

PROGRESS ON CATTAIL MANAGEMENT TO REDUCE BLACKBIRD DAMAGE TO SUNFLOWER

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Introduction

In 1989, the USDA began experimenting with cattail management to reduce sunflower damage caused by blackbirds. Dense stands of cattail, which often hold large numbers of blackbirds in late summer and early fall, were thinned with glyphosate-based herbicide. Based on promising results from initial research, a statewide cattail management program was started by the USDA in 1991.

Methods

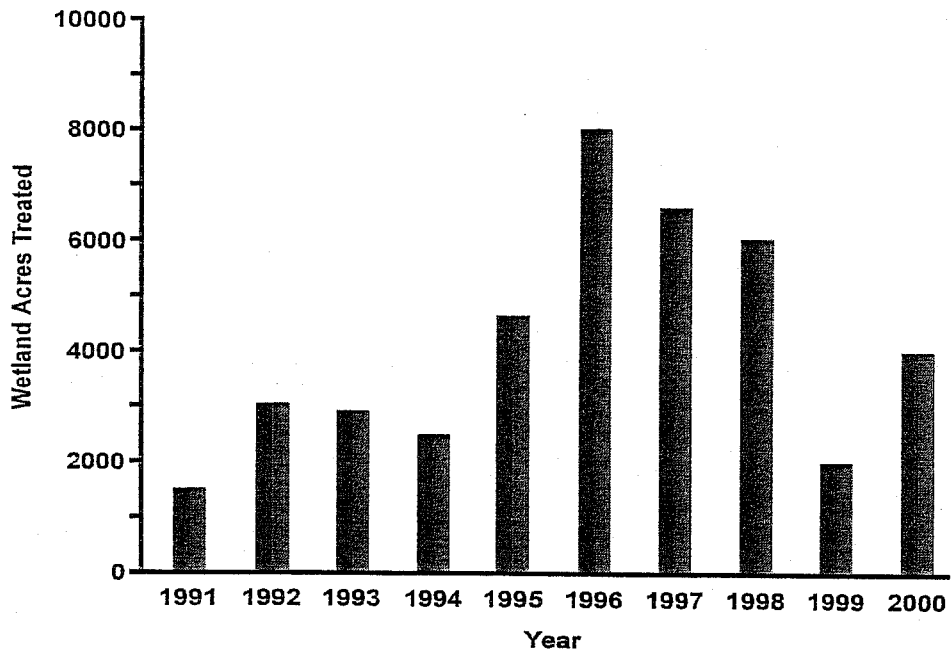
Cattail-dominated wetlands larger than 10 acres are treated at no cost to sunflower producers to help reduce blackbird damage. The glyphosate is applied in July by helicopter. If applied early in July, cattail stands can be affected in the same year; thereby potentially eliminating those stands as roosting habitat. The treated wetlands display a linear pattern consisting of 15-m strips of open water that alternate with bands of living cattails 6-m wide. Treatments can last >4 years when water levels stay consistently ≥ 12 inches.

Wildlife Services maintains a database that includes the acres of wetlands treated with glyphosate, the wetland location, and the landowner's name. The total acres of treated wetlands were estimated by dividing the number of sprayed acres by 0.70, which represents an average spray coverage of 70% per wetland. Here we summarize the North Dakota database from 1991 through 2000.

Results

Since 1991, North Dakota Wildlife Services has used glyphosate on >1,300 cattail-dominated wetlands comprising nearly 42,000 acres (Fig. 1).

Figure 1. Acres of treated wetlands in North Dakota by year from 1991-2000.



