

State Scientists Collects Foreign Corn To Save For Rainy Day

For four years a cramped office on the North Carolina State University campus has been the unlikely headquarters for an international "rescue" operation, with tentacles stretching to Peru, Columbia, Mexico.

Heading the operation is a soft-spoken, self-effacing scientist: Dr. Major M. Goodman. The object of Goodman's attention, the reason the scientist travels to Latin America once or twice a year, where he has the authority to dole out thousands of dollars, is corn.

Since 1985 Goodman has directed a U.S. Department of Agriculture program aimed at collecting and preserving what plant breeders call maize germplasm, essentially seeds of different varieties, or races, of corn found in Latin America.

The success Goodman has enjoyed in this effort is part of the reason the North Carolina Agricultural Research Service scientist

was awarded the prestigious O. Max Gardner Award in 1987 and named a William Neal Reynolds Distinguished Professor last year. The Gardner award, which goes to faculty members judged to have made "the greatest contribution to the welfare of the human race," is the only statewide honor given by the University of North Carolina Board of Governors.

Why should anyone go to the trouble, much less expense, of collecting Latin American corn? Surely the high-yielding hybrid varieties of corn grown in the United States are vastly superior to Latin American varieties.

"Basically, it's an insurance policy," says Goodman of Latin American corn. "If you have good luck, you don't need it."

But when a farmer's luck turns bad — when, say, a new insect or new disease suddenly decimates existing corn varieties — varieties of corn like those found

in Latin America can be priceless to crop breeders.

The Latin American varieties contain tremendous genetic diversity, Goodman explains. Resistance to insects or diseases never encountered by corn growers may be locked within Latin American corn. If a new disease were to suddenly sweep through the cornfields of the United States, a variety of Latin American corn might well hold the genetic antidote.

Indeed, Goodman points out that endless tropical summers expose plants endlessly to insects and disease. As a result, Latin American corn varieties tend to develop greater resistance to insects and disease. The North American winter gives plants something of a respite from insects and disease, lessening the need for plants to develop resistance.

"It's very important to have reserve genetic materials available

and ready for use," says Goodman.

But those materials, at least from Latin American corn varieties, weren't available in 1985. That's when Goodman — reluctantly, as he tells it — set out to rectify the situation.

Goodman first became interested in the availability of Latin American corn races in the late 1960s, when he tried to obtain some of the varieties for a collection and to study. He assumed they would be readily available. They weren't.

The problem was poverty. Latin American countries didn't have the resources to devote to the upkeep of germplasm collections. Collections throughout Latin America were "dying of poverty," according to Goodman.

"They hadn't shipped any seed in years, because they couldn't afford the postage," he added. Goodman wasn't the only

North American scientist to discover the poor condition of Latin American germplasm collections. Other scientists also were becoming concerned, although it was a decade later before that concern mounted to the point anyone did anything about it.

In 1980 a USDA committee was appointed. Goodman served first as co-chairman then as chairman of the Maize Crop Advisory Committee. The committee detailed a plan to assure the survival of the varieties in the Latin American collections by including samples of these varieties in U.S. germplasm collections.

The plan was presented to and approved by USDA's National Plant Genetic Resources Board at what Goodman recalls as "an exceedingly boring committee meeting."

"I trotted back to Raleigh thinking USDA was going to take care of it. I forgot it. It was a

USDA plan," says Goodman. Nothing happened at first, but over a year later Goodman was contacted by USDA officials. Money was available to implement the plan, but there was no one available to do it. Would Goodman take on the assignment?

"It was put up or shut up," he says. He put up.

Goodman has arranged contracts with germplasm collections in Peru, Colombia and Mexico under which seed for various corn varieties is produced and sent to USDA germplasm banks in Ames, Iowa and Ft. Collins, Colo. Thus far seed for over 2,300 varieties has been received. Goodman estimates the major portion of the program will last three more years, at which point, "we'll have most everything they have."

He describes his role in the program as "mostly paper shuffling, balancing budgets.

Bassin' — with the pros

Contrary to what many anglers believe, not all largemouth bass hibernate in un-catchable depths during the winter.

On some lakes, the fish actually stay shallow - or perhaps move shallower at certain times - during the coldest temperatures.

"There are several shallow water winter patterns anglers should investigate before giving up and heading to deeper depths," explains David Wharton, a member of the Johnson Outboards Pro Staff and long-time guide on Sam Rayburn Reservoir in Texas.

"Tributary creeks, vegetation, and riprap often hold fish in shallow water, if not throughout the winter, at least during part of it. Much, of course, depends on what else is available for the bass, but I strongly recommend fishermen look for these first if they want to stay in shallow water."

Winter vegetation is more common on Sun Belt lakes, says Wharton, and even though the cold weather kills the greenery on the surface, the grass continues to grow underwater. Anglers can find it by studying a depthfinder and concentrating along deeper flats, in sheltered bays and coves, and wherever the vegetation may have been present earlier in the year.

"Water with vegetation is usually slightly warmer," explains the well-known Johnson Outboards pro, "so the fish are a little more active and chase a lure better. Grass also provides shelter for baitfish, which always attract larger predators like bass."

Effective grass lures include crankbaits, jigs, and possibly even topwater plugs if the water is shallow and the greenery, such

as moss, is thick and does grow to the surface. In most instances, the lures do need to be worked slower and more deliberately. Stop-and-go retrieves are among the best to use.

"Another option for shallow water winter fishing is to work tributary creeks," adds Wharton. "What you're doing when you fish a creek is simply eliminate the deep water option for bass. Some bass will live their entire lives in the same tributary and never leave, regardless of the conditions."

