

# The <http://www.wvagriculture.org> Market Bulletin

Gus R. Douglass, Commissioner  
Janet L. Fisher, Deputy Commissioner Steve Hannah, Deputy Commissioner

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## WVDA, Partner Agencies Quickly Contain Poultry Virus

Being a regulatory agency, the West Virginia Department of Agriculture (WVDA) staff diligently maintains on alert for threats that could be harmful to industries and human health. Although emergency events are thankfully rare, in the long run, it is inevitable that threats become reality on occasion. The WVDA's investments on new technology, updated analytical equipment and specialized training recently allowed our personnel to discover a threatening virus in a flock of turkeys in Pendleton County. Working with the Virginia Poultry Growers Cooperative, the owners of the birds, and the Virginia Department of Agriculture, an active low pathogen H5N2 virus was identified during routine pre-slaughter testing.

The WVDA's Rapid Response Team was deployed and moved immediately to secure the farm by restricting movement of the family and workers on the farm, enacting a five-county quarantine on the movement of birds, and closing a highway heavily used to transport poultry.

WVDA staff used the skills learned in training and special equipment to reduce 25,600, 40-pound turkeys into compost in a very short time. Our efforts now are directed toward assisting the family in recovering their losses and returning their farm to production.

Surveillance of commercial and backyard flocks within a six-mile radius of the affected farm revealed no other cases of Avian Influenza (AI). We are using aggressive surveillance to determine if this low-path virus is in any neighboring poultry houses or private flocks in the five-county region.

This emergency situation operated under the National Incident Management System (NIMS) with WVDA Deputy Commissioner Steve Hannah serving as the Incident Commander. Several state and local agencies including law enforcement and fire departments partnered with WVDA and assisted in containing the area and in recovery efforts.

I want to extend a personal thanks to them, and a special thanks to WVDA staff for their professionalism in using their knowledge, training and equipment to bring the situation to a rapid closure. USDA and WVDA staff, as well as staff in the Office of Emergency Services, gained valuable hands-on experience from this incident. We will all be more effective if we have to respond to future challenges in the poultry industry.

I am aware that farmers preparing their land for crops were not happy with the ban on spreading poultry litter until the situation was contained. I felt I had to do this to protect the broiler industry, as well as the turkey industry. Fortunately, I was able to lift the ban within a week.

Springtime is when we are most alert to viruses, diseases and insect threats to agriculture. I'm very concerned about reports I'm receiving concerning the collapse of honeybee colonies across the country. Reports note that bee colonies are dying overnight for no apparent reason. I am checking into these reports and will comment in a later column about the situation.

Good things have been happening, too. One of the bright spots in March was the FFA Ham, Bacon, Egg Show and Sale here in Charleston (*see complete story in June Market Bulletin*). A dozen eggs sold for \$10,000, a slab of bacon for \$800 and a dry-cured ham for nearly \$12,000. This is remarkable support for the young men and women in the FFA program. Kroger, Fas-Chek, Gunnoes, and so many other people deserve a great thank you for their support of the FFA -programs in high schools. A considerable amount of money has been spent by counties on facilities for FFA students to process their meats in compliance with commercial standards. The facilities have state-of-the-art equipment, and if students choose to go to work in the commercial meat industry, they will be properly trained.

On a similar topic, the National Association



### Gus' View . . .

of State Departments of Agriculture is still endeavoring to get a federal law changed regarding interstate commerce of meat. If we are successful, this will open up tremendous opportunities for small meat processors and FFA students to market their products across state lines.

Some five years ago, the Mountain State University in Beckley, along with the United States Department of Agriculture-Agricultural Research Service (USDA-ARS), developed a medicinal botanicals program. This partnership, along with the West Virginia Herb Association, recently held an Appalachian Opportunities Symposium at the Tamarack Conference Center in Beckley. I was given the opportunity to give the keynote address, Agricultural Opportunities in West Virginia. This symposium reminded me of how we are turning the curve and coming back to medicinal remedies based on plant life. I consider the remedies have merit because my grandparents and parents always had an antidote for any ailment I came down with. Some of the concoctions they brewed tasted awful, but did seem to cure the ailment, especially the patch I wore around my neck for the sniffles. There were a number of vendors at the symposium marketing herbs and medicinal plants.

