Ag and Food Interprets . . .

- **Furor over gypsy moth campaign evokes thought about public relations**
- **Radioactively sterilized flies offer new insect control weapon**
- **Phosphine has possibilities as fertilizer material**
- **South is on the lookout for chemicals to control witchweed**
- **Scientists agree pretesting should be mandatory for food additives**

Gypsy Moth Campaign

Adverse publicity for DDT in New York evokes some deep thought on public relations from NAC, USDA

"Bug Spray Raids Spur Human Health Fears," headlined a leading metropolitan newspaper in May. With that statement splashed across eight columns on the front page of its second section, the *New York World-Telegram & Sun* (Scripps-Howard) heralded a major editorial series that was still going strong last month. Stimulus for the press campaign: a small, but extremely vocal and highly organized opposition to the federal-state DDT spray program in the northeast. The program, directed by USDA, was aimed at gypsy moth eradication (Ag and Food, June, page 397).

The public outcry was probably strongest in Long Island, N. Y., where a group of residents filed injunction proceedings that are still pending, and are expected eventually to go to trial. Organic farmers, with an emotional hatred for agricultural chemicals, are strongest in Connecticut and Long Island.

In cooperation with the several state governments, USDA had early this spring declared the 5-million dollar war against the gypsy moth in the nine northeastern states. More than half the funds were earmarked for use on 2.95 million acres in three states: northern New Jersey, eastern Pennsylvania, and southeastern New York. Most of the DDT was applied from the air.

USDA officials seem to have been surprised by the severity of the bitter campaign waged against them around New York City. Coming on the heels of extremely strong local support of their Medfly eradication program in

Pictures such as this were distributed by USDA public relations people in advance of the spray program in the Northeast. It shows dramatically how gypsy moth stripped foliage and killed trees on the right. On the left, trees were protected by DDT

Florida (AG AND FOOD, June, 1956, page 481), which officials considered to be in many respects a similar situation, the New York experience did carry a jolt.

A strong public relations program had seemed safe insurance before actual spraying began. USDA prepared radio tapes (with Secretary Benson and several state commissioners as speakers), press kits, and news releases. Significant success was achieved—the local county press and radio picked up the story. Heralding the good results to be expected, and the safety assured, local papers on Long Island, in Westchester County, and in metropolitan New Jersey gave complete, day-by-day details of spraying plans. This coverage was based mainly on USDA releases. A press conference was scheduled at the start of the actual spraying program; unfortunately, although invited, no New York City newspapers sent reporters, according to USDA officials.

Strongest local press attack certainly was that of the *World-Telegram*. Dozens of articles by staff writer William Longgood, together with several editorials and various reports carrying no by-line, added up to by far the greatest single coverage, favorable or adverse. Some typical *WT&S* headlines included:

"DDT Aerial Bombing Protested By Congressman as Health Peril"

"Spray Planes Ignore Rule on Wind, Height"

"Farmers Join Battle Against DDT Spraying"

"DDT Spoils Marine Life, Anglers Say"

"Public Speaks Out Loudly Against Spraying of DDT"

"Poison Strafes a Farm; Planeload of Spray Ruins Toil of 10 Yrs."

"DDT Violates Safety Limit, Lawyer Says"

"DDT Found in Milk on Sprayed Farm"

"DDT Maker Fears Peril, Halts Output"

Each of these articles was by-lined by Longgood. Both USDA and the National Agricultural Chemicals Association say that they sent Longgood detailed information on the safety of pesticides, which they feel the journalist largely ignored. Some of the material was sent as early as March.

Other New York City dailies ran some adverse publicity, but generally it lacked the sting characteristic of the *WT&S* stories. What was the stories' effect? Although state conservation officials generally strongly supported, and fully cooperated with USDA, some fence-straddling was in evidence where politics was involved. New York Gov. Harriman hit the "killing of state fish" in several mid-state counties, and strongly asked that all streams and ponds be avoided by sprayers. Several mayors, among them Glen Cove, N. Y.'s Mayor Suozzi, asked an end to the spray operations. New York City's water commissioner blocked any spraying near city reservoirs or adjacent property. And some well-known personalities and organizers attacked the program; Archibald Roosevelt, for example, termed it "ignorant and arrogant."

Congressman James J. Delaney came into the act with a strong statement in the *WT&S* on DDT's health hazard: "Indiscriminate spraying of DDT over such a huge area presents a definite hazard to human health as well as wild life, and it should be stopped immediately. This poison is being dumped on the entire population of the affected area—on men, women, and children alike—without their consent and usually without their knowledge and no understanding of the hazard involved." The same article continued: "The Department of Agriculture has offered assurances that the spray will not harm humans. But those assurances are being drowned out by the protests of doctors, lawyers, school people, and ordinary men and women caught in the storm of poison."

