphenylamine	8.6	NIP; low priority
126	Fenpropathrin	8.6	NIP; low priority
127	Ethoxyquin	8.1	NIP; low priority
128	4-hydrocythidiazuron	8.1	NIP; low priority
129	Buprofezin	8.1	NIP; low priority
130	Cyclohexylstannoic acid	8.1	NIP; low priority
131	Cyhexatin	8.1	NIP; low priority
132	Dicyclohexyltin oxide	8.1	NIP; low priority
133	Diflubenzuron	8.1	NIP; low priority
134	Dipropyl isocinchomerate	8.1	NIP; low priority
135	N-phenylurea	8.1	NIP; low priority
136	PB-9	8.1	NIP; low priority

Table 28 *continued*
Rank and Status for Pesticides
2005 FSIS NRP, Domestic Scheduled Sampling Plan

Rank	Compound / Compound Class	Score	Status in the 2005 NRP
137	Pyridaben	8.1	NIP; low priority
138	Thidiazuron	8.1	NIP; low priority
139	Triphenyltin hydroxide	8.1	NIP; low priority
140	1,1,3,3,-tetrakis(2-methyl-2-phenylpropyl)-1,3-dihydroxydistannoxane	7.8	NIP; low priority
141	2-amino-n-isopropylbenzamide	7.8	NIP; low priority
142	Acifluorfen, amino analog	7.8	NIP; low priority
143	Bentazon, 6-hydroxy bentazon, 8-hydroxy bentazon	7.8	NIP; low priority
144	Chlorsulfuron	7.8	NIP; low priority
145	Chlorsulfuron, 5-hydroxy-	7.8	NIP; low priority
146	Emamectin	7.8	NIP; low priority
147	Fenbutatin Oxide	7.8	NIP; low priority
148	Fluazifop-butyl	7.8	NIP; low priority
149	Hexazinone	7.8	NIP; low priority
150	IN-A3928	7.8	NIP; low priority
152	IN-B2838	7.8	NIP; low priority
153	IN-T3935	7.8	NIP; low priority
154	IN-T3936	7.8	NIP; low priority
155	IN-T3937	7.8	NIP; low priority
156	Propargite	7.8	NIP; low priority
157	SD 31723	7.8	NIP; low priority
158	SD 33608	7.8	NIP; low priority
159	Sodium acifluorfen	7.8	NIP; low priority
160	6-chloronicotinic acid	6.9	NIP; low priority
161	Benoxacor	6.9	NIP; low priority
162	CGA 150829	6.9	NIP; low priority
163	CGA 171683	6.9	NIP; low priority
164	Dalapon	6.9	NIP; low priority
165	Diphenamid	6.9	NIP; low priority
166	Diphenamid, desmethyl	6.9	NIP; low priority
167	Diquat dibromide	6.9	NIP; low priority
168	Imidacloprid	6.9	NIP; low priority
169	Nicotine	6.9	NIP; low priority
170	NTN33823	6.9	NIP; low priority
171	NTN35884	6.9	NIP; low priority
172	PB-7	6.9	NIP; low priority
173	Primisulfuron-methyl	6.9	NIP; low priority
174	Propanil	6.9	NIP; low priority
175	WAK4103	6.9	NIP; low priority
176	6-chloropicolinic acid	6.0	NIP; low priority
177	Fenarimol	6.0	NIP; low priority
178	Fenarimol metabolite B	6.0	NIP; low priority
179	Fenarimol metabolite C	6.0	NIP; low priority
180	Fenridazon	6.0	NIP; low priority

Table 28 *continued*
Rank and Status for Pesticides
2005 FSIS NRP, Domestic Scheduled Sampling Plan