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**WVDA MISSION STATEMENT . . .** The mission of the West Virginia Department of Agriculture is to protect plant, animal and human health and the state's food supply through a variety of scientific and regulatory programs; to provide vision, strategic planning and emergency response for agricultural and other civil emergencies; to promote industrial safety and protect consumers through educational and regulatory programs; and to foster economic growth by promoting West Virginia agriculture and agribusinesses throughout the state and abroad.

# Gus' View...

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By coincidence, I received a letter from Edelene Wood, President of the National Wild Foods Association in Parkersburg. I had lost track of her and was pleased to learn she is still active in the Association. She recalled my comments on wild foods in the October 1985 issue of *The Market Bulletin*. I then remarked on the Nature Wonder Wild Foods Weekend at North Bend State Park in 1968. Wild foods author Euell Gibbons was the guest naturalist-speaker for the event. I recall many varieties of the wild foods served to us that weekend that were quite tasty. Again, not much escaped my grandparents and parents, who lived in a rural area where wild foods were very much a part of our diet.

I also had an opportunity to address the 42nd Annual West Virginia Vegetation Management Association Meeting. This group is comprised of

electric and gas utility representatives and landscapers. The WVDA's role with them is to inform them on the best use of pesticides, as we are the licensing agency for restricted-use pesticides. These vegetation managers keep the right-of-ways cleared, which keeps the power on, keeps natural gas flowing and keeps our highways clear of roadside vegetation, making them safer for driving. I appreciate their efforts now, and in the past when, with their cooperation, we developed a plan for landowners wherein they would be paid to keep the right-of-ways cleared without the use of pesticides.

I am happy to report that we are making progress in the energy arena with ethanol and biodiesel development. I recently addressed the Mid-Atlantic Technology Research & Innovation Center (MATRIC), which is a West Virginia entity. I have said many times how energy-rich West Virginia is and that we should be taking advantage of our renewable resources as we deplete non-renewable sources of energy.

I knew it would take time for agriculture to be recognized as a basis for our existence, not just food. Agriculture must be respected and valued. I sincerely believe that farmers can fuel America. We are fortunate in having two land grant universities here in West Virginia, and that both are working in the arena of alternative fuels. Our nations land grant universities must remain a strategic resource for agriculture and the public. I'm also glad to see MATRIC is working closely with these land grant institutions so we can fully support the needs for an ever-expanding domestic and worldwide population. I note that in our Congress, there has been an erosion of public support for agricultural research. This must be reversed. We have already come a long way in biotechnology and genetic research, and I believe we can ensure our energy needs are met as well.

Over the weekend, I had an opportunity to help my son Tom seed 15 acres of new alfalfa. I was given the responsibility of applying the alfalfa while he was on the tractor preparing the ground ahead of me. My assigned piece of equipment was a 1950 model Farmall H, which functions well for this type of work. Of course, the Farmall H was what I grew up with, and I reminisced a little while watching Tom in his modern closed-cab tractor merely flipping switches to change gears. There I was out in the open grabbing gears manually as I did in yesteryear. I must say I enjoyed the work, but rarely do I operate the new hi-tech tractor and seeding equipment.

My son impressed upon me how critical it was that I applied the seed properly because the alfalfa he was using cost \$185 per bag and he only had three bags to put on the 15 acres. I then ask about other costs associated with spring work. Seed corn was \$140 a bushel, nitrogen fertilizer was \$440 a ton, plus \$2.60 a gallon for diesel fuel. Our fertilizer supplier was at the farm that day, too, top dressing meadows. I was afraid to ask about that cost. Hopefully, he will recover these high production costs through good prices for his cattle and hay. Cattle and hay make up his main production and livelihood.

As for me, my garden looked good until the cold temperatures returned. The freezing weather also appears to have greatly hurt our fruit producers, and we should know more about the extent of the loss in the coming month. Everything on my farm will survive except the green beans. I'll plant them again when it warms up. Since we removed the old shade trees in front of the house I've been working on a plan to renovate the lawn. Anna Lee and I are having considerable discussion on the project. I may just do half of it so the great grandkids will have plenty of grass to play on.