A joint statement by USDA, the Public Health Service, and the Fish and Wildlife Service, reaffirming the safety of the program in terms of the health of humans and wildlife, received wide play in most of the press, but failed to still either the vocal public minority or the *World-Telegram & Sun*. The fact that much of the spraying was done in sparsely settled areas appeared to make little difference to the opposition groups.

Will the same outcry occur again if a similar situation arises? The answer cannot be complete until the Long Island injunction proceedings are settled in court. USDA officials have no ready answer when asked how such a reaction can be prevented in the future. They plan even more intensive advance publicity and education, but no one can deny their well-intended efforts in that direction this year. There appears to be no way to prevent an individual newspaper campaign. They do feel that their educational efforts should be backed by similar efforts on the part of the chemical industry—telling the public that agricultural chemicals are safe when properly used. As one USDA man puts it, "We just apply the chemicals;" the industry could help by intensifying the educational programs it already has under way.

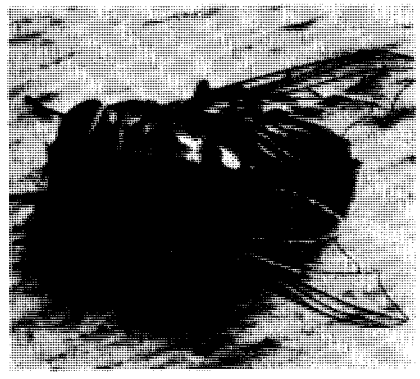
NAC says it has learned two lessons from the experience. First, because nonfarm uses of pesticides are increasing, it is necessary to get accurate information to a vast new audience of city dwellers and suburbanites. Second, the use of pesticides in various large-scale programs evokes value judgments. Possible temporary adverse effects on wildlife (of which the *WT&S* series made much) must be weighed against the long-term benefits. In practice these value judgments are now made by appropriate authorities before spray programs are begun. But a far more effective job needs to be done in informing the public of benefits to be gained by spraying, and of the adverse alternatives if spraying is neglected. Otherwise, the New York experience could be only a sample of things to come.

Screw Worm Battle in Florida

Use of sterilized male insects, along with insecticides and other control methods, adds new weapon to the battle against insects

THERE ARE NO screw worms on the Isle of Curaçao in the Caribbean. There have been none there since early in 1955 when the Entomology Research Branch, USDA, successfully eradicated this pest from the island by releasing sexually sterile male flies in sufficient numbers to wipe out the entire screw worm population. (Female screw worm flies mate only once. Those that mate with sterile males lay infertile eggs, and hence leave no offspring.)

Adult screw worm fly



The Curaçao experiment proved that if enough sterile males can be introduced into an insect population, the number of fertile eggs laid is gradually reduced to zero. Eradication then depends on ability to prevent reinfestation. Curaçao is situated far enough from the mainland that infestation from that direction is not likely.

Florida Tests

Now USDA is extending its knowledge of this insect-control technique with a large scale test of screw worm eradication methods in Florida. Calling the Florida program "pilot type field tests," USDA says the project will evaluate and improve procedures and equipment for screw worm eradication, using the sterile male technique. However, it hopes a significant reduction in screw worm activity will also result from the tests.

