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BLACKBIRD CONTROL — AN AGRICULTURAL PERSPECTIVE

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Owing to the concentrated and severe nature of blackbird depredation on corn and sunflower crops in the Portage la Prairie area of Southern Manitoba, a group of area farmers formed the Central Plains Special Crops Protection Association to examine this problem during 1979. With financial support from Agro-Man, a Federal-Provincial cost sharing sub-agreement, they established a pilot project demonstrating field control techniques during the 1980 crop season. In a total of 40 fields surveyed for damages, demonstration fields suffered damages averaging 1.7% and 2.8% (weight of crop loss) for corn and sunflowers respectively (range: 6.3-0.1% corn; 6.1-0.1% sunflowers) compared to 17.5% and 12.0% averages on non-demonstration field (range: 44.6-1.9% corn; 62.4-0.1% sunflowers). These results were considered promising enough to justify a four year study commencing in 1981.

The first program studied by the Blackbird Control Project was a Decoy Trapping Program using the "Wings-Inn" design (a modified Australian Crow Trap). These traps were recognized to be not the most efficient design but were considered simple enough for the average farmer to build and operate. A total of 16,068 birds were trapped from 1981-83 using 10-12 traps; the vast majority trapped were blackbird species. Approximately 1400 red-winged blackbirds were fitted with bands and coloured leg tags and released; they were recovered from as far away as Sunburg, Minnesota. Blackbirds other than redwings were routinely destroyed by gassing. Since 60% of all captures are brown-headed cowbirds, which are not a major agricultural problem, decoy trapping is not seen as an effective control technique except at a very localized level.

Field trials of propane bangers and Av-Alarms proved to be highly effective. Propane bangers are available in a variety of forms, the best of which appears to be the double-shot, rotational, tripod-mounted (or Double John) banger. One of these units can cover between 50-80 acres of crop except under unusually severe conditions. Average cost of banger controls was estimated at between \$2.00* and \$3.00 per acre under normal conditions for this area.

Pole-mounted, three-speaker Av-Alarms have been demonstrated during 1983 to be a low maintenance option with comparable cost-benefit ratios to propane bangers. Roost dispersal using Av-Alarms during 1982 was proven to be only temporarily successful with no effect on depredations (i.e., even when the roost was moved several miles, the flock continued feeding on the same preferred field). All acoustic control techniques have been shown to be more effective when used in combination and when backed by regular shooting (both shotgun and pyrotechnics).

A major demonstration of lane baiting with Avitrol in 1982 gave disappointing results. Three of the eight test fields showed over 20% damage despite repeated applications made necessary by excessive rainfall. The average cost of Avitrol application was calculated at \$20.06 per acre, an unacceptably high figure when added to the value of crop lost. Samples of bait sent to Denver for analysis showed only 1.7% of the labelled, active ingredient (4-AP), leading in part to the discovery that 4-AP sublimates rapidly under normal storage conditions. Avitrol Corporation subsequently changed their bait to the more stable hydrochloride salt of 4-AP. Trials in 1983 using the new bait supplied from the factory proved inconclusive.

Extensive damage assessment programs from 1981-83 covered a total of 27,214 acres of corn and sunflowers. The average economic impact of blackbird depredation (Value of Lost Crop plus Cost of Controls) was calculated to be as follows; 1981 - \$7.69 per acre; 1982 - \$5.83 per acre; 1983 - \$5.96 per acre. Total potential losses for all Manitoba for 1983 were estimated at \$1,935,000, based on seeded acreages of 230,000 and 95,000 for corn and sunflowers respectively.

As a result of repeated damage assessments, we are now able to predict fairly accurately, within a given area, which fields are at highest risk of blackbird predation. Removal of preferred fields (or thorough protection of these fields) will lead to corresponding increases in damages on adjacent fields.

During 1983 we participated in field trials of the Bird Resistant Synthetic Sunflower Variety Number 1 (BRS 1), which has been developed at N.D.S.U. by Dr. Greg Fox. The characteristics of this variety and details of its development are covered elsewhere in these proceedings.

Although our test plots did not receive severe bird pressure, BRS 1 did exhibit better bird protection than commercial oilseed hybrids grown in the same plots (e.g., Plot 1 - BRS 1 damage = 0.36%, Commercial Hybrid damage = 1.42%. Plot 2 - BRS 1 damage = 0.37%, Commercial Hybrid damage = 16.42%). BRS 1 is not yet a commercial proposition since yields are very low (734 lb/acre vs 1435 lb/acre for 894 commercial hybrid in same plot), and oil content at approximately 35% is 5% lower than acceptable for oilseed-type sunflower.

*All prices quoted refer to Canadian Dollars (approximately 20% lower than U.S. value).

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