Have a good spring. \_\_\_\_\_



## Second Annual South Branch Watershed Awareness Day Canoe Trip

June 2, 8 a.m.; Rain Date, June 9  
Old Fields Bridge, north of Moorefield. W.Va.  
Trip is free and open to the public  
Limited to 70 participants

### Registration deadline is May 18.

To register, contact Carla Hardy at  
304-538-7581, or by email, [chardy@wvca.us](mailto:chardy@wvca.us)

Online registration will be available at  
[www.wvca.us/wvwcrc](http://www.wvca.us/wvwcrc). Click on the upcoming  
events tab on right side of page for a  
registration form.

## 2007 Gypsy Moth Cooperative Suppression Program to Begin

Agriculture Commissioner Gus R. Douglass recently announced that the West Virginia Department of Agriculture (WVDA) aerial treatment for gypsy moth in the Cooperative State-County-Landowner (CSCL) Program will begin around the first week of May, depending on egg mass hatch and larval development. Commissioner Douglass said, "Public notification, envi-

ronmental assessments, biological evaluations, work plans, safety plans and decision notices have all been completed for the project which is a cooperative effort with the USDA Forest Service, West Virginia Division of Forestry and landowners to protect the State's forest resources."

The Program will likely operate out of the Cumberland Airport at Wiley Ford, W.Va. The contact numbers for the operation will be 304-813-9625, the New Creek Office at 304-788-1066, or the Charleston Office at 304-558-2212.

A total of 11,237 acres in Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Monroe, Morgan, and Webster Counties will be treated under the CSCL Program. The proposed treatments will consist of a single application of Dimilin 4L on 9,251 acres and a single application of Bacillus thuringiensis var karstaki (Btk) on 1,986 acres.

For more information on the WVDA's gypsy moth treatment program, you may contact Gary Gibson, Director or Clark Haynes, Assistant Director, of the Plant Industries Division in Charleston at 304-558-2212 or Butch Sayers, Gypsy Moth Program Manager, in New Creek at 304-788-1066.

## West Virginia Lime Incentive Program Open

Farmers may apply for participation in the *West Virginia Lime Incentive Program* at local conservation districts.

The Program reimburses eligible farmers fifty percent of cost for applying lime to areas with permanent grasses and legumes, in accordance to program guidelines.

The purpose of the Program is to provide incentive to local farmers for the maintenance of permanent grasses and/or legumes on grassland.

More information, program information and applications are available at the 14 West Virginia conservation districts. Visit [www.wvca.us](http://www.wvca.us) for contact information.

## Multiflora Rose Control Program Accepting Applications

West Virginia Conservation Districts are taking applications for the *Multiflora Rose Control Program*.

Persons wanting more information or to register for the program may contact their local conservation district office. A list of those offices is available online at [www.wvca.us](http://www.wvca.us).

## Inaugural West Virginia FFA Golf Tournament



June 21  
Stonewall Resort  
Roanoke, W.Va.



Limited to the first 30 teams  
Entry fee (foursome), \$425  
Captain's Choice tournament  
Sponsorship opportunities available  
Over \$3,000 in prizes to be awarded

For additional information,  
contact Mr. Keith Burdette at  
304-558-2347 or [www.wvffa.org](http://www.wvffa.org).

**The deadline for all entries is May 15!**

# MONROE COUNTY AGRICULTURE REACHING OUT TO NEW MARKETS

Located in southernmost West Virginia, rural Monroe County is an agricultural powerhouse, counted among the state's leaders in nearly every major agricultural category.

Despite its leadership position, farmers there, as elsewhere, have struggled for years to turn a profit. However, the times are changing, and Monroe County farmer John Spangler is leading a charge to provide himself and many of his neighbors with opportunities to better market their products,



maintain farming as a viable lifestyle, and provide West Virginia's cities and restaurants with fresh, home-grown products.

The problem, said Spangler, has been the "feast and famine" cycle inherent in farming.

"Since farming began, you raised the crop and starved while you were raising it, then you sold it and you've got all this money. The farmer has needs year-round, though," Spangler said.

