PROTECTING AMERICAN AGRICULTURE: THE PPQ ROLE

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My organization in APHIS is Plant Protection and Quarantine--or PPQ.

How does it help protect American agriculture?

Let me count the ways!

One: We exclude agricultural pests and diseases by inspecting imports, either in the country of origin or at U.S. ports of entry--and inspecting the baggage of incoming international travelers as well.

Two: We work with state officials, industry, and other cooperators to find plant pest infestations early--before they can do serious economic damage.

Three: When feasible, we eradicate such infestations.

Four: Or we manage--contain--them when the most practical choice is to live with the pest.

Five: We establish rules for interstate and international commerce to minimize the risk of pest introduction or spread.

Let me elaborate.

EXCLUSION

The job of excluding pests and diseases at ports of entry falls to some 900 APHIS-PPQ inspectors, who work closely with U.S. Customs. Seven days a week they man what is our first line of defense--at air terminals, sea ports, and border stations. They check passenger baggage and cargo, truck and rail freight, and even packages from foreign countries.

Some statistics:

In fiscal year 1982, PPQ inspectors cleared more than 298 million travelers and their baggage. They inspected more than 245,000 airplanes and 461,000 cargo shipments. They intercepted one million prohibited agricultural products, including more than 100,000 prohibited meat and animal byproducts. They intercepted more than 22,000 pounds of meat and animal products from the international mails alone.

Seeing to it that foreign garbage is properly disposed of is another responsibility of our PPQ inspectors. Foreign garbage includes leftover airplane meals and garbage from ships. It is a potential source of both diseases and pests. In FY 1982 nearly 49 million pounds of it was removed from aircraft and destroyed. Another 3 million pounds was removed from ships.

The number of pests and diseases to keep out is numerous--and so are the ways in which they can get in.

For example, foot-and-mouth disease could be in the soil on the shoes of an incoming traveler who visited a farm in a foot-and-mouth disease country.

Moreover, international travelers don't realize how much damage one orange or piece of homemade sausage could cause.

Most are not intentional smugglers. In fact, most of them want to do the right thing.

Take one elderly gentleman from the Philippines arriving at Chicago's O'Hare airport. He had the longest, skinniest can PPQ inspectors ever saw--five feet long! In this five-foot-long can he had a five-foot-long sausage. He had made the can himself--by soldering together several cans to get one long enough to accommodate his five-foot sausage. He had heard that we required meat to be in cans. But he was only half-right. We require that it be in commercial cans, with a label saying it doesn't need refrigeration.

But even a sausage or fruit unintentionally brought into the country could damage our agriculture.

ECONOMIC LOSS POTENTIAL

How much damage? What kind of ecomomic losses could we suffer?

Let's reflect on that for a moment.

A single sausage could bring in an animal disease like African swine fever that could devastate our pork industry--and raise consumer pork prices.

Or it could bring in another animal disease like foot-and-mouth...which would cost some $10 billion over several years to eradicate.

Or a single piece of fruit like an orange could bring in a fruit fly like the Mediterranean fruit fly that would cost millions of dollars to eradicate.

In fact, that's probably how the Medfly got into California a few years ago--in a piece of fruit slipping by undetected into Los Angeles or San Francisco. The cost to eradicate: Over $100 million.

But that was just the direct cost. To that $100 million you have to add another $40 to $100 million in market losses. No producing groves were actually infested, but there were losses due to quarantine actions.

And there were job losses...people who picked and packed the fruit...and truckers who hauled it. The work these people lost has to be counted on the loss side as well.

Still, the cost of eradication was really a bargain...because the value of what was at stake was much greater than the cost of eradication. What was at stake was a California fruit crop worth an annual $5.4 billion--and ultimately the fruit and vegetable crop of the entire country.

If the Medfly had really got foothold in this country--if we had allowed it to establish itself over its entire ecological range, it would have infested over 80 percent of this country's citrus--at an annual cost of $524 million. This is considerably more than just the one-shot $100 million-plus eradication cost.

As I said, truly a bargain!

So PPQ people stand guard at ports of entry, our first line of defense. But if that line of defense is breached, they undertake to eradicate the invading pest--as they did with the Medfly, working together with the states and industry.

