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## THE AVITROL PROGRAM IN OHIO

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## THE AVITROL PROGRAM IN OHIO

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In 1965 we really became interested in Avitrol in Ohio. Prior to that time the material had been field tested in field corn in South Dakota. We ran some pilot tests in fields where we hand-baited with material to see if redwing blackbirds would feed upon the material in a Ohio corn field, which they did. In 1966 we repeated these tests; but it was not until 1968 that any major applications of the material were made. During this year aircraft were used to apply the material to 1500 acres of corn in Monroe County, Michigan, and to one of the mid-eastern counties of southern Ohio. A three percent concentrated material mixed in a one-to-nine ratio; one part treated to nine parts non-treated was used. The cost of the operation was \$2.40 per acre, of which \$1.50 was for the applicator and \$0.90 for the material.

In 1969 the operation was expanded to two counties in eastern Ohio, two in southern Ohio, southwest Ohio, one part of Indiana, and the same area in Monroe County, Michigan, for a total acreage of about 5500 acres. In all these operations the farmers paid for the entire cost of materials and application. The cost was \$2.15 per acre, of which \$1.50 was for the applicator, and \$0.65 was for the material. The material was applied at the rate of one pound per acre on one third of the acreage.

The program was voluntary. Farmers were asked to participate if they wanted to pay for the material, but success was not guaranteed.

At the same time in 1969 the research division ran tests in northern Ohio where they used a 12-mile square area and attempted to treat all the corn fields in that area with Avitrol. In this program, however, the Fish and Wildlife Service paid for the materials and application. They had a reference area in the same area and tried to evaluate the effects of the application to that that was not treated. In general, the reference area had substantially more damage than the treated area. During this time the material was experimentally registered, and its use had to be supervised by a governmental agency.

In 1970 a larger program was mounted. At the time it was started we did not know what the registration situation was going to be, but organization began in April. In late June we found out that the material would be available. We expanded the program under the assumption that one man could adequately supervise 6,000 acres of corn. More realistically we found that one man could supervise about 3,000 acres.

Plans were initiated in March, when time schedules were set up, County Agents had meetings with farmers to explain the program, and we left it with the farmers to decide whether they wanted to participate.

We had a cut-off date of June 15, so that material could be ordered in time for application. We ended up with five areas in Ohio and two in Michigan. The

Indiana Conservation Department felt that the program was too controversial so they did-not authorize the use of the material.

Final cost was \$2.01 per acre. Farmers had been originally told that they would be charged \$2.25 per acre and based on this approximately 17,000 acres of corn in the six areas were initially signed for the program.

The entire program represented the use of 600 pounds of concentrated Avitrol at \$10.50 a pound, which means that the Phillips Petroleum Company received a little over \$6000. You can see why chemical companies are not too interested in this type of operation, since it takes them a long time to recover the research and development investments involved.

After the project was started there were problems. One aerial applicator crashed his plane. There were three or four good cases where birds were chased out of a 50-acre corn field, and then simply went a quarter mile down the road, because not all farmers treated within the general area. We also felt that we had moved birds from the areas that we worked to areas that never had bird damage before. Flight lines were moved, and I think some roost areas were moved to different sites. One thing that did happen that benefited everybody was that birds apparently became conditioned to scare or stress, and comments were made that exploders and shot guns were much more effective this year than prior years-one or two shots in the fields moved the birds out of the corn fields and into other areas.

As far as evaluation goes, we spent quite a bit of time in field investigation. Over 167 hours was spent in corn fields, looking for proper bait placement and amounts as well as affects on non target species. We searched 187 fields. Of the dead birds we found, 167 were redwings, 23 were grackles, 10 were morning doves, 7 were house sparrows, 1 cardinal, 1 indigo bunting, and 1 starling. In one field I remember flushing 88 doves and only found one dead one. We also found numerous pheasants in treated fields but none that were affected. I don't think any quail were seen; and of course, we found, blackbirds in the fields.

We counted 33 reacting redwings, one cowbird, and two reacting doves. Damage varied--we were in only one field that was heavily damaged. The problem in this field was not knowing when the field was treated. The farmer's responsibility was to call the aerial applicator and to ask him when he wanted to treat the field, and some of the treatments were so late that damage had already occurred.

In 1970 we had a hot summer and corn matured a lot faster than normal; it took perhaps two weeks to go through the damage period, so we should have been treating perhaps once every five days. We learned that bait material must be uniform in size because spreader openings are very small, and application rates vary if all the bait is not uniform in size.

In summary, I think that the material as used, had a definite effect on damage, although much of this may be the redistribution of damage, rather than total reduction. I think that Avitrol must be used with other scaring devices for good control.