His solution is a three-pronged marketing approach that spreads out income and offers a better return on investment because it focuses on selling products directly to consumers at a premium.

He has formed a community supported agriculture (CSA) organization called Spangler's

Greenhouse & Organic Farm that sells "shares" in the harvest, and then delivers a variety of fresh produce weekly during the growing season to local dropoff locations. The deliveries start in mid-June and run about 20 weeks through Thanksgiving, said Spangler.

Spangler uses environmentally friendly field-cropping and high tunnel production methods to extend his growing season, and works with about a dozen other farms to provide customers with a variety of fresh fruits, vegetables, eggs and other specialty items.

Spangler's operation is also unusual for its production of microgreens, which are plants that are grown to the first true leaf and then harvested, preserving the distinct flavor of each and providing up to 18 times more nutrition than full-grown versions. Spangler describes them as "a burst of flavor that entices the most discerning tastebuds," and markets them to high-end restaurants along the East Coast.

The third aspect of his marketing plan targets farmers' markets with traditional fare such as pumpkins and sweet corn.

Spangler's marketing strategies have caught on in Monroe County as a group of producers, with the help of the local Extension Agent, Brian Wickline came together to form a marketing group that targets high-end restaurants to move their premium agricultural products—from apples to free range chicken eggs. The marketing group has operated mainly in the Beckley and Lewisburg areas, but wants to expand into the Charleston area during the next year or two.

They are currently supplying high-end restaurants in the Charleston area with quality products, and provided Stonewall Resort in Lewis County with \$50,000 worth of fresh produce and eggs last year.

The Monroe County Marketing Group hopes to start a "buyers' club" in the Charleston area as a prelude to a full-fledged CSA in the area. Buyers would visit a website (still in development) that lists products available during a given week and take individual orders. A similar website is being developed with the assistance of the West Virginia Department of Agriculture to link producers with chefs at the state's top restaurants. For more information on the Monroe County Marketing Group contact Rachel Moran at 304-661-0970.

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*To see Spangler's Greenhouse & Organic Farm in operation, stop by for their **Annual Customer Appreciation Open House and Field Day Saturday, May 12 from 10 a.m.-2 p.m.** CSA suppliers will be providing product samples. Horse and buggy rides will be just a small part of the fun. West Virginia University Extension Service also will be on hand to answer your farm and garden questions. They will have a full selection of plants to meet your flower and home gardening needs. For ordering information or to join the CSA, contact Spangler at 304-320-7406 or [spanglersgreenhouse@hotmail.com](mailto:spanglersgreenhouse@hotmail.com).*

## Living with African Honeybees

*George Clutter, State Apiarist, WVDA Marketing & Development Division*

In the late 1950s, *Apis Melifera Scutalata* better known as the African Honeybee (AHB) were imported to South America. At that time, the European honeybees in South America were poorly suited to the tropics. Researchers hoped that the AHB would be better suited to their climate and would boost their lack luster honey production. Twenty six of these African colonies promptly escaped their managed apiary and thrived far better than anyone ever expected. Without any assistance the AHB spread throughout the tropical and subtropical portions of South and Central America, then into the Southern United States. This is why the AHB has been dubbed the most successful invasive species in human history. Stinging incidents for humans and animals have been a problem for the entire length of their migration. AHBs are far more defensive than their European cousins. A common misconception is that they are more aggressive. This is not true, like European bees they will only defend their nest, only much more vigorously. Tethered or penned animals have been the most common victims of stings because they cannot retreat. As with any bee sting encounter, the best thing to do is to leave the

area as quickly as possible and seek shelter. Swatting at the bees will only anger them and make it easier for them to find you.

It was originally thought that when AHB mated with European honeybees the defensive behavior could be bred out of them. Researchers quickly realized that this was not the case. Because of a shorter gestation period for AHB queens the effect was the opposite. The AHB has displaced all other races of honeybees in their path. Beekeepers in AHB areas have found it difficult or impossible to maintain other races of honey bees.