Rank	Compound / Compound Class	Score	Status in the 2005 NRP
181	Fluridone	6.0	NIP; low priority
182	Nitrapyrin	6.0	NIP; low priority
183	Tebuthiuron	6.0	NIP; low priority
184	Chlorfenapyr	5.8	NIP; low priority
185	Tetradifon	5.8	NIP; low priority
186	Diflufenzopyr	5.8	NIP; low priority
187	2,4-D	5.2	NIP; low priority
188	Dodine	5.2	NIP; low priority
189	Flutolanil	5.2	NIP; low priority
190	Myclobutanil, myclobutanil alcohol metabolite, myclobutanol dihydroxy metabolite	5.2	NIP; low priority
191	Prosulfuron	5.2	NIP; low priority
192	Difenzoquat	4.6	NIP; low priority
193	Ethephon	4.6	NIP; low priority
194	MCPA	4.6	NIP; low priority
195	Methoprene	4.6	NIP; low priority
196	2,5-dichloro-4-methoxyphenol	4.3	NIP; low priority
197	Chloroneb	4.3	NIP; low priority
198	Chloroneb, hydroxy-	4.3	NIP; low priority
199	Clofencet	4.3	NIP; low priority
200	Glufosinate-Ammonium	4.3	NIP; low priority
201	HOE-061517	4.3	NIP; low priority
202	HOE-099730	4.3	NIP; low priority
203	2,3-dihydro-3,3-dimethyl-2-oxo-5-benzofuranyl methyl sulfonate	4.0	NIP; low priority
204	2-hydroxy-2,3-dihydro-3,3-dimethyl-5-benzofuranyl methyl sulfonate	4.0	NIP; low priority
205	Butylamine, sec-	4.0	NIP; low priority
206	Compound 125670	4.0	NIP; low priority
207	Ethofumesate	4.0	NIP; low priority
208	Quinclorac	4.0	NIP; low priority
209	Sethoxydim	4.0	NIP; low priority
210	Sethoxydim hydroxylate sulfone	4.0	NIP; low priority
211	Sethoxydim sulfoxide	4.0	NIP; low priority
212	Tralkoxydim	4.0	NIP; low priority
213	3-t-butyl-5-chloro-6-hydroxymethyluracil	3.5	NIP; low priority
214	6-chloro-2,3-dihydro-3,3,7-trimethyl-5H-oxazolo(3,2a)pyrimidin-5-one	3.5	NIP; low priority
215	6-chloro-2,3-dihydro-7-hydroxymethyl-3,3-dimethyl-5H-oxazolo(3,2-a)pyrimidin-5-one	3.5	NIP; low priority
216	Azoxystrobin	3.5	NIP; low priority
217	Azoxystrobin Z isomer	3.5	NIP; low priority
218	CGA 161149	3.5	NIP; low priority
219	CGA 195654	3.5	NIP; low priority
220	Cloprop	3.5	NIP; low priority
221	Dimethenamid	3.5	NIP; low priority

Table 28 *continued*
Rank and Status for Pesticides
2005 FSIS NRP, Domestic Scheduled Sampling Plan

Rank	Compound / Compound Class	Score	Status in the 2005 NRP
222	Dimethipin	3.5	NIP; low priority
223	Fluroxypyr	3.5	NIP; low priority
224	Sulfosulfuron	3.5	NIP; low priority
225	Terbacil	3.5	NIP; low priority
226	Triasulfuron	3.5	NIP; low priority
227	Pyradostrobin	3.5	NIP; low priority
228	Trifloxystrobin	3.5	NIP; low priority
229	Maleic hydrazide	3.2	NIP; low priority
230	Clopyralid	2.9	NIP; low priority
231	Halosulfuron	2.9	NIP; low priority
232	Picloram	2.9	NIP; low priority
233	Clethodim	2.6	NIP; low priority
234	Glyphosate-Trimesium	2.3	NIP; low priority
235	Metsulfuron Methyl	2.3	NIP; low priority
236	Carfentrazone Ethyl	2.0	NIP; low priority
237	Fludioxanil	2.0	NIP; low priority
238	Pyriproxifen	2.0	NIP; low priority
239	Spinosad	2.0	NIP; low priority
240	Aminomethylphosphonic acid	1.4	NIP; low priority
241	Glyphosate	1.4	NIP; low priority
242	Bensulfuron methyl ester	1.2	NIP; low priority
243	Fluthiacet-Methyl (CGA-248757)	1.2	NIP; low priority
244	Pymetrozine	1.2	NIP; low priority
245	Indoxacarb (DPX-MP062)		NIP; low priority
246	Teflubenzuron		NIP; low priority