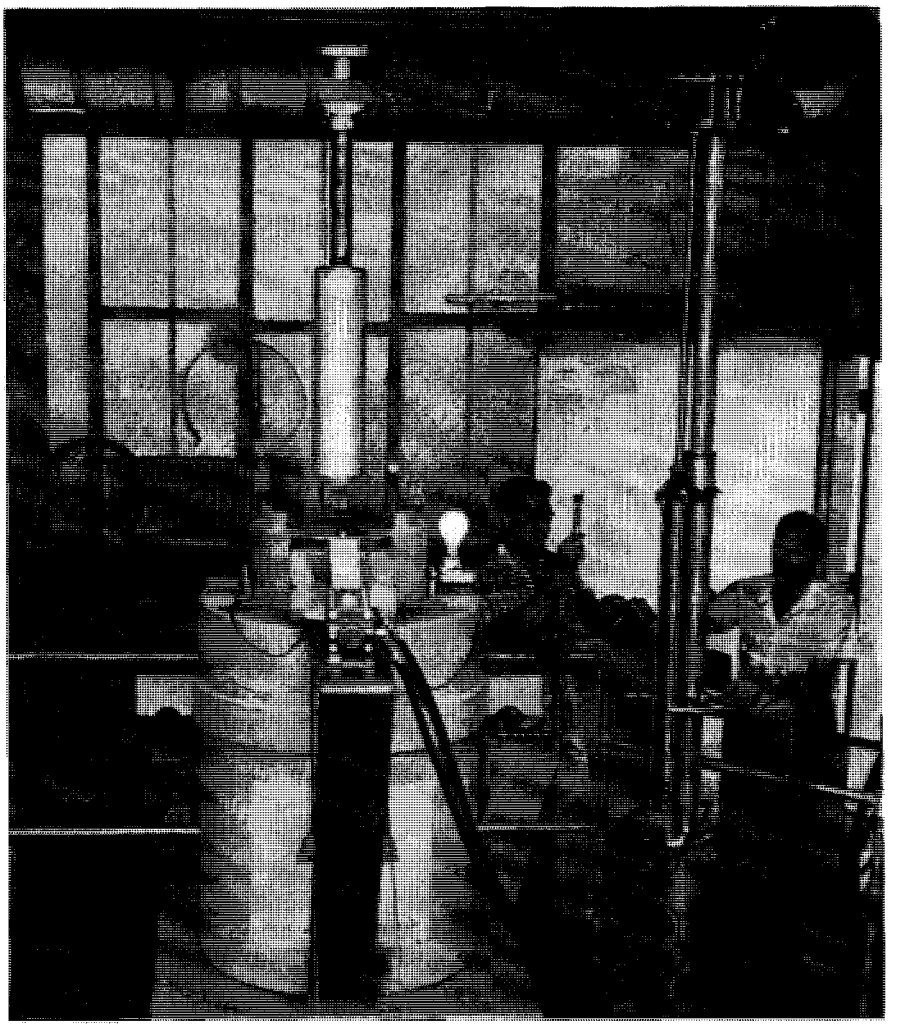
Production of livestock has become Florida's third largest industry—next to citrus fruits and tourists. But in 1936, the screw worm took a $10-million bite out of the industry's profits. Estimates indicate that 80 to 85% of wounds on cattle in the state were infected.

The screw worm, active in the Southeast since about 1933, lives in the flesh of warm-blooded animals—both domestic and wild—and lays eggs on scratches, tick bites, or other wounds. In winter it survives in this area only in southern Florida. Despite its low incidence during the winter, the parasite is difficult to control in Florida because livestock graze over large areas. And unless infected animals, especially the young, are located and treated promptly, they die from the infestations.

The screw worm is considered an ideal insect for the sterilized male method because it fits a pattern that greatly increases chances of successful control:

- It is easily reared and sterilized in the laboratory
- Its females mate only once
- It has a low natural population during part of the year

In the laboratory, screw worm eggs hatch in one day. Larvae feed for five days on horsemeat or beef hearts and then change to pupae. After five more days, the pupae are sterilized by exposure to cobalt-60 rays for about six minutes. At seven days the pupae become flies; in another five to six days, the flies can lay eggs. The complete life cycle lasts about three weeks.



USDA's sterilizing unit at Orlando, Fla. An automatic mechanism lowers the cylinder full of screw worm pupae into the sterilizing unit

The Florida USDA experiments will cover an area of about 2000 square miles, lying east and south of Orlando and heavily infested with the screw worm. R. C. Bushland, Entomological Research Division, USDA, who conducted the Curaçao program, will direct these tests from the department's Orlando headquarters, using about 2 million laboratory bred flies per week.

Flies will be released at the rate of 500 males per square mile each week for four months. Aircraft, flying a pattern developed in Curaçao, will disperse the insects at an altitude of 1000 feet and at intervals of one mile or more. Standard survey techniques on the ground, including examination of host animals, will show results of the work.

Eradication will not be achieved in the test area, because flies cannot be prevented from moving in and out. However, effectiveness of the campaign can be determined by comparisons between numbers of fertile eggs near the center of the operation and those found toward the outer edges of the area.

An all-out eradication effort in Florida would require production of at least 50 million sterile flies a week, says USDA. This compares with release of 200,000 a week on Curaçao and 2 million a week in the current Florida test. About 50,000 square miles would be involved, covering most of Florida, South Carolina, Georgia, and Alabama. Cost of the program would probably reach $10 million. Once the pest was eradicated, quarantine and survey work to maintain screw worm control would cost about $750,000 a year.