People in Africanized areas have learned to live side by side with the AHB. Nesting sights have been reduced around homes by bee proofing, such as screening vents and caulking openings. African honeybees will nest in smaller spaces than European bees. Birdhouses, old tires, stored flower pots and outdoor grills are examples of potential nesting sights. Because of the dry environment African bees originated in they commonly nest in cavities in the ground, such as water meter service holes and animal dens. The AHB will not excavate their own underground cavities like yellow jackets. Any swarm

hanging in the open should be removed promptly by a trained professional. Farmers cutting hay have been the most common people to have encounters with the AHB. It is now common practice for farmers to carry a bee veil on tractors and be more vigilant in looking for signs of flight.

Florida is the latest southern state to become infested with AHB. Swarm traps have been placed around the state to monitor the movement and growth of AHB swarms. Last year 80 percent of all swarms captured were AHB. West Virginia is most likely too far north for AHB to migrate here. However, package bees and queens purchased from AHB areas and migratory beekeeping will most likely bring these bees here in isolated instances. Beekeepers must be vigilant and re-queen any colony that exhibits greater than normal defensive behavior. Most queen honeybees have traditionally been produced in the south, but this may change because of AHB. West Virginia beekeepers will be in a good position to produce queens because we are about as far south in the country that will not be within the AHB Projected Migration.

# WHAT'S COOKIN'

MAY 2007



Jean Smith, Director, Marketing and Development Division

Spring has arrived and with it comes beautiful flowers and the promise of fresh from the garden fruits and vegetables! Adding more fruits and vegetables to your menus is an easy way to improve your family's nutrition, while adding new and exciting dishes to your list of family favorites.  
— *Bon Appetit!*

## Recipes

### Chicken Asparagus Casserole

- 2 pounds asparagus, cooked and drained
- 4 cups cooked chicken, chopped
- 2 cans cream of chicken soup (10¾ ounces)
- ¾ cup mayonnaise
- 1 tablespoon lemon juice
- 1 cup Cheddar cheese, shredded
- 1 cup bread crumbs

Layer asparagus in buttered 9x13x2" pan. Top asparagus with chopped chicken. Mix soup, mayonnaise and lemon juice; pour over chicken and asparagus. Top with cheese and bread crumbs. Bake at 350°F for 30-40 minutes.

## Recipes

### Asparagus & Potato Salad

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|--|---|
| <ul style="list-style-type: none"><li>2 pounds new, small potatoes, cut in half or quarters</li><li>1 pound asparagus, cut in 2" lengths</li><li>10 ounces frozen peas, thawed</li><li>1 small red pepper, cut into thin strips</li><li>½ cup heavy cream</li><li>¾ cup mayonnaise</li><li>¼ cup red onion, minced</li></ul> | <ul style="list-style-type: none"><li>2 tablespoons lemon juice</li><li>1 tablespoon Dijon mustard</li><li>2 small cloves garlic, crushed</li><li>¾ teaspoon salt</li><li>½ teaspoon ground pepper</li><li>2 tablespoons fresh parsley, minced</li><li>1 teaspoon dried dill weed</li></ul> |
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Cook potatoes in boiling salted water for 15 minutes or until just tender; drain. Place potatoes in large bowl; cover to keep warm.

In boiling water, cook asparagus, peas and peppers 4 minutes or until just tender; drain. Add drained asparagus, peas and peppers to potatoes and recover bowl.

In medium saucepan, combine cream, mayonnaise, onion, lemon juice, mustard, garlic, salt and pepper. Cook over medium heat, stirring constantly until mixture begins to boil. Stir in parsley and dill. Pour sauce over warm vegetables; toss well to coat evenly.

## Recipes

### Strawberry, Shrimp & Feta Salad

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|---|--|
| <ul style="list-style-type: none"><li>3 tablespoons extra virgin olive oil</li><li>2 tablespoons balsamic vinegar</li><li>2 tablespoons water</li><li>1 tablespoon chopped onion</li><li>½ teaspoon salt</li><li>¼ teaspoon ground black pepper</li><li>⅓ cup thinly sliced red onion</li></ul> | <ul style="list-style-type: none"><li>2 cups fresh strawberries, stemmed and quartered</li><li>8 cups mixed salad greens</li><li>4 ounces feta cheese, crumbled</li><li>1 small cucumber, sliced</li><li>¾ pound shrimp, cooked or grilled</li></ul> |
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In small bowl, combine olive oil, balsamic vinegar, water, chopped onion, salt and pepper; whisk to mix well.