Key:
MRM = Multiresidue Method
NIP = Not Included in 2005 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 29
Pesticide Compound/Production Class Pairs, Sorted by Sampling Priority Score, with Adjusted Number of Analyses
2005 FSIS NRP, Domestic Scheduled Sampling Plan

Compound Class	Production Class	Priority Score	TNS.[a]	Violation Rate (%) (10 Year)[b]	UNS.[c]	Adjust[d]	Initial Adjust.[e]	Adjust: LC[f]	Adjust: PV[g]	Final Adjust[h]
CHCs/COPs	Young chickens	700.64	3734	0.03	460		460			460
CHCs/COPs	Market hogs	296.70	4192	0.00	460		460			460
CHCs/COPs	Steers	218.06	3916	0.03	460		460			460
CHCs/COPs	Heifers	128.21	3913	0.08	460		460			460
CHCs/COPs	Young turkeys	112.14	3736	0.05	460		300		230	230
CHCs/COPs	Egg products	37.63	1397	0.00	300	-1	230			230
CHCs/COPs	Beef cows	29.50	3929	0.08	300		300			300
CHCs/COPs	Dairy cows	26.67	3755	0.03	300		300			230
CHCs/COPs	Sows	16.02	3527	0.11	300		300			300
CHCs/COPs	Mature chickens	13.04	2773	0.00	300	-1	230		90	230
CHCs/COPs	Bulls	8.99	3180	0.13	300		300			300
CHCs/COPs	Lambs	2.86	3812	0.03	230		300			300
CHCs/COPs	Ducks	2.54	2680	0.00	230	-1	90		90	0
CHCs/COPs	Formula-fed veal	2.18	3141	0.00	230	-1	90			90
CHCs/COPs	Mature turkeys	1.30	1625	0.06	230		230		90	90
CHCs/COPs	Boars/Stags	0.91	3213	0.34	230	+1	300			300
CHCs/COPs	Goats	0.51	3689	0.24	230	+1	300			300
CHCs/COPs	Bob veal	0.45	2270	0.09	230		230			0
CHCs/COPs	Horses	0.40	3316	0.33	230	+1	300		90	0
CHCs/COPs	Bison	0.34	70	0.00	230	+1	300			0
CHCs/COPs	Heavy calves	0.27	2898	0.17	230		230			230
CHCs/COPs	Roaster pigs	0.18	20	0.00	90	+1	230			230
CHCs/COPs	Non-formula-fed veal	0.14	2167	0.14	90		90			90
CHCs/COPs	Sheep	0.14	2292	0.03	90		90			90
CHCs/COPs	Ratites	0.10	162	0.00	90	+1	230			0
CHCs/COPs	Geese	0.05	156	0.00	90		90			0
CHCs/COPs	Rabbits	0.03	899	0.11	90		90			0
CHCs/COPs	Squab		81	0.00	90		90			0
TOTAL #					**7,030**		**7,080**			**5,380**

a. TNS = the total number of samples analyzed in the FSIS Scheduled Sampling Plan (01/01/1994 to 12/31/2003)
b. Violation rate for the period 1994-2003 (10 Years). 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)
c. UNS. = Unadjusted number of samples