May Extend to Texas

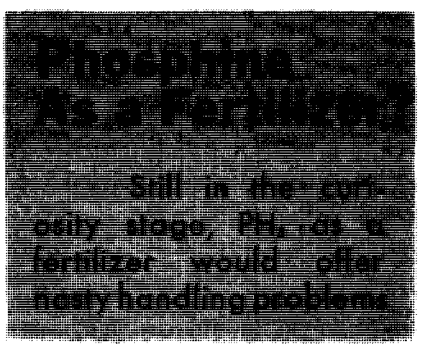
In the future, USDA may consider use of the sterile male technique as a control in Texas where the worm has been known since 1842. Complete eradication in the Southwest (Texas, Arizona, New Mexico, and

California), however, probably will never be accomplished because of the ease of reinfestation from Mexico.

Recently USDA scientists started work toward possible control experiments with the Hawaiian fruit fly. They hope further basic studies on rearing and sterilizing males of other species may develop wider use for the technique. For example, E. F. Knipling, chief of USDA's Entomology Research Branch, has suggested the method may be adapted for use against the Australian sheep blow fly which, like the screw worm, occurs in relatively small numbers.

Similarly, Knipling believes cattle grubs and other bot flies, hornworm moths, and tsetse flies could become subjects of this type control if mass rearing methods can be developed for these pests. In fact, British scientists reportedly have already started to experiment with the sterile male technique on tsetse flies.

From another angle, USDA also sees possibilities for benefiting small crop-producing areas by using sterile males to curb insect populations after the pests have been reduced in number by insecticides or other control agents.



When the trend toward more concentrated phosphatic fertilizers reaches a point where the phosphorus content equals 208%, the end is about in sight. That is the phosphorus content of phosphine (PH_3)—on a P_2O_5 basis, of course. The parallel between the formula for phosphine and the NH_3 for ammonia led F. Hunter and I. Thornton of the University of Durham in Newcastle-upon-Tyne in England to try phosphine as a fertilizer material, in spite of rather nasty handling problems.

Preliminary results show that radishes and wheat can both use phosphine, and that it is not toxic to normal seed germination and growth.

Although it is intriguing to compare PH_3 and NH_3 as fertilizer materials, there are important differences. Anhydrous ammonia is a cheap form of nitrogen because it is the primary product of the nitrogen fixation industry. Phosphine is not a cheap form of phosphorus. It must be made from elemental phosphorus. This is an expensive form of phosphorus to begin with, and processing to phosphine would add still more to the cost.

More Serious Disadvantages

There are other disadvantages that are more serious. Phosphine is toxic to humans, and also often contains P_2H_4, which causes it to ignite spontaneously in air. Phosphine is not sold or shipped in industrial quantities. But it is manufactured for captive use—probably by the reaction of elemental phosphorus and sodium hydroxide solution.

This is the process Hunter and Thornton originally used. They made phosphine on a small scale and applied it immediately to the soil. Using a 40% caustic soda solution, they obtained a mixture of phosphine and P_2H_4, with some $P_{12}H_6$. Later they used a different process, in which magnesium aluminum phosphide was treated with dilute sulfuric acid. Still another process consists of treating aluminum phosphide with water. Aluminum phosphide is sold in Europe for generating phosphine for fumigating grain. It is made by Degesch in Germany and sold under the trade name Phostoxin.

The equipment available to Hunter and Thornton has not permitted accurate control over the rate of production. Doubtless better generators could be developed. But phosphine is difficult to liquefy, so it cannot be handled as easily as anhydrous ammonia. It would require stronger storage vessels. Mixing phosphine and ammonia does not seem to offer any advantages, although there seems to be no reason why they could not be applied simultaneously.

Retention in Soil

From the agronomic point of view, phosphine is not retained in the soil so well as anhydrous ammonia is, but at normal dressings no loss to the air has been found, according to Hunter and Thornton. The mechanism of absorption and the chemical reactions that take place before the phosphorus is absorbed into the plant have not yet been determined. Clay soil will absorb slightly more phosphine than other soils. The limiting factor may be organic matter. Moisture has little effect. Phosphine has a very low solubility in water, so application via irrigation water is ruled out. There is a possibility that in excessive amounts phosphine may inhibit nitrogen-fixing bacteria in the soil. Excessive application reduces soil pH.

Hunter and Thornton suggest that $P_{12}H_6$ could also be used as a plant food. It is a solid, and an even more concentrated source of phosphorus than is phosphine. Some time ago in the U. S., TVA tried the ultimate in concentrated phosphatic fertilizer—elemental phosphorus. White phosphorus, applied at rates equivalent to 80 and 320 pounds of P_2O_5 per acre in pot tests, was toxic to plant seedlings and largely inhibited growth. Red phosphorus, which is more stable and can be handled and distributed much like ordinary fertilizer materials, gave no response. Apparently it does not become available to the plant in time to be utilized.

