

## NATIONAL RESIDUE PROGRAM

### What is the National Residue Program?

The National Residue Program (NRP) monitors veterinary drug, pesticide, and environmental contaminant residues in domestic and imported meat, poultry, and egg products. A residue is a compound indicating an animal was exposed to a drug, pesticide or contaminant. It can be the drug or pesticide itself or another compound formed or broken down in the body after exposure to the drug or pesticide.

Established in 1976, the program has been administered by the Food Safety and Inspection Service (FSIS) of the United States Department of Agriculture in conjunction with the Environmental Protection Agency (EPA) and the department of Health and Human Services' Food and Drug Administration (FDA).

EPA and FDA have statutory authority for establishing residue tolerances and ensuring compliance with tolerances. FDA establishes tolerances for veterinary drugs, food additives, and environmental contaminants, such as lead or arsenic. EPA sets tolerance levels for pesticides. FSIS tests meat, poultry, and egg products to verify these tolerances are not exceeded.

The NRP is a structured process for identifying and evaluating compounds of concern by production class, detection capability and appropriate regulatory action for violative tissue residues. The NRP also provides collection, statistical analysis, and reporting of the results.

### How does the program work?

The range of chemical compounds evaluated for inclusion in the various NRP sampling plans is comprehensive. It includes approved and unapproved veterinary drugs, pesticides, and other xenobiotic and naturally occurring compounds that may pose a potential human health hazard. A violation occurs when a chemical residue is detected and the residue exceeds the established tolerance for that production class. Different animals and egg products are divided into production classes.

Samples are collected from healthy-appearing carcasses. Targeted sampling occurs for carcasses showing signs of certain diseases or conditions—these carcasses would not enter the human food supply because of the disease or condition, regardless of the test result.

Samples are often taken from organ tissues, such as kidney or liver, because many residues concentrate in organs, which make them easier to detect. Because of this concentration effect, FDA often bases its tolerances for veterinary drugs on the levels found in the kidney or liver. The carcasses are subject to retention and condemnation if a violative level of a chemical residue is found. FSIS notifies FDA of the violation and assists in determining the animal producer.

FDA and state agencies follow up on known violators and if a problem is not corrected, subsequent FDA visits could result in enforcement action, including prosecution. FSIS posts a Repeat Violator List on its website, which lists the names and addresses of parties with more than one residue violation in a 12-month period. The list provides helpful information to producers and processors working to avoid purchasing animals that may contain illegal levels of residues and serves as a deterrent for violators.

Scheduled sampling plans consist of random tissue sampling from healthy-appearing carcasses and targeted sampling for carcasses showing signs of certain diseases or conditions. The development of scheduled sampling plans includes determining compounds of food safety concern, algorithms to rank the selected compounds, pairing compounds with appropriate production classes, and establishing the number of samples to be collected. The Surveillance Advisory Team determines the compound and production class pairs. The FSIS Chemical Residue Risk Branch determines the number of samples to be collected by employing statistical analysis techniques.

The National Residue Program sampling design assures a 99.97 percent probability to detect residue violations if the violation rate in the production class population is greater than or equal to one percent. The resulting violation data are used to verify the industry meets the public health standard for the production class and the establishments effectively control residues. Finally, reviews and final adjustments to these sampling plans are made by FSIS senior management, FSIS laboratory staff, FDA, and EPA. More details about the sampling plan can be found on the FSIS website in the [blue book](#) and results are in the [red book](#).

### What about foreign establishments?

For imported meat, poultry and egg products, foreign countries must establish and maintain inspection systems and residue control standards that are equivalent to U.S. systems. These countries undergo an extensive review process before they are eligible to export into the United States. Reinspection of product at the port of entry ensures the exporting country is meeting the inspection standards of the United States.

Reinspection of products is performance-based, which means that better-performing foreign establishments are subject to less frequent reinspection by FSIS inspectors at ports of entry. However, all shipments are reinspected for transportation damage, labeling, proper certification, general condition, and accurate count. Performance-based residue analyses on imported meat, poultry, and egg products are not limited to just those compounds included in the domestic residue program. Decisions about product acceptability are based on U.S. tolerances or action levels. When violative results are reported, the product is not permitted to enter the United States, and is destroyed, returned, or converted to animal food if an appropriate approval is received from FDA.

### Helpful Links:

#### North American Meat Institute

<http://www.meatinstitute.org>

#### FSIS Blue Book

[https://www.fsis.usda.gov/wps/portal/fsis/topics/data-collection-and-reports/chemistry/blue-books/ct\\_index](https://www.fsis.usda.gov/wps/portal/fsis/topics/data-collection-and-reports/chemistry/blue-books/ct_index)

#### FSIS Red Book

<https://www.fsis.usda.gov/wps/portal/fsis/topics/data-collection-and-reports/chemistry/red-books/red-book>