Table 29
Pesticide Compound/Production Class Pairs, Sorted by Sampling Priority Score, with Adjusted Number of Analyses
2005 FSIS NRP, Domestic Scheduled Sampling Plan

d. Adjustment based on FSIS Historical Testing Information (refer to text discussion in Section 4); +1 level, +2 levels, -1 level. There are four different sampling levels: 90, 230, 300 and 460. Sampling levels were increased or decreased (e.g., changed from 300 samples to 230 samples) based on the rules described in the section, *Design of the Domestic Scheduled Sampling Plan for Pesticides*
e. Number of samples proposed following adjustment for lack of testing information
f. Adjustment for Laboratory Capacity as discussed in the section, *Design of the Domestic Scheduled Sampling Plan for Pesticides*
g. Adjustment for Production Volume as discussed in the section, *Design of the Domestic Scheduled Sampling Plan for Pesticides*
h. Final adjustment numbers were obtained following an assessment of laboratory capacity and production volume. In addition, FSIS has suspended scheduled sampling for CHCs/COPs in bob veal, horses and minor species (ducks, ratites, geese, rabbits, and squab) for the 2005 NRP.

Design of the Import Scheduled Sampling Plan for Pesticides

I. Selecting and Ranking Candidate Pesticides

The list of compounds of concern for the import scheduled sampling plan is identical to that for the Domestic Scheduled Sampling Plan (Table 27). Furthermore, in ranking pesticides for inclusion in the import scheduled sampling plan, FSIS chose to employ the ranking scores generated for the domestic scheduled sampling plan because FSIS does not have sufficient historical data on pesticides in imported products to predict their violation rates. However, if FSIS has reason to believe that a compound is being misused in a foreign country then it would add that compound/country pair to the import scheduled sampling plan.

II. Prioritizing Candidate Pesticides

The list of high priority compounds chosen for the import scheduled sampling plan by the Surveillance Advisory Team (SAT) is the same as that for the domestic plan. Once the high-priority compounds and compound classes had been identified, FSIS applied non-public health considerations to determine which compounds FSIS should sample. The principal non-public health factor 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 be included in the 2005 NRP. The compounds that can be identified by this multiresidue method (MRM) are listed in the section, *Design of the Domestic Scheduled Sampling Plan for Pesticides*.

III. Identifying the Compound/Production Class (C/PC) Pairs

As with the domestic scheduled sampling plan, the import sampling for CHCs and COPs is used as a means of monitoring incidents of accidental and environmental contamination.

IV. Allocation of Sampling Resources

Egg Products

The samples for residue analysis for imported egg products are selected in a different manner than the other product classes. In order to establish a history of compliance with the U.S. requirements for each category for egg products, the first ten shipments from individual foreign establishments are subjected to 100 % reinspection. If the egg product is in compliance, the rate of inspection is reduced to a random selection of one reinspection out of eight product lots from each foreign establishment. This reinspection rate will continue as long as the product is in compliance.

Animal Product Classes

Table 8 **,** *Estimated Annual Amount (in lbs.) of Product Imported,* lists the estimated amounts of all product classes imported into the U.S. and the percentage of each of the product classes. The percentage of each product class imported annually is calculated using the following equation:

$$\%\ \text{Product Class Imported } (P_C) = \frac{\text{Amount Product Class Imported}}{\text{Total Product Imported}} \times 100 \qquad \text{Equation 15}$$

The relative sampling priority is obtained by multiplying the percent product class imported (P_C) by the pesticide scores, using the following equation:

Relative Sampling Priority = (P_C) x Pesticide Score Equation 16

Based on the scores, one of the following sampling options is chosen: (1) very high regulatory concern (460 analyses/year); (2) high regulatory concern (300 analyses/year); (3) moderate regulatory concern (230 samples/year); or (4) low regulatory concern (90 samples/year). This is indicated in Table 30 , *Number of Pesticide Samples/Product Class*, in the column "Number of Samples."