Potassium phosphides can be prepared and can be altered to contain nitrogen as well. But they are probably explosive in air and may also be toxic. TVA workers have prepared KPN_2 and phospham, HPN_2. However, these compounds are very insoluble.

The difficulties in handling phosphine seem enormous. Yet, since the material does appear to be a usable phosphatic plant food it should not be ruled out. Toxicity problems should be no greater than those encountered with some of the phosphorus insecticides, and spontaneous ignition in air could probably be eliminated by using pure phosphine.

At this stage phosphine is still in the "curiosity" stage in so far as its possible use as a fertilizer material is concerned. But it may be well to remember that only a relatively few years ago, the first suggestion that anhydrous ammonia might be applied directly to the soil produced, primarily, laughter.

Witchweed

New plant pest invading crops in South. No effective chemical herbicides have yet been found

Farmers are being asked by USDA to be on the lookout for a plant parasite new to this country. First observed in 1956, the genus *Striga*, or witchweed, has now been discovered on about 38,000 acres in North and South Carolina; 470 farms in 13 counties are affected. Surveys in other areas—parts of Alabama, Florida, and Georgia—have produced

no evidence of the presence of witchweed.

The plant has such an innocent appearance that it might be observed and dismissed as being harmless. Usually 8 or 10 inches in height, it sometimes reaches 18 inches. Its bright green leaves are slightly hairy, and appear the same on both the upper and lower surfaces. Numerous small bright red flowers first appear in June and continue until frost comes.

Witchweed seeds depend upon stimulation from secretions of host plants to germinate. Then, to maintain life, the young seedling's roots must attach to and penetrate the roots of the host. The entire life cycle of the weed is 90 to 120 days. About 30 days elapse between germination and breaking of the soil by the young plant, and during this period it wreaks most of its damage to the host.

Symptoms Could Be Confusing

Symptoms of the plant's attacks on crops are similar to those resulting from severe drought. Growth of the host plant is stunted, and wilting and yellowing take place. Corn has suffered the most serious damage so far, but USDA warns that sugarcane, sorghum, many grasses, certain sedges, and some broadleafed plants also are attacked. Crabgrass is particularly susceptible. While witchweed does not usually show up in cotton and tobacco fields, it may appear when crabgrass starts coming in. The Department says also that witchweed has been observed parasitizing crabgrass in fields of peanuts, beans, peas, and sweet potatoes.

Potential difficulty in bringing the pest under control lies in its prolific reproduction. One witchweed can produce up to a half-million seeds of microscopic size, and these have a facility for lying dormant, but viable, up to 15 or 20 years. They can be spread by wind or water, in old crates, on clothing, or in many other ways. Conceivably, a hurricane on a well-chosen path could cause propagation of the parasite in areas as far north as New England. It is possible also that its symptoms would be confused with those of drought, especially in areas where prolonged dry spells have been experienced. This, of course, would be an ideal situation for the plant to become firmly entrenched in the field before realization of its presence. USDA points out that, while ideal conditions for witchweed are warm temperatures and light soils containing considerable moisture, it grows well under a wide range of soil, temperature, and moisture conditions.

Although new to the Western hemisphere, the plant has been known for many years as a parasite on sugarcane in the Eastern hemisphere and on maize in South Africa. As a matter of fact, it was a graduate student from India who aided in fixing the cause of the puzzling crop failures in the Carolinas, by noting the resemblance of the weed to those of his homeland.