SURVEY AND DETECTION

But they do still more.

They conduct surveys that detect a pest like the Medfly in the first place.

In fact, over two million hours a year is spent surveying for plant pests in the United States.

Let me just say a few words about one aspect of our surveying activity.

Until recently, most our survey users would get only uncoordinated and unstandardized local survey data. But now our computerized "National Cooperative Plant Pest Survey and Detection Program" (NCPPSDP) is changing that. It is now beginning to give users regional data--more quickly and increasingly in a standardized form. More and more states are participating in the program. As of last month, 39 had submitted data so far this year.

Here is how it works:

States submit standardized data on pests and other crop performance factors to a central APHIS computer at Fort Collins, Colorado. Then states get summary printouts updating them on regional pest situations. At the same time, we in PPQ--in the national program--use it to detect exotic pests early, before they can spread or do any economic damage.

Also, the data is useful for exports. Our phytosanitary officers use it when issuing phytosanitary--plant health--certificates--to exporters. The certificates assure foreign countries that the plants and crops we export are pest- and disease-free.

Surveys, computerized or otherwise, have always been an indispensable tool in our pest eradication or management programs. Surveys enable us to first detect a pest. Then they tell us how far it's spread. And they tell us how well we are doing when we are eradicating or managing it.

TO ERADICATE OR NOT TO ERADICATE?

So the pest has been detected--and we are carrying out surveys to find its limits. Then we have to decide at some early point whether we do away with the pest--eradicate it--or manage it--that is, learn to live with it.

Sometimes we can't eradicate--either because the pest has spread too far or because the technology is not available. Or industry finds that it can live with the pest--that eradication is uneconomical. Then we manage the pest. We devise a management scheme to help growers and others live with it.

The choice is sometimes clear--at other times not so clear.

Let me cite some examples.

ERADICATION

First--some eradication examples.

I have already cited our most recent and biggest--and most publicized--eradication effort: the Medfly campaign in California...how costly it was...and how much more costly it would have been if we had not eradicated.

But here we are discussing the choice...and the choice was eradication.

No way could we have accepted simply managing such a devastating pest, given a five-billion-dollar-plus-a-year industry in California. Living with the pest was out of the question.

So we eradicated the Medfly.

The effort was a big one by any measure. It lasted some 27 months. It enlisted the efforts of thousands of people, officials and citizens alike. There were 4,000 people directly involved--from the federal level on down to the state, county, and town. At its height aerial spraying covered 1,400 square miles a week. Nearly 4,000 square miles in seven counties were quarantined.

Another example--the khapra beetle, a tiny but destructive pest of stored grains. We eradicated it in the 1950's. But it remains a serious threat because much of the world remains infested.

In the last three years, khapra beetle slipped past our defenses. It was detected in some 20 locations across the United States--warehouses, spice factories, and even a grocery store.

Again, no question about the choice. It was eradication. Working with local authorities and civic groups, we ironed out all problems and successfully cleaned up each infestation.

Sometimes it's a question not only of developing an eradication technology--but also of demonstrating that it works.

That's what we did in the case of the boll weevil, the cotton pest.

Boll weevil was eradicated from Virginia and part of North Carolina in a three-year trial program using both pesticides and non-chemical means. The trial program showed that eradication could be carried out over a wider area. This is significant because the pest remains a problem in the rest of the Cotton Belt.

The trial program convinced North and South Carolina cotton growers--so much so that they voted in a referendum to foot 70 percent of the eradication costs. So eradication is now underway in both of these states, in cooperation with the Southeastern Boll Weevil Eradication Foundation, Inc. We estimate it will take two years to complete the program. When it's over, the boll weevil's northern range of economic damage will be confined to the northern border of Georgia.

MANAGEMENT

But let's say we decide that we manage rather than eradicate. What happens then?

Pest management follows a pattern. First, detection. Then delimiting surveys...finding the extent of the pest spread. Next, regulation, to limit the spread. Finally, determining the best way to cope with the pest--and that's management.

There are many ways to manage a pest--by biological as well as chemical means.

For example, you can use a parasite to combat a particular pest.