In the import scheduled sampling plan, FSIS will not test (1) processed products from eligible foreign countries that also ship fresh products to the United States; and (2) processed products from countries that source all their raw materials from other foreign countries that are eligible to ship fresh products and are actively exporting to the United States. Processed pork from Australia, Denmark and Ireland, processed mutton/lamb products from Australia, Canada and New Zealand, Varied combination products from Canada, processed beef from Australia, Canada, Costa Rica, Mexico, New Zealand and Uruguay, and processed chicken from Canada will not be sampled since the raw materials used are from countries that are eligible to ship raw products to the U.S.

If a product class represents less than one percent (by weight) of total combined U.S. imports of meat, poultry and egg products, then the total number of samples analyzed for any compound or compound class is eight times the number of countries from which that product is imported. For example, if processed turkey is imported from only three countries and the amount imported is 0.10 % relative to total U.S. imports, 24 samples of processed turkey would be taken for each analysis, eight from each country.

The adjusted number of samples is listed in Table 30, *Number of Pesticide Samples/Product Class*, in the column labeled "Adjusted No. of Samples." The final number of samples for a compound/product class is obtained after the allocation of samples among different countries is completed. The final number of samples is listed in Table 30 in the column labeled "Final No. of Samples." The numbers in columns labeled "Adjusted Number of Samples" and "Final Number of Samples" may vary slightly because of the rounding upwards or downwards of the samples.

Allocation of Samples among Different Countries

The total number of samples chosen for each compound/product class pair is subdivided among the different countries. The number of samples for each country is based on the relative amount of total product class imported: less than one percent and greater than one percent.

Allocation of Samples in Product Classes where the Total Volume Imported is Less Than 1%

If the amount of an import product class is less than 1%, eight samples per compound/compound class are taken from each country. The relative amounts of pork processed, veal processed, lamb/mutton processed, goat fresh, turkey fresh and processed, ratite fresh, chicken fresh, other fowl fresh and processed, varied combination fresh and processed and eggs processed are less than 1%. Also, as stated above, if a country is exporting both fresh and processed products or sources all their raw materials from eligible sources then no residue samples will be scheduled for the processed products from that country. The numbers of samples per country per product class for each compound/compound class are listed in Tables 31-45.

Allocation if Samples in Product Classes where the Total Volume Imported is Greater than 1%

For major product classes, the number of samples was allocated to each country depending upon the relative amount of product imported from that country. Table 9, *Estimated Annual Amount (in lbs.) of Product Imported/Country*, lists the amount of product imported from each country. The percent of a product class imported from a country was calculated as follows and is in Table 10, *Relative Annual Amount of Product Imported/Country.*

Percent Product Class Imported per Country ($P_{C/C}$) Equation 17

$$= \frac{\text{Amount of Product Class from Country}}{\text{Total Amount of Product Class}} \times 100$$

Based upon the relative amount of product class imported per country, the number of samples that should be taken at the port of entry was calculated using the following formula:

Unadjusted Number of Samples per Country ($U_{C/S}$) Equation 18

$$= \text{Total Number of Samples} \times \frac{(P_{C/C})}{100}$$

This is indicated in the column labeled "Unadjusted Number of Samples ($U_{C/S}$)," in Tables 31-45.

After the determining of the number of samples required from each country, each country with less than eight samples was assigned a minimum of eight samples. This is indicated in the column labeled "Adjustment # 1" in Tables 31-45. The results of this adjustment are in the column labeled "Initial Adj." If the total number of samples for a compound/product class resulted in more than the total number of samples allocated to that compound/product class pair, then a second adjustment had to be made so that the total number of samples would be within an allocated number. This adjustment was made only to those countries from which greater than eight samples were to be taken. This adjustment will be accomplished by using the following equation:

Number of Samples after Adjustment # 2 = $(U_{C/S}) - \frac{[N \text{ X } (P_{C/C})]}{(P_{T/C})}$ Equation 19

where,

$N = (N_1) - (N_T)$
N_1 = Total Number of Samples after Adjustment #1
N_T = Total Number of Samples Allocated
$P_{T/C}$ = Total Percent of Product Class from the Countries That Had Greater Than Eight Samples
$P_{C/C}$ = Percent Product Class Imported per Country
$U_{C/S}$ = Unadjusted Number of Samples

If a country is exporting both fresh and processed products or sources all of their raw materials from eligible sources, then no residue samples will be processed from that country.