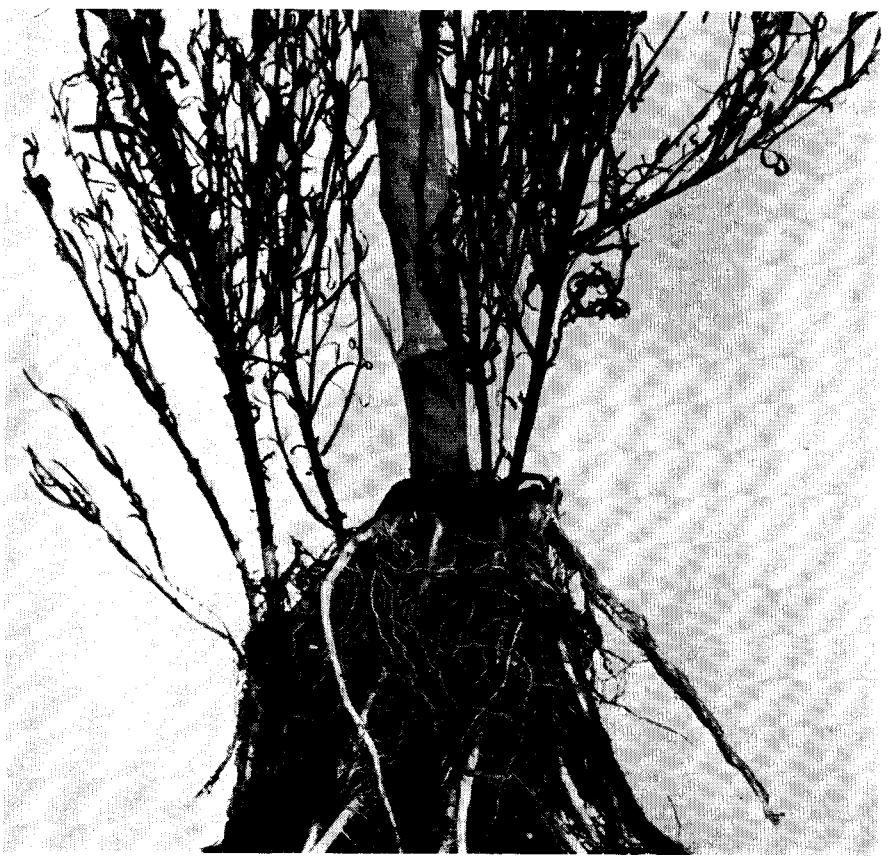
United States agriculturalists, then, are indebted to scientists of foreign lands for knowledge that exists concerning witchweed. Such knowledge, however, includes little concerning possible use of herbicides. A Queensland report states that fairly satisfactory control has been accomplished through crop rotation with nonsusceptible hosts. Main reliance in most of the Far East and South Africa is upon the "trap crop" system. This consists of putting in plants which will cause witchweed seeds to germinate, but which are not true hosts. Cowpeas or soybeans, for example, will cause germination but will not support the parasite's growth.

On March 5, the second and final session of a hearing to consider a federal quarantine for preventing spread of witchweed was held in Washington, D. C. Result of the meeting was an endorsement of a federal witchweed quarantine by a committee of eight farmers. These farmers represented the eight counties of North and South Carolina then known to be directly affected. About 60 interested spectators were present at the hearings, including farmers, state and USDA pest-control officials, research workers, and others. Statements of 10 other states and from the Central, Eastern, and National Plant Boards were placed in the record, all favoring the quarantine.

Quarantine Imposed

Acting upon these endorsements, USDA on July 11 announced details of a federal quarantine. Under terms of the quarantine, specified farms and localities in the eight afflicted counties are to be subject to regulation. Interstate movements from the designated areas are to be regulated on soils, rooted plants and root crops, various grains and plant litter, used farm tools, machinery, and equipment, and other items that might spread witchweed. Certificates and permits are to govern

Corn root attacked by witchweed, which has appeared for first time in the country in scattered areas of North and South Carolina



movement of noninfected articles. Exemption from permit requirements is to be provided for shipments made under specified conditions. After allowance of a period for reception of comments on the proposed quarantine, it was expected to go into effect on Aug. 21. Parallel regulations to cover intrastate movement of affected products are expected to be issued by North and South Carolina.

This could potentially be one of the most difficult struggles in pesticide history. Actually, pesticide control has not yet come into the picture on any organized basis. Flame weeders have been the chief means of eradication. The herbicide 2,4-D has been used to some extent, but this compound is incompatible with cotton and tobacco crops. USDA has no knowledge that any company is conducting definite research on specific herbicides, but USDA itself is conducting such research in cooperation with agencies of North and South Carolina. Thus far, however, emphasis is on detection and eradication through starvation and physical destruction. This admittedly is the hard way to do it, since it requires the utmost in alertness, diligence, and cooperation from each individual farmer. At best, it is a holding action. But the payoff is in good or bad crops, and for the present the farmer is largely on his own in getting rid of the pest.

Scientists and Food Additives

Congressmen get briefed by the scientific experts on food additives. Agreed: Pretesting should be mandatory

IN A RECENT two-day session before the Congressional committee charged with looking into proposed amendments to the Food, Drug and Cosmetic Act covering the use of chemical additives in food processing, a panel of scientists expert on cancer and/or food processing agreed on these points:

- Chemicals are necessary in the processing of food.
- Pretesting of food additives should be mandatory.
- New legislation should not freeze into law any particular methods of evaluating the safety of food additives.

Perhaps the strongest plea made by the panel, composed of experts suggested to the committee by the National Academy of Sciences, was that in any new legislation flexible wording be used in dealing with the question of testing methodology. They cited many reasons to back up their request.