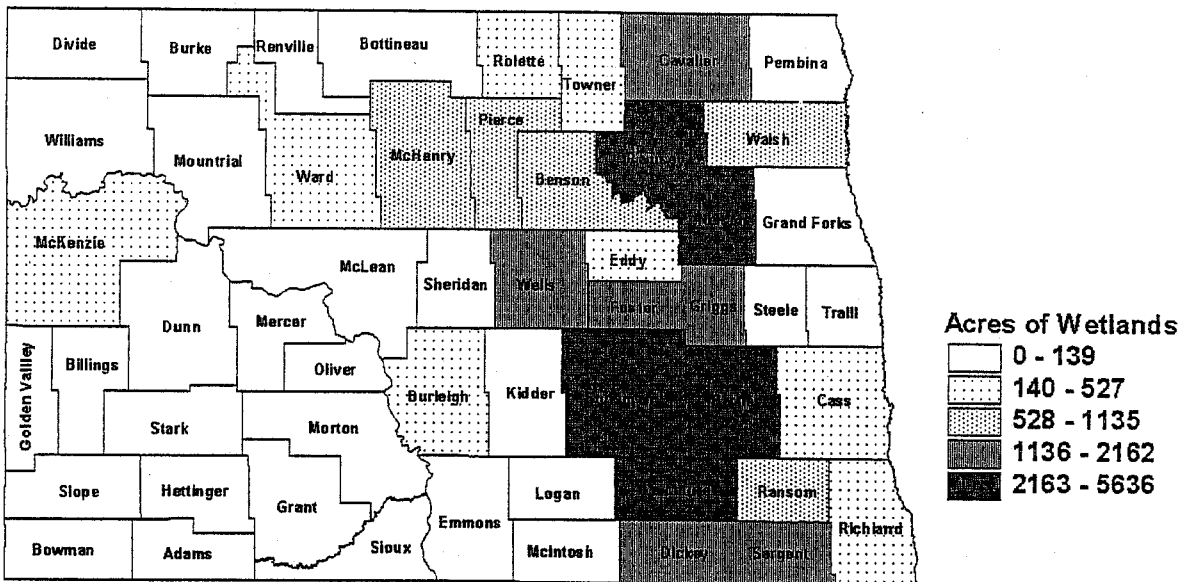
Thirty-two of North Dakota's 53 counties have received at least one application. The average size of wetlands treated by Wildlife Services from 1991-2000 was 30 (± 7.1) acres (Table 1).

Table 1. Summary data from USDA/Wildlife Services' cattail management program in North Dakota from 1991 through 2000.

Year	Mean size (acres) of treated wetlands	Number of wetlands sprayed
1991	19	78
1992	26	118
1993	37	80
1994	27	94
1995	27	176
1996	34	240
1997	44	161
1998	35	183
1999	29	78
2000	26	111
Mean/Totals	30	1,319

In 2000, most of the spraying was in Stutsman County (806 acres), followed by Barnes (680 acres), Foster (506 acres), and LaMoure (503 acres). Over the duration of the program, Barnes, Nelson, LaMoure, and Ramsey Counties have each had >4,000 acres of semipermanent wetlands treated with glyphosate, or approximately 18% of the semipermanent wetland area present in these counties (Fig. 2). At an application cost of \$61/acre, Wildlife Services has expended about \$2.5 million to reduce cattail growth.

Figure 2. Acres of treated wetlands in North Dakota by county from 1991-2000.



Discussion

The cattail management program has finished its 10th consecutive year in operation, and demand for this program still remains strong. Several changes have occurred to the program over its 10-year span; two of the most important occurred this last year.

First, Wildlife Services has switched from using a fixed-wing aircraft to a helicopter. With helicopters we can now treat smaller-sized wetlands, and Wildlife Services has lowered its minimum wetland size requirement from 15 acres to 10 acres. Moreover, because helicopters generally have better control of their spray drift, applications are now made earlier in the growing season (mid- to late July).

Experiments conducted over the last two years have shown that earlier spraying can produce within-year results. Cattails sprayed in mid- to late July will often fold over or flatten by late August, depriving blackbirds of roosting and loafing habitat during the prime period of blackbird damage to sunflower.