Table 30
Number of Pesticide Samples/Product Class
2005 FSIS NRP, Import Scheduled Sampling Plan

No. of Countries	Product	Pesticide	Pesticide Score	Percent Product	Relative Sampling Priority	Number of Samples	Adjusted Number of Samples	Final Number of Samples
8	Beef, fresh	CHCs/COPs	16	52.991	847.85	300	302	302
20	Pork, fresh	CHCs/COPs	16	31.007	496.11	300	298	303
9	Beef, processed	CHCs/COPs	16	5.751	92.02	230	179	121
5	Lamb/Mutton, fresh	CHCs/COPs	16	3.888	62.21	230	113	90
4	Chicken, processed	CHCs/COPs	16	1.973	31.56	90	24	24
4	Veal, fresh	CHCs/COPs	16	1.244	19.91	90	90	91
3	Pork, processed	CHCs/COPs	16	0.890	14.23	90	24	0
1	Chicken, fresh	CHCs/COPs	16	0.762	12.19	90	8	8
3	Goat, fresh	CHCs/COPs	16	0.500	7.99	90	24	24
4	Turkey, processed	CHCs/COPs	16	0.248	3.97	90	32	24
5	Varied combination, processed	CHCs/COPs	16	0.247	3.95	90	40	32
1	Turkey , fresh	CHCs/COPs	16	0.056	0.90	90	8	8
4	Lamb/Mutton, processed	CHCs/COPs	16	0.007	0.11	90	32	8
1	Varied combination, fresh	CHCs/COPs	16	0.006	0.09	90	8	8
2	Veal, processed	CHCs/COPs	16	0.001	0.01	90	16	8
	Total					**2,050**	**1,198**	**1,051**

Table 31
Number of Samples/Product Class – Pork Processed
2005 FSIS NRP, Import Scheduled Sampling Plan

PORK PROCESSED/ CHC/COP	PERCENT PRODUCT	UNADJUSTED NUMBER OF SAMPLES	FINAL NUMBER OF SAMPLES
Australia	0.02	8	0[1]
Denmark	99.90	8	0[1]
Ireland	0.08	8	0[1]
Total	**100**	**24**	**0**

Table 32
Number of Samples/Product Class - Veal, Processed
2005 FSIS NRP, Import Scheduled Sampling Plan

VEAL PROCESSED/ CHC/COP	PERCENT PRODUCT	UNADJUSTED NUMBER OF SAMPLES	FINAL NUMBER OF SAMPLES
Canada	11	8	0[1]
France	89	8	8
Total	**100**	**16**	**8**

Table 33
Number of Samples/Product Class – Mutton/Lamb Processed
2005 FSIS NRP, Import Scheduled Sampling Plan

MUTTON/LAMB, PROCESSED/CHC/COP	PERCENT PRODUCT	UNADJUSTED NUMBER OF SAMPLES	FINAL NUMBER OF SAMPLES
Australia	27	8	0[1]
Canada	20	8	0[1]
France	1	8	8
New Zealand	52	8	0[1]
Total	**100**	**32**	**8**

Table 34
Number of Samples /Product Class - Goat, Fresh
2005 FSIS NRP, Import Scheduled Sampling Plan

GOAT, FRESH/CHC/COP	PERCENT PRODUCT	UNADJUSTED NUMBER OF SAMPLES	FINAL NUMBER OF SAMPLES
Australia	92	8	8
Mexico	0.01	8	8
New Zealand	7.6	8	8
Total	**100**	**24**	**24**

Table 35
Number of Samples /Product Class – Turkey, Fresh
2005 FSIS NRP, Import Scheduled Sampling Plan

