



March 9, 2015

**Legislative Report of the Kansas Sunflower Commission
Senate Agriculture Committee**

Chairman Love and members of the Committee please accept this written overview of activities and research concerning the sunflower industry in Kansas and the Commission's use of check-off dollars authorized by the Legislature.

In fiscal year 2014 (10/1/2013 to 09/30/2014) the Kansas Sunflower Commission collected \$39,363.90 in check-off dollars from Kansas sunflower growers. Again this year we have seen a decrease in check-off collections, approximately \$2000 less than the previous year. This year we received refund requests for only \$644.19 which means the Commission received gross check-off dollars of \$38,710.71. Obviously the Commission is pleased such a low percentage of sunflower growers have made a request for a refund, but the trend of decreasing acres planted and check-off collections limits the scope of research and promotion the Commission can fund. As of February 26, 2015 the Commission has assets totaling \$73,236.96.44. In accordance with KSA 2-3005(k), attached to this report is the annual financial audit report. Again this year there were no irregularities found in KSC financial statements.

The net decrease in check-off dollars this year shows the continued market trend dictating planting choices. International and domestic demand for sunflower seed, oil and meal remains flat, and the demand for other commodities is high. Lower market prices make it difficult for sunflowers to compete for acres in the rich soils of Kansas. Producers making the choice to grow sunflowers are getting premiums, but even with those premiums prices are still below the higher value crops. With dwindling aquifer water supplies and advances in sunflower breeding, we hope that sunflowers will once again become a more prevalent crop in Kansas.

Under the agreement the KSC has used since its inception in 2002, one-half of the check-off dollars collected in Kansas are sent to the National Sunflower Association in Mandan, North Dakota for funding of promotion and research specific to sunflowers. This year KSC sent \$19,388.67 to NSA for research. Money contributed by Kansas sunflower growers is leveraged many times to produce critical, weed, insect, genetic and agronomic research through NSA. A great deal of that research takes place in Kansas at K-State research stations. Over \$70,000 is being sent back to Kansas for continued research. For your information I have attached a list of those projects to this report.

Mr. Chairman the Kansas Sunflower Commission continues to look for opportunities to promote the sunflower, increase acres planted in our State and provide valuable crop research. We want to thank the Legislature for its continued support of our efforts.

Supporter of the Kansas Sunflower Industry through Farmer Check-off Dollars
www.kssunflower.com

Kansas Research Projects

Inheritance and mapping of sunflower insect resistance traits

Description: Sunflower moth is the most damaging sunflower insect across the central and southern Great Plains. Sunflower moth larvae cannot survive winters in the northern Great Plains, but adult moths emerge early in the south and (while completing several generations) are carried northward by prevailing winds. While migrating moths may sometimes cause damage as far north as Manitoba, they are a more consistent threat in southern states like Texas and Kansas. Female moths are attracted to lay eggs on sunflower in early-bloom stage. Newly-hatched larvae feed on pollen, but later consume florets and seeds. The goal of this project is to use elite germplasm and germplasm with documented value for host plant resistance to determine the mode of inheritance or map the location of genes responsible for resistance to target insects. The products from research will be released germplasm along with information (i.e., genetic markers) that permits commercial seed companies to develop inbreds or hybrids without the need to directly screen for insect resistance. In the long-term, this and related projects should permit development of germplasm with resistance to multiple pests or multiple types of resistance. If germplasm with enhanced resistance is successfully incorporated into commercial hybrids, positive impacts should include more consistent yields or decreased costs of insect management.

Funded Amount: \$16,720

Timing of Irrigation for Tall and Short Stature Sunflower Hybrids to Help Improve Land Allocation Decisions

Description: Little information exists differentiating the timing or irrigation for tall and short stature sunflower hybrids. In the US Great Plains region there is expressed interest in the newer short stature hybrids in that they canopy sooner helping with weed control and they can be more resistant to lodging. Many irrigators in the Central Great Plains have marginal capacity irrigation systems and there will be more producers facing this in the future. Many producers are coping with marginal capacity wells by planting only a portion of their irrigated area to higher water use crops and are planting stress tolerant sunflower to the remaining area that will be deficit irrigated. For this to work effectively the timing of irrigation for the sunflower and the alternative crop must be carefully balanced. In the proposed study, the timing of irrigation for three various length periods centered around the R5 (flowering) sunflower growth stage will be compared for both tall and short stature sunflowers under three different irrigation capacities (inches/day). This can help producers better decide on land allocation, particularly in cases where center pivot sprinklers are split into multiple crops.

Funded Amount: \$20,000

Efficacy and Economics of Insecticide Seed Treatments for Management of Wireworms and Seed Corn Maggots in Sunflowers

Description: This project addresses the National Sunflower Association research priority in the pest management focus area: Insects - Controlling priority insects including sunflower head moth, wireworms and seed maggots through conventional insecticide means, seed treatments or other innovative techniques. Wireworms and seed corn maggots are occasional pests of sunflowers, but when present they can significantly reduce stands and diminish crop production. In certain locations in Kansas, moreover,

other seed-feeding beetles called false wireworms can have equally devastating consequences to sunflower stands, and the effectiveness of insecticide against false wireworms has not been established. The results of this research have the potential to improve management of wireworms and other sunflower insects in areas where they are especially problematic and cause significant losses. The outcomes will include improved knowledge of insecticide efficacy in controlling target pests and an analysis of the net economic benefits to sunflower producers.

Funded Amount: \$34,867

Crop Protection:

NSA was able to get approval for IR-4 funds to be used for Pyroxasulfone for field trials, lab residue tests and assistance to accelerate the registration process at EPA.

Pyroxasulfone herbicide has utility in conventional, Clearfield, or Express Sun sunflower production systems to achieve greater weed control than currently exists. Pyroxasulfone strengths are annual grass control with some broadleaf weed activity. Spartan strengths are annual broadleaf weeds control with slight annual grass suppression. Since both herbicides are soil-applied, combining and applying the two together may control many grass and broadleaf weeds that infest sunflower fields. Research in Kansas has shown annual grass weed control similar to or greater than acetanilide herbicides but was also very effective on many broadleaf weeds including pigweed species, lambsquarters, kochia, and many other weeds. Weeds that Pyroxasulfone does not control are common cocklebur, giant ragweed, and sunflower. Pyroxasulfone has a mode of action in which no major crop weeds have developed resistance. The field trials were conducted and the lab residue work will be done in 2015. This product is expected to be available to producers in 2017.