



## RESULTS OF SOUTH DAKOTA SUNFLOWER PRODUCER POLL RING-NECKED PHEASANT DEPREDAATION OF SUNFLOWER SEED AND SEEDLINGS

In February and March 2009, the South Dakota Department of Agriculture (SDDA), Office of Agronomy Services conducted a poll to determine the need for the use of Avipel® (anthraquinone) seed treatment products to protect newly planted sunflower seed against consumption by ring-necked pheasants. The poll identified areas throughout the state where sunflower producers are experiencing economic loss due to seed and seedling depredation by ring-necked pheasant. The SDDA, Office of Agronomy Services asked for sunflower producer input to determine yield loss information to substantiate economic losses due to ring-necked pheasant damage.

Some questions allowed more than one response, so the response percentages to questions may be more than or less than 100%. Some questions had follow-up questions. Follow-up questions would be skipped if they did not apply to the respondent. We allowed the respondents to choose multiple responses in selecting which counties they grew sunflower therefore one respondent may grown sunflower in 2 or more counties with varying acreages in each county.

Ninety-eight percent of the respondents reported ring-necked pheasant depredation in their sunflower. In South Dakota, most sunflower production counties east of the Missouri River do have high or very high pheasant densities (greater than 101 pheasants/square mile) according to the 2008 South Dakota Game, Fish, & Parks pheasant population counts. In the two counties (Potter and Sully) with the highest survey response rate, 100% of the respondents reported losses due to ringed-neck pheasants. These counties have high or very high pheasant densities (greater than 100 pheasants/square mile).

The survey showed 42% of sunflower producers reported less than 50 acres damaged by ring-necked pheasant. Seventy percent of the respondents indicated that field borders are the most problematic areas. Twenty five percent of the producers reported damage all over the field. Overall, 27% of the respondents indicated 12 to 24 rows damaged and 28% of the respondents indicated more than 48 rows of sunflower were damaged by pheasant.

The greatest response frequency shows grass areas (23%), shelterbelt areas (11%), and roadside areas (11%) as the adjacent land use. The total number of acres enrolled in CRP in South Dakota amounts to 1.3 million acres. A majority of these acres are in the highest pheasant density areas.

The overall responses indicated a wide range of yield losses due to pheasant depredation. Twenty one percent of the respondents indicated a range of 21% to 50% yield loss. Nineteen percent indicated yield losses of 5% to 10% and another 19% indicated yield losses of 11% to 20%.

Sixty percent of the respondents do not replant the pheasant damaged areas. Of those producers who do not replant the damaged areas, 39% indicated management costs of less than \$30 per acres to manage the damaged areas. However, in Potter County 54% of the respondents do replant the damaged areas and in Sully County 63% of the respondents do replant the pheasant damaged areas. Forty three percent of the respondents who do replant the pheasant damaged acreages indicated a 21% to 50% yield loss due to delayed planting of the damaged areas.

Of the respondents who do replant the pheasant damaged areas of their sunflower field(s), the highest response frequency indicates a replant cost of \$51 to \$65/ acre.

The poll was not a scientifically valid survey because it is only representative of those who responded. Information on which the poll results were based was not audited or verified. We used industry organizations and the media to inform the sunflower producers in South Dakota of the poll. Because the poll was online, only those with internet access were able to participate. To mitigate multiple responses by any one individual, there were controls in place to allow only one response per IP address. Approximately 14% of the estimated 478 South Dakota sunflower producers responded to the poll.