TURKEY, FRESH/CHC/COP	PERCENT PRODUCT	UNADJUSTED NUMBER OF SAMPLES	FINAL NUMBER OF SAMPLES
Canada	100	8	8
Total		**8**	**8**

Table 36
Number of Samples /Product Class – Turkey, Processed
2005 FSIS NRP, Import Scheduled Sampling Plan

TURKEY, FRESH/CHC/COP	PERCENT PRODUCT	UNADJUSTED NUMBER OF SAMPLES	FINAL NUMBER OF SAMPLES
Canada	71	8	0[1]
France	1	8	8
Israel	8	8	8
Mexico	20	8	8
Total	**100**	**32**	**24**

Table 37
Number of Samples /Product Class – Chicken, Fresh
2005 FSIS NRP, Import Scheduled Sampling Plan

CHICKEN, FRESH/CHC/COP	PERCENT PRODUCT	UNADJUSTED NUMBER OF SAMPLES	FINAL NUMBER OF SAMPLES
Canada	100	8	8
Total		**8**	**8**

Table 38
Number of Samples /Product Class – Varied Combination, Fresh
2005 FSIS NRP, Import Scheduled Sampling Plan

VARIED COMBINATIONS, FRESH/CHC/COP	PERCENT PRODUCT	UNADJUSTED NUMBER OF SAMPLES	FINAL NUMBER OF SAMPLES
Canada	100	8	8
Total		**8**	**8**

Table 39
Number of Samples /Product Class - Varied Combination, Processed
2005 FSIS NRP, Import Scheduled Sampling Plan

VARIED COMBINATION, PROCESSED/CHC/COP	PERCENT PRODUCT	UNADJUSTED NUMBER OF SAMPLES	FINAL NUMBER OF SAMPLES
Australia	0.15	8	8
Canada	88.21	8	0[1]
France	0.27	8	8
Mexico	11.35	8	8
Netherlands	0.01	8	8
Total	**100**	**40**	**32**

Table 40
Number of Samples/Product Class - Beef, Fresh
2005 FSIS NRP, Import Scheduled Sampling Plan

BEEF, FRESH/ CHC/COP	PERCENT PRODUCT ($P_{C/C}$)	UNADJUSTED NUMBER OF SAMPLES (U) = 300*[($P_{C/C}$)/100]	ADJUSTMENT #1 (8 MINIMUM/ COUNTRY)	INITIAL ADJ.#	ADJUST. # 2	FINAL ADJ.#
Australia	40	120		120	111	111
Canada	29	87		87	81	81
Costa Rica	1	3	8	8	8	8
Honduras	0.004	0.012	8	8	8	8
Mexico	0.5	1.5	8	8	8	8
New Zealand	23	69		69	64	64
Nicaragua	2	6	8	8	8	8
Uruguay	5	15		15	14	14
Total	**100.504**	**301.512**	**32**	**323**	**302**	**302**

Table 41
Number of Samples/Product Class - Beef, Processed
2005 FSIS NRP, Import Scheduled Sampling Plan

BEEF, PROCESSED/ CHC/COP	PERCENT PRODUCT ($P_{C/C}$)	UNADJUSTED NUMBER OF SAMPLES (U) = 300*[($P_{C/C}$)/100]	ADJUSTMENT #1 (8 MINIMUM/ COUNTRY)	INITIAL ADJ.#	ADJUST. # 2	FINAL ADJ.#
Argentina	22	50.6		51	34	34
Australia	1	2.3		8	2	0[1]
Brazil	52	119.6		120	79	79
Canada	13	29.9		30	20	0[1]
Costa Rica	0.004	0.0092	8	8	0	0[1]
France	0.05	0.115	8	8	8	8
Mexico	3.74	8.602		9	6	0[1]
New Zealand	2	4.6	8	8	3	0[1]
Uruguay	6	13.8		14	9	0[1]
Total	**99.794**	**178.9262**	**24**	**256**	**160**	**121**