When the cereal leaf beetle entered the United States, pesticides failed to eradicate it. And regulations didn't stop its spread. So researchers went to the beetle's native Europe where they found tiny wasp parasites that control the beetle there. After testing to make sure the wasps wouldn't

themselves become pests, they introduced them into the United States. One of our labs began mass-rearing them. The result is that today in most areas the cereal leaf beetle is only a minor pest.

Parasites are used to manage other pests--for example, the citrus blackfly in Texas and Florida.

But often controlling a pest requires a combination of methods.

Take the golden nematode--a pest of potatoes in parts of New York. Working with New York state agricultural officials and growers, we are controlling it with a combination of pesticides, resistant varieties, and and regulations governing the movement of potatoes, soil, and other items that could spread it.

Regulations play an important part in the management of the gypsy moth.

The gypsy moth, an eastern pest, has been spreading westward in recent years--as far west as California. It hitchikes on outdoor articles of American families moving from the east to points west.

How to prevent spread of the pest?

Obviously we would like to reduce and eliminate outlying infestations where we find them...and we are doing that in several states through aerial spraying and other means. At the same time, we need to limit the pest's spread. So we sought to regulate the movement of outdoor household articles--because we found it accounted for about 70 percent of the spread.

We now have the regulations. They require moving families to have documentation showing that their outdoor goods were inspected by a USDA-approved method. Self-inspection is one option. But if a family moving is stopped and its outdoor articles are found to be infested, a fine can result.

Some pests cause such severe and widespread damage that growers acting individually cannot control them. Grasshoppers, for example, can destroy millions of acres of livestock forage during outbreak years...and cause massive damage to crop land as well. PPQ helps keep damage down by cooperating with the states and ranchers in aerial treatment of hard-hit rangeland.

REGULATION

A few words about the mechanics of getting regulations on the books.

Regulation is an important interim step--to limit the spread of a pest while you're trying to figure out how to eradicate or manage it.

In consultation with industry and other experts, we draft the regulations. We get as much input as possible. On issues of wide interest, public hearings are held to make sure all interested parties have their say. We invite written comments as well.

Finally, the regulations become effective after being published in the Federal Register--and our information people issue a press release, or other materials like pamphlets if needed.

But sometimes there is no time. Action has to be taken immediately. It's an emergency. So we issue emergency regulations first. Then we go ahead with perhaps public hearings and the rest of the procedure, after which permanent regulations are issued.

One final point on regulations. We don't keep regulations on the books forever. We amend them--and when they're not needed any longer we abolish them. We do not want to add to the burden of unnecessary government regulation.

OTHER ACTIVITIES

Besides pest exclusion, survey and detection, eradication, management, and regulation, we do some other important things.

I already mentioned plant health certification--or phytosanitary certificates. We issue well over 100,000 such certificates each year.

We are into "endangered species." We cooperate with the U.S. Department of the Interior, which has the responsibility of carrying out the provisions of the Endangered Species Act. The Act deals, among other things, with the import and export of "endangered" plant species. The Department of the Interior issues the permits required for the international movement of such species--but we are the ones who do the enforcement--through our PPQ port inspectors, who are trained to identify the regulated species.

Another important activity: Seed inspection. PPQ inspectors sample seed imported from foreign countries to make sure it is accurately labeled and free of noxious weeds. At some ports we cooperate with U.S. Customs in carrying out this particular activity.

Finally, as Mr. Hawkins has noted, we are doing a great deal of work overseas.

PPQ has regional offices the world over--in Central and South America, in Europe, and in the Pacific. Many of our people are now in our own foreign service. They help preclear agricultural products destined for the United States...tulip bulbs in Holland, fruit from Australia and Chile, and fruit and vegetables from Mexico. They are helping Mexico and Guatemala fight the Medfly. They serve as technical advisors for USAID programs overseas.

In effect, our overseas activities serve to extend our first line of defense. For our part in PPQ, we believe it makes a great deal of sense to head off exotic pests before they get to our ports of entry.

But whether abroad or at home, our aim in PPQ is to work together with our sister service, Veterinary Services, as part of the APHIS team, to protect U.S. agriculture and assure Americans a bountiful food supply.