In another small bowl, combine thinly sliced red onion with 1 tablespoon of the liquid mixture; set aside. In an additional small bowl, combine strawberries with 1 tablespoon of the liquid mixture. Toss gently to coat evenly; set aside.

In large bowl, combine mixed salad greens, cucumbers, feta cheese and red onions. Add remaining liquid mixture; toss gently to coat evenly. Add strawberries and shrimp; again toss gently.

## Recipes

### Strawberry Cream Pie

- 1 package vanilla instant pudding (4 serving size)
- 1 cup sour cream
- ¼ cup milk
- 2 teaspoons grated orange rind
- 1 8-ounce container whipped topping
- 1 9" graham cracker pie crust
- 2 cups fresh strawberries, hulled, rinsed and patted dry

In large bowl, combine vanilla pudding mix, sour cream, milk and orange rind. Add whipped topping; beat with wire whisk for 1 minute or until well blended. Spoon half the mixture into the pie crust. Press the strawberries, stem side down, into the mixture in pie crust. Top with the remaining mixture. Freeze the pie for about 1 hour or refrigerate for 3 hours before serving. Garnish with additional whipped topping and/or strawberries.

**The men of the United Methodist Church of Mon Valley District** are collecting fresh produce and vegetables for the soup kitchen and food pantries within the following counties: Barbour, Harrison, Marion, Monongalia, and Preston. If you will have extra produce that does not grade out at any time during the year please contact. Allan Wolfe, 304-367-1788 or [whitehalls@earthlink.net](mailto:whitehalls@earthlink.net).

# From Monkey Heads to Rats on a Stick, State's Agriculture Investigator Fights to Keep out Illegal Animal Products

By Tara Tuckwiller. Reprinted from the February 25, 2007 Sunday Gazette-Mail.

Part 2, continued from the April Market Bulletin issue.

Illegally imported meats often come from developing countries — either criminally smuggled for cheap sale, or innocently sent through the mail or lovingly packed in a visitor's suitcase, a care package from home for emigrants in America.

But those meats can carry disease. The devastating 2001 foot-and-mouth outbreak in England that forced the slaughter of more than 6 million animals was traced to meat illegally imported to a restaurant.



Joe Messineo

A 2002 California outbreak of Newcastle disease, one of the most infectious poultry diseases known, was traced to diseased fighting cocks smuggled from Mexico. It threw California into a state of emergency and cost more than \$160 million to fight. More than 3 million birds were killed.

Messineo displayed another photograph. Limp, lifeless-looking roosters, tightly wrapped in paper cylinders. A man smuggled these fighting cocks from Mexico into El Paso, packed behind the seat of his pickup, anesthetized to keep them quiet.

Sometimes they're strapped to women's bras. Sometimes they're stuffed in dash-

boards.

Messineo remembers searching one guy's truck. He leaned on the spare tire. It squished. He opened it up.

"There were the birds, packed all around in a circle," Messineo said.

Cockfighting is illegal in West Virginia, but breeding fighting cocks for show isn't.

"The department is paying particular attention to the fighting cock industry in West Virginia and how it's being managed," Messineo said. "We're letting them know how we could get avian flu from smuggled birds."

Messineo, a former rodeoer, wears a puffy ball cap, jeans and a big silver belt buckle. Nothing like the popular image of a government intelligence agent — but the high-tech methods he employs are similar.

Sometimes, though, nothing beats old-fashioned sleuthing.

"We look in freezers at restaurants" and grocery stores, he said. He showed a photo of a plastic package full of meat, covered with foreign writing. "You'll see these at ethnic markets," he said, "but they'll all have the USDA stamp." This one didn't. Major tip-off.

"We used the UPC code to trace it back to the individuals bringing it in," he said. It turned out to be an international smuggling ring.

Another major tip-off: Stuff that's not what it claims to be. Messineo showed a photo of a cardboard carton labeled "prune slices." Inside, investigators found fresh duck eggs.

