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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

SEP 3 1980

COMMUNITY AND ECONOMIC
DEVELOPMENT DIVISION

Dr. Harry C. Mussman, Administrator
Animal and Plant Health Inspection
Service
Department of Agriculture

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Dear Dr. Mussman:

As part of our review of the Animal and Plant Health Inspection Service's efforts to control animal diseases and pests, we have reviewed that portion of the Swine Disease Surveillance Program related to the treatment of garbage to be fed to swine. A primary component of the program, which the Service conducts with the assistance of cooperating State agencies, is the periodic inspection of garbage-feeding premises to inspect swine for clinical disease signs, check cooking equipment, and check garbage to determine if it is being properly cooked.

We directed our review toward determining whether inspection operations provide adequate assurance that garbage fed to swine is being properly cooked each day and not just when inspectors are present. We made the review primarily in Texas. We also did some work in Florida and at the Service's offices in Hyattsville, Maryland.

We noted that the inspectors check garbage-cooking operations primarily by checking the temperature of the garbage that is being cooked at the time of their visits. However, garbage is not always being cooked at those times and the temperature check does not provide any assurance of proper cooking when inspectors are not present. Greater assurance of proper garbage cooking could be achieved if inspectors would make greater use of the phosphatase field test--a chemical analysis which can be made up to 48 hours after cooking, and in some situations 96 hours after cooking, to determine if garbage has been properly cooked.

Also, the Service needs to provide inspectors with instructions on how to conduct inspections at garbage-feeding premises and give inspectors the necessary training and equipment to perform the phosphatase field tests.



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PROPER TREATMENT OF GARBAGE ESSENTIAL

Proper treatment of garbage is essential because infections and communicable swine diseases, such as African swine fever, hog cholera, vesicular exanthema, and foot-and-mouth disease, can be spread readily and rapidly if swine are fed garbage that is either raw or not properly treated to kill disease organisms. According to Federal regulations (9 CFR 76), raw garbage is one of the primary media for the spread of several serious swine diseases. The regulations stipulate that garbage is considered raw if it has not been heated throughout to boiling or equivalent temperature (usually 212°F at sea level) for 30 minutes.

As part of its efforts to prevent hog cholera, the Service imposes restrictions on the interstate movement of swine fed raw garbage or of pork derived from such swine. Essentially, these restrictions are that (1) swine fed any raw garbage may be shipped in interstate commerce only for immediate slaughter and special processing and (2) products from swine fed raw garbage must be specially processed prior to interstate shipment.

For regulating the processing or treatment operations for garbage fed to swine, the Service relies on the laws and regulations of each State to require proper treatments for killing any disease organisms because there is not now authority to impose uniform Federal requirements. ^{1/} Currently, 15 States prohibit feeding any garbage to swine. The others require treatment of garbage fed to swine.

Service instructions on inspections of garbage-feeding activities were established as minimum standards for the cooperative hog cholera eradication program. The instructions specify that garbage-feeding premises should be inspected at least once a month, with inspections on a non-scheduled or irregular basis. In addition, the cooking equipment is to be tested at least once every 6 months for direct-fire cookers and once every 3 months for steam cookers.

^{1/}African swine fever is now present in the Western Hemisphere and if the United States experienced an outbreak, the Nation's multibillion dollar swine industry could suffer devastating economic effects. Because of this threat, legislation--H.R. 6593 and S. 2612--has been introduced which would authorize a Federal-State cooperative effort to establish and enforce a uniform system for the treatment and feeding of garbage to swine.

Two types of tests are available for checking the cooking equipment and operations: the temperature check and the phosphatase field test.

The equipment temperature check is made while garbage is being cooked by using a water temperature gauge which is fitted on a 4-foot probe. The inspector rates the equipment as adequate or inadequate depending on the temperature produced. During this check, the inspector also determines if garbage is being properly cooked.