Wharton believes the best winter creeks are those that have good spawning areas in them, and which have abundant cover. He always chooses one on the lower end of a lake where the water will probably be slightly deeper, and one on the north shoreline of the lake because it receives the most sunlight each day.

"Start at the back of this creek and work your way out, fishing crankbaits or a jig with a pork chunk attached. Keep your boat in the middle of the creek channel and fish both edges, but remember to cast directly ahead of you into the channel itself, too," says Wharton.

"With these lures you can effectively cover a variety of depths, and once you do establish a depth pattern, you can generally go to other creeks and catch bass in them at that same depth."

Riprap, as well as large rocks and boulders, may also hold bass shallow in winter, according to the Johnson Outboards pro. The rocks absorb heat from sunlight and frequently have algae growing on them. This attracts bait, which in turn, brings in bass. On windy days, riprap also collects wind-blown algae, which also draws both bait and bass.

"You can fish riprap and rocks with a deep crankbait, casting at an angle so your lure comes down and across them. A big spinnerbait will also generate strikes. Look for little breaks in the rocks, places where logs or debris may have lodged, or corners in the riprap, and work them thoroughly."



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A priest announced, "Everybody in this parish will one day die."

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But you can "believe on the Lord Jesus Christ, and you will be saved."

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Red Fire Ants Annoy Farmers In County

Red imported fire ants currently inhabit 14 southeastern counties in North Carolina, from Robeson County in the west to Beaufort County in the north.

The pest is annoying to householders because it often interferes with outdoor activities. Fire ants construct ugly mounds in lawns and respond to disturbances with painful stings.

The stings leave a pustule for a week and often a scar for several months. Also, some people are allergic to the stings and require immediate medical attention when stung.

The pest is also a nuisance to farmers since it may annoy livestock and farm workers, and the ant mounds present a hazard to harvesting machinery. Although young animals and plants are occasionally attacked, damage to livestock and crops appear to be minimal.

Red imported fire ants are reddish to dark brown and from 1/4 to 1/2 inch long. A mound which contains a large ant colony measures about 2 feet across, 18 inches high and contains about 100,000 ants.

Satisfactory control depends upon killing the queen ant in each mound. This is often difficult because she is well protected within the mound.

Five pesticides — Dursban, Orthene, Diazinon, Amdro and Affirm — are available for home and landowner control of imported fire ants. These pesticides should be used according to any control directions on the package label.

When using Dursban, Orthene, or Diazinon, best control will result if each mound is completely saturated with spray mixture. About two quarts of liquid per six inches of mound diameter are required. Apply the liquid slowly

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to an undisturbed mound, allowing it to run into the mound interior through the tunnels that appear when the mound surface is washed away.

An area of one to two feet around the mound should also be thoroughly treated. Retreatment may be required if new mounds appear or if living ants are found in the treated mound three weeks after the treatment. Best control can be obtained on warm days in spring or fall when ants are active. Control is difficult to obtain during very hot summer months since the ants remain deep within their mounds and are harder to reach with pesticides.

An ant bait, Amdro, or Affirm can be applied directly to fire ant mounds or broadcast over infested lawns, pastures or other non-croplands according to directions on the package label. Because Amdro and Affirm rapidly breaks down in full sunlight, applications of the bait should be made when possible in early evening. To help keep the bait fresh, the bag containing unused bait should be tightly sealed.

Affirm and Amdro are slow-acting. A visible reduction in the number of ants inhabiting treated mounds will not occur until three or four weeks after the application of bait. Complete kill of treated mounds may take several months. When immediate kill of fire ants is needed in playgrounds, residential lawn areas and other human high-rise areas, a mound drench should be used.

FACE THE FACTS: DRUGS ARE A DEAD END

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ASCS Notes

ASCS Staff
The eighth sign-up for the Conservation Reserve Program will take place through Feb. 24.

Those who have highly erodible land may qualify for the Conservation Reserve Program if the land meets the qualifications necessary for eligibility.

Just recently, the U.S. Department of Agriculture announced that some cropped wetlands and cropland subject to scour erosion will now be eligible for the program.

These lands will only be eligible for the program if the they were cropped in two of the five crop years from 1981 to 1985. To be eligible, the land must be scoured with erosion caused by out-of-bonds water flows which can be expected to flood at least once every 10 years.

The majority of the land is located in the north central states or in the Mississippi flood plain. However, there are areas of Craven County which have been eligible for the program in the past.

If a person believes he has highly erodible land and wishes to submit a bid for participation, he may do so.

The Soil Conservation Service will determine whether the land in question will be eligible for the 10-year program.

If eligible, the land can be entered into the program for 10 years. Trees or permanent cover must be established and maintained for that period of time. The Agricultural Stabilization and Conservation Service will pay cost-share assistance to establish the applicable cover. Also, the government will pay the landowner rent for the 10 years the program is out of production. The rent is based on the bid submitted by the applicant.

Other practices in which ASCS helps with cost-share assistance are: water control structures, water reservoirs, animal waste con-

trol facilities, sod waterways, cropland protective cover, diversions, no-till, shallow water areas for wildlife and tree planting.

Landowners may apply for any of the above-mentioned practices, and if deemed eligible, may receive cost share assistance. Cover crop eligibility is open to all tobacco and peanut producers. Sign-up periods end March 15 for the no-till and Sept. 13 for the cover crop.

Reminder
The sign-up period for the 10 to 25 percent soybean-sunflower provision of the wheat and feed grain programs ends tomorrow.

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