Table 42
Number of Samples/Product Class - Pork, Fresh
2005 FSIS NRP, Import Scheduled Sampling Plan

PORK, FRESH/ CHC/COP	PERCENT PRODUCT ($P_{C/C}$)	UNADJUSTED NUMBER OF SAMPLES ($U_{c/s}$) =230*[($P_{C/C}$)/100]	ADJUSTMENT #1 (8 MINIMUM/ COUNTRY)	INITIAL ADJ.#	ADJUST. # 2	FINAL ADJ.#
Australia	0.03	0.09	8	8		8
Belgium	0.27	0.81	8	8		8
Canada	86	258	258	258	144	144
Croatia	0.01	0.03	8	8		8
Czechoslovakia	0.002	0.006	8	8		8
Denmark	9	27	27	27	15	15
Finland	0.2	0.6	8	8		8
France	0.04	0.12	8	8		8
Germany	0.07	0.21	8	8		8
Hungary	0.32	0.96	8	8		8
Ireland	0.5	1.5	8	8		8
Italy	0.6	1.8	8	8		8
Mexico	0.21	0.63	8	8		8
Netherlands	0.8	2.4	8	8		8
New Zealand	0.06	0.18	8	8		8
N. Ireland	0.23	0.69	8	8		8
Poland	1	3	8	8		8
Spain	0.01	0.03	8	8		8
Sweden	0.01	0.03	8	8		8
Switzerland	0.11	0.33	8	8		8
Total	**99.472**	**298.416**	**298.416**	**429**		**303**

Table 43
Number of Samples /Product Class – Veal Fresh
2005 FSIS NRP, Import Scheduled Sampling Plan

VEAL FRESH, CHC/COP	PERCENT PRODUCT ($P_{C/C}$)	UNADJUSTED NUMBER OF SAMPLES ($U_{c/s}$) =90*[($P_{C/C}$)/100]	ADJUSTMENT #1 (8 MINIMUM/ COUNTRY)	INITIAL ADJ.#	ADJUST. # 2	FINAL ADJ.#
Australia	23	20.7		21	18.86	19
Canada	30	27		27	24.6	25
Mexico	0.01	0.009	8	8	8	8
New Zealand	47	42.3		42	38.54	39
Total	100.01	90.009		**98**	**90**	**91**

Table 44
Number of Samples /Product Class - Lamb/Mutton, Fresh
2005 FSIS NRP, Import Scheduled Sampling Plan

LAMB/ MUTTON, FRESH/ CHC/COP	PERCENT PRODUCT ($P_{C/C}$)	UNADJUSTED NUMBER OF SAMPLES ($U_{c/s}$) =90*[($P_{C/C}$)/100]	ADJUSTMENT #1 (8 MINIMUM/ COUNTRY)	INITIAL ADJ.#	ADJUST. # 2	FINAL ADJ.#
Australia	63	56.7		57	42	42
Canada	0.3	0.27	8	8	8	8
Denmark	0.01	0.009	8	8	8	8
Iceland	0.13	0.117	8	8	8	8
New Zealand	36	32.4		32	24	24
Total	**100**	**89.496**	**24**	**113**	**90**	**90**

Table 45
Number of Samples/Product Class - Chicken, Processed
2005 FSIS NRP, Import Scheduled Sampling Plan

CHICKEN, PROCESSED/ CHC/COP	PERCENT PRODUCT ($P_{C/C}$)	UNADJUSTED NUMBER OF SAMPLES (U)= 90*[($P_{C/C}$)/100]	ADJUSTMENT #1 (8 MINIMUM/ COUNTRY)	INITIAL ADJ.#	ADJUST.# 2	FINAL ADJ.#
Canada	97	87.3	0	0	0	0[1]
France	0.1	0.09	8	8	8	8
Israel	1	0.9	8	8	8	8
Mexico	2	1.8	8	8	8	8
Total	**100**	**90.09**		**24**	**24**	**24**