The phosphatase field test is made by extracting juices from several pieces of garbage and placing the juice in two test tubes. Distilled water is added to one test tube and a reagent to the other. After incubating these mixtures for 15 minutes, an alkaline solution is added to each of the mixtures. The colors of the two mixtures are compared and the difference is interpreted to determine proper cooking.

A major advantage of the test is that it can be made up to 48 hours after the cooking operation and sometimes as long as 96 hours later under the right weather conditions. Thus, it can be used on an unannounced, after-the-fact basis to check on proper treatment of garbage when the inspector is not present. According to Service instructions, the phosphatase field test is to be made whenever garbage is available.

INSPECTORS OFTEN UNABLE TO MAKE TEMPERATURE CHECKS

Program inspectors were often unable to make temperature checks during inspections of garbage-cooking operations and they seldom used the phosphatase field test.

We accompanied inspectors to several garbage-feeding premises in Texas and found that operators were generally not cooking garbage at the time of the inspections. We were told that this happens frequently even though visits are sometimes scheduled in advance when necessary to meet the requirements for equipment tests. The inspectors we accompanied did not use the phosphatase field test as an alternate when they were unable to make the temperature check. They believed this test would be a useful tool to ensure proper garbage treatment, but they said they did not have the training or equipment necessary to conduct the tests.

We also reviewed monthly summaries of garbage-cooking inspections during calendar year 1979 for four States having a high activity of swine surveillance. As of December 1979, these four States contained 2,274, or 68 percent, of the 3,342 garbage-feeding premises in the United States. As summarized below, the reports showed that while 18,469 inspections were made in the four States in calendar year 1979, equipment temperature checks were made during only 17 percent of the inspections and a total of only 17 phosphatase field tests were made.

<u>State</u>	<u>Number of inspections</u>	<u>Temperature checks</u>		<u>Number of phosphatase field tests</u>
		<u>Number</u>	<u>Percent</u>	
Florida	5,922	1,772	30	0
North Carolina	2,147	448	21	0
Hawaii	1,826	216	12	0
Texas	<u>8,574</u>	<u>613</u>	7	<u>17</u>
Total	<u>18,469</u>	<u>3,049</u>	17	<u>17</u>

THE PHOSPHATASE FIELD TEST SHOULD BE USED MORE OFTEN

The phosphatase field test has several advantages not found in the temperature check method. It can be used when (1) the inspector cannot be present during garbage cooking, (2) doubt exists that all contents of garbage, particularly large scraps, have been thoroughly cooked, and (3) evidence is required for litigation. In addition, because the test can be used at least 48 hours after cooking, the element of surprise is preserved. This is vital to the success of the overall Swine Disease Surveillance Program because it is essential that garbage be properly treated at all times, not just when inspectors are present. The use of the phosphatase field test would help provide this assurance.

We discussed the use of the phosphatase field test with a Service headquarters official in May 1980. He said the reasons the test is not used more may be that the inspectors are not trained, the test kits are not available, or the inspector may not think the test is necessary. He agreed that the test was a useful tool for the inspection program and that inspectors should be encouraged to use it more.

INSTRUCTIONS NEEDED ON HOW
TO MAKE PREMISE INSPECTIONS

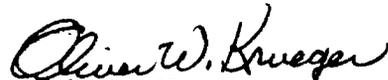
Although Service instructions provide guidance on when garbage-feeding premises are to be inspected, they do not describe how the inspections are to be made. Also, neither Texas nor Florida had written instructions on how to make the inspections.

RECOMMENDATIONS

We recommend that you revise Service instructions on the inspection of garbage-feeding operations to emphasize the need for the phosphatase field test, provide guidance to Federal and State inspectors on making garbage-feeding premise inspections, and add the controls necessary to assure that the phosphatase field test is used when practical and beneficial. We recommend also that you provide inspection personnel with the necessary training and equipment to conduct the phosphatase field test.

We would appreciate being advised of the action taken or planned on our recommendations. If you desire, we will be happy to discuss these matters in more detail with you.

Sincerely yours,


Oliver W. Krueger
Senior Group Director

cc: Inspector General