"Dried lily flower?" Whole frozen ducks, webbed feet, bills and all. "Frozen vegetables?" Whole frozen chickens.

"We actually traced these products right to the province in China that had a major outbreak at that time of avian flu," Messineo said.

That bird flu, known as H5N1, is the latest animal disease headline-grabber. It has killed 167 people since 2003.

"Fifty containers made it through before we caught this one. At 40,000 pounds per container, that's a lot of chicken," Messineo said. "When you're looking at 2 percent of the cargo that comes in, how much are we missing?"

"Homeland Security puts priority on certain packages. A lot of these don't even get looked at."

Messineo showed a photograph of one package that a dog — dogs are particularly useful in this business — sniffed out at a post office.

"That's a primate hand," he said, pointing to the very recognizable fingers and thumb sticking out of the box. The monkey had been split in half lengthwise and sun-dried — more bush meat.

"In the same shipment, we found dried duiker meat," from a small African antelope. "Rats on a stick — it's kind of like you would eat a corn dog. Just a variety."

Like the Charleston antelope, that shipment was bound for recent immigrants to the U.S.

"With the influx of people of different ethnicities comes a lot of things we're not familiar with," Messineo said.

Bush meat, for example, is a cultural preference. For people in some agriculturally pressured countries, it is their only protein source.

"They sent this with probably not any knowledge of what we were concerned with from an animal- or human-health standpoint," he said.

Another photo showed a black plastic trash bag full of fresh, raw beef from an African foot-and-mouth-infested country that somebody tried to bring on a plane in his suitcase.

"Passenger baggage in the airline industry is one of the biggest threats to American agriculture," Messineo said, simply because it's not thoroughly checked for things like plants, animals and meat.

For people who honestly didn't mean to break the law, he said, officials mostly just want to explain the law and why it's important.

"That person probably got a \$125 fine for the first offense," he said.

"But there's people sending packages as gifts, and then there's outright smuggling."

Such as the Peruvian "courier service" that used the U.S. airlines to traffic illegal guinea pigs.

Known as "cuy," the guinea pig is common food in some parts of South America.

"So you have all these fresh guinea pigs coming in," Messineo said. "Guys carry duffel bags full of little packages to people in the U.S., and what's in all those little packages? Fresh chickens, fresh eggs, meat."

A Cuban national got off a plane in Miami. He looked normal. But the investigators' dog wouldn't stop sniffing the man's legs.

It was a sting. Investigators had gotten a tip that exotic Cuban finches, worth anywhere from \$200 to \$1,500 each, were being smuggled.

Underneath the man's pants, "he had 45 finches taped to his body," Messineo said. Each had been sedated and stuffed into a medicine bottle — the narrow kind prescriptions come in from the pharmacy.

"He was doing a flight every week, and nobody caught him," Messineo said. "One-and-a-half-hour flight, 45 to 50 birds a pop."

The man was prosecuted and jailed. His birds were confiscated and turned over to the U.S. Fish and Wildlife Service for quarantine. "They probably ended up in some zoo or wildlife preserve center, if they were OK," Messineo said.

The birds could have carried bird flu. Cuban finches can be imported legally, but they must be licensed.

That's the key, Messineo said. Live-killed chickens, unusual pig parts — a lot of ethnic specialties can be obtained in the U.S. legally, but people smuggle them anyway.

"We're doing a lot of outreach," Messineo said. He travels to farm bureaus and food sellers, explaining why the laws are important and showing slides of some of his huge stack of photos.

What's the strangest thing Messineo has ever run across?

Dried chimpanzee heads.

"This was a store we raided in Manhattan," he said, showing a photo of four heads — eyes, teeth, fur, everything — lined up on a slab. Chimps, he pointed out, are endangered.

In the same store's secret back room, among other oddities, investigators found poisonous snakeheads and cow hooves.

"Foot and mouth, anthrax, you can get all kinds of stuff from that," Messineo said of the hooves. "All this stuff was being used for medicinal purposes. All of it came in illegally."

"These came from Africa to New York. Where they were distributed from there could be anywhere."