William J. Darby of Vanderbilt University said there are many methods of assessing safety—animal feeding is only one of them—and emphasized that each additive is different. A scientist who is to direct the pretesting must have freedom to choose the method and make the judgment as to safety on the basis of each individual compound's characteristics.

Wants to Avoid Unnecessary Testing

Dr. Darby said he hoped it would be possible to avoid burdensome pretesting work on chemicals for which there is no reason to suspect harmfulness. To emphasize how burdensome such testing can become, he cited a recent estimate that FDA would need 25 years, with its present staff, to put currently used food dyes through reasonable testing procedures. Obviously, he said, unreasonable requirements for pretesting would constitute a heavy drain on one of the nation's most valuable resources—scientific manpower. Herbert E. Carter of the University of Illinois reinforced the plea for flexibility with the comment that he is optimistic about the possibility of developing biochemical methods that will permit researchers to predict with accuracy the effect that a chemical will have on humans. He mentioned specifically studies on single cells. If rigid animal testing procedures were to become mandatory, he indicated, scientists would not be able to take advantage of such shortcuts when and if they become feasible.

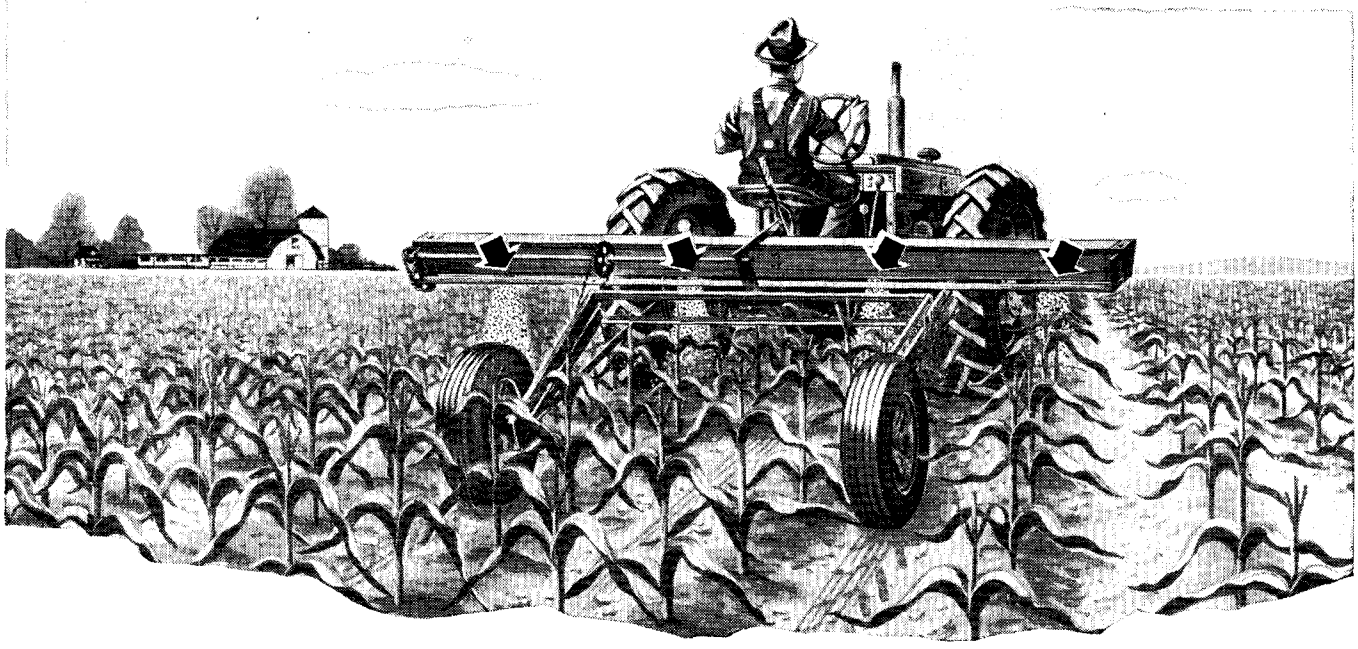
Cancer Causes

Much of the panel's discussion was concerned with the cancer and chemicals question. Morton L. Levin of New York State Department of Health, reviewing present knowledge about cancer causes, told the committee there is no common denominator in the many known causes, and that for this reason there is no way to predict whether a given chemical will cause cancer. Several hundred carcinogenic chemicals are known, he said, but the carcenogenicity of most of them was discovered by direct observation on humans and not through laboratory work. Most of those chemicals, he said, also cause cancer in animals, but this is not always true. Nor does every chemical that causes cancer in experimental animals also

