



RESULTS OF SOUTH DAKOTA EAST RIVER CORN PRODUCER SURVEY RING-NECKED PHEASANT DEPREDAATION ON CORN SEED AND SEEDLINGS

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

Depending upon the response to a question, some questions were skipped. Because of this, the numbers may be more than 100% or less than 100% on some questions. The respondents could select more than one answer in some of the questions resulting in percentages greater than 100%. We allowed the respondents to choose multiple responses in selecting which counties they grew corn therefore one respondent may grown corn in 2 or more counties with varying acreages in each county.

Eighty-nine percent of the respondents reported ring-necked pheasant depredation in their corn. In South Dakota, most counties east of the Missouri River do have high or very high pheasant densities (greater than 101 pheasants/square mile) according to the 2007 South Dakota Game, Fish, & Parks pheasant population counts. In the seven counties (Beadle, Brown, Edmunds, Faulk, Potter, Spink, and Walworth) with the highest survey response rate as corn production areas, 100% of the respondents reported losses due to ringed-neck pheasants. These counties have very high pheasant densities (greater than 200 pheasants/square mile).

The survey showed 39% of corn producers reported 10 to 50 acres damaged by ring-necked pheasant. 91% of the respondents indicated that field borders are the most problematic areas. This is a consistent response across all counties. The number of rows from the edge of the field borders that were damaged by pheasant depredation varied from 12 rows to more than 36 rows.

The greatest response frequency shows CRP-Grass areas (72%), shelterbelt areas (54%), and roadside areas (61%) 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 two percent of the respondents indicated a range of 21% to 50% yield loss. Twenty six percent of the respondents indicated a range of 51% to 75% yield loss. These ranges are consistent across all of the responding counties in the survey.

Fifty 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 corn field(s), the highest response frequency indicates a replant cost of \$66 to \$80/ acre.

Producers who do not replant the damaged acres have management costs of about \$20/acre in the damaged areas of their fields.

The assessment was not a scientifically valid survey because it is only representative of those who responded. Information on which the survey results were based was not audited or verified. We used industry organizations and the media to inform the corn producers in South Dakota of the survey. Because the survey was online, only those with internet access were able to take the survey. To mitigate multiple responses by any one individual, there were controls in place to allow only one response per IP address. Approximately 3% of the estimated 8500 east river corn producers responded to the survey.