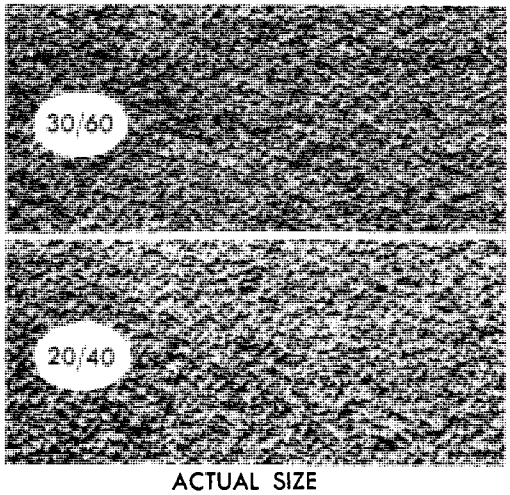
Witchweed (left) destroys corn and grass by attacking roots, depriving plants of food and water. Witchweed may become one of the most difficult struggles in pesticide history. Flame weeders have been the chief means of eradication so far

Florex and Floridin

granular carriers serve formulators and agriculture best.



Granular pesticide formulations deposit the chemical where it's most effective . . .



ACTUAL SIZE

Have you received the new Floridin bulletin on agricultural chemical processing? It's free; write today.

Although we've been making granular carriers for a half century, recent new techniques in agricultural pest control have proven granular formulations to be efficient, economical and easily applied, with pesticide residues on foliage at harvest time greatly reduced. The method is already established for combating European corn borer, Japanese beetle larvae, white fringed beetle grub, corn root worm, wireworm, mosquito larvae, and other turf and soil pests.

Because of the amphibole-like structure of Floridin adsorptive granular fuller's earth products, uniformity and speed in formulation are at their best. Produced in a variety of mesh sizes, including the popular 20/40 and 30/60 ranges, regular Florex and Floridin granulars are available for rapid disintegration in water, or in calcined grades for resistance to disintegration in water.

Build your granular pesticide formulations and your fertilizer-pesticide mixtures on Florex or Floridin granules. Use the type carrier which has actually given superior performance in field tests.

Adsorbents
Desiccants
Diluents

DEPT. O **P. O. BOX 989** **TALLAHASSEE, FLORIDA**

cause cancer in humans. Thus, he concluded, animal experimentation must not be depended upon entirely. Human population must also be watched closely.

The scientists stuck closely to their original plan of not discussing or commenting upon the various bills now before the committee.

Obviously weighing heavily on the minds of several congressmen was: How much freedom does an industry-employed scientist have in discussing his toxicological findings? This question was prompted by earlier testimony before the committee, wherein a scientist told the committee he had been fired because he insisted on publishing research data which threw suspicion on the safety of a chemical additive. Congressman Isidore Dollinger (D.-N. Y.) asked of the industry men on the panel: Can the front office overrule your judgment as to the safety or harmfulness of a proposed chemical additive? One by one they rose to declare their freedom.

Henry F. Smyth, Jr., who works at Mellon Institute "in the interest of Union Carbide," told committee members that he gets no instructions from the company on whether or what to discuss about his research, that no compound is sold by the company for use in food without his research team's approval, and that he cannot believe Union Carbide would ever overrule his toxicological opinion.

John H. Foulger, Du Pont's medical director, said that never, in the more than 20 years he has worked for Du Pont, has anyone told him what to say or not to say about his research findings.

Herbert E. Carter, University of Illinois biochemist, said that he and his associates keep in close touch with graduates of Illinois' chemistry department, and that he has never heard of a scientist's being fired by industry for what he published or said about his research findings.

Industry scientists also told the committee that they are in constant touch with FDA regarding their toxicological work. Thus, if a company were to put on the market a harmful chemical for use in food FDA would have the right to publicize the fact.

One observer in the standing-room-only audience remarked later that if a company were to market a suspect chemical, it would certainly be known by competitors, and all a competitor's salesmen would have to say to customers is: "Have you heard . . .?"

Congress and Science

This was the second time in recent months that Congress has used the technique of an expert panel to become informed about matters of science. First use of the technique had been earlier in the session when a panel briefed congressmen on problems concerned with atomic fallout. Many observers felt that the food additives panel had been the more successful one, because of the wide area of agreement among panel members. John Bell Williams (D-Miss.), chairman of the subcommittee, told the panel members they had kept their discussions on a "shelf" low enough for committee members to understand.

The subcommittee will hear from the Food and Drug Administration once again before it winds up hearings on the various amendment proposals now before it.