

2-4-2004

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Diersen, Matthew A., "Crop Insurance in South Dakota: Sunflowers, Oats, Grain Sorghum, and Millet" (2004). *Economics Commentator*. Paper 439.

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ECONOMICS COMMENTATOR

South Dakota State University

No. 448

February 4, 2004



Crop Insurance in South Dakota: Sunflowers, Oats, Grain Sorghum, and Millet

by

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Crop insurance products and coverage continue to evolve as relevant risk management tools for crop producers and their lenders. Crop insurance is widely used to cover the primary crops produced in South Dakota: corn, soybeans, and wheat. However, several other relevant crops are not covered as extensively. In this *Commentator* crop insurance is examined for sunflowers, oats, grain sorghum, and millet. As the coverage has changed for these minor crops over time, each will be examined to provide a general overview of the coverage available and any trends in producer behavior.

Throughout this article crop production data are from the *Crop Production 2003 Summary* report released by NASS on January 12, 2004. Over 100,000 acres were planted to each of these crops in South Dakota during 2003.

The USDA's Risk Management Agency administers federal crop insurance programs. Their website, <http://www.rma.usda.gov/>, has a variety of information related to specific programs. Product information and crop insurance data are from various sources accessed in December of 2003 and January of 2004. Edwards and Barnaby (2000) provide an overview of the types of coverage available and how to make well-informed purchase decisions. For more details about specific coverage available in a given county, contact a crop insurance agent.

During 2003 South Dakota producers paid \$3.8 million to insure sunflowers, oats, sorghum, and millet. They purchased \$77.9 million in coverage for those crops and received \$18.3 million of indemnity payments. Traditional actual production history

(APH) products are available to cover yield risk. Catastrophic Risk Protection (CAT) and Multi-Peril Crop Insurance (MPCI) are APH products that are available for all four crops with price levels quoted below. In addition, revenue insurance products are available for grain sorghum and sunflowers. Revenue insurance facilitates hedging and forward pricing crops by paying an indemnity under low yields, low prices, or some combination of events.

Johnson and Bixley (2001) identified the disparity across South Dakota counties between production of sunflowers, sorghum, and millet and where coverage was available in 2000. They also outline the alternatives for producers when federal crop insurance is not available. Written agreements can be obtained from a crop insurance agency. Non-insured Assistance Program coverage can be purchased from the Farm Service Agency when federal crop insurance is not offered.

Sunflowers

In 2003 South Dakota producers reported seeding 505,000 acres of sunflowers, of which 475,000 acres were of the oil type and 30,000 acres of the confectionery type. The final statistics showed 455,000 acres were harvested with a yield of 1,005 pounds per acre. County-level data from earlier years shows production is concentrated in the central agricultural reporting districts. Most counties in the western districts also have measurable production while few counties in the eastern districts have any production. Sunflowers are crushed for the oil and meal markets and supply the birdseed and human consumption markets (McNew and Bixley, 2001c).

Sunflower coverage is only available in certain counties in South Dakota, mainly excluding counties in the extreme west and the southeast corner (figure 1). Only CAT and MPCI policies were offered until 2004 when Revenue Assurance (RA) became available in South

Dakota. During 2003 producers insured 465,225 acres buying \$51.8 million in coverage. MPCl was the primary product and was bought primarily at the 65 and 70 percent yield election levels (figure 2).

Figure 1. Sunflower insurance in South Dakota for 2004.

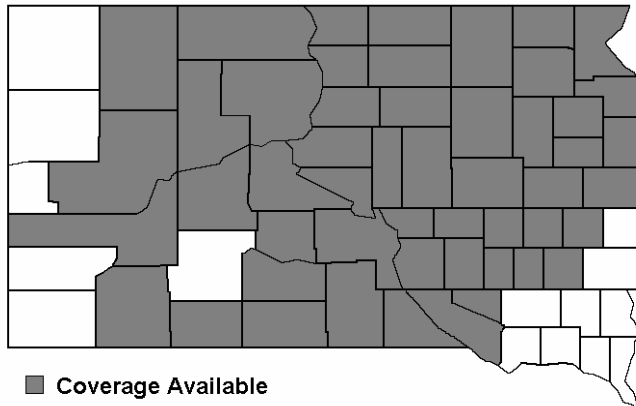
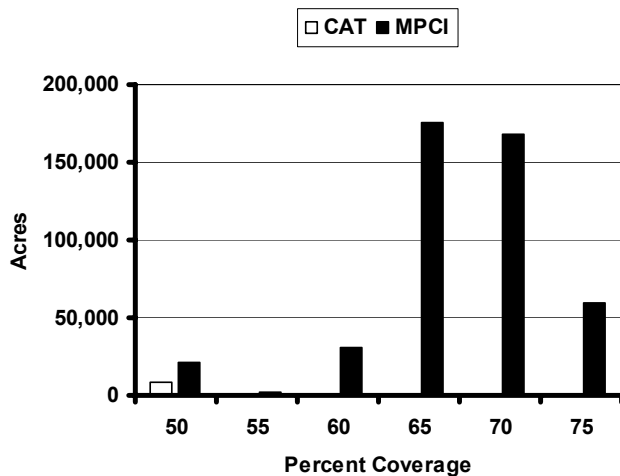


Figure 2. 2003 sunflower insurance by policy type and coverage level.



The sales closing date for purchasing coverage is March 15. For 2004, the APH price for oil is \$0.126 per pound and for confection is \$0.1485 per pound (as of December 11, 2003). The transition yields or "T-yields" range from 580-1,215 pounds per acre West River and 865-1,606 pounds per acre East River. T-yields are county-level yields that can be substituted for a producer's yield history when new coverage is purchased.

RA is a new alternative for sunflower producers in South Dakota. The product has been offered in North Dakota since the 2000 crop year. RA is a fairly common revenue insurance product, widely used by corn and soybean producers. Qasmi (1998) reported that elevators in South Dakota purchased about 30

percent of their sunflowers under a forward pricing mechanism during 1994-1995. RA may thus be a demanded product.

The projected harvest price level for RA is determined by taking the average of the closes of the October soybean oil contract during February, dividing it by 2 and subtracting 1. If the harvest option is purchased, the price becomes the higher of prices using the February average and the September average of the oil contract. For example, the October oil contract is currently trading at about \$26 per cwt. Dividing the contract price by 2 gives \$13 per cwt. Subtracting 1 gives \$12 per cwt. or \$0.12 per pound. This price level compares to the \$0.126 per pound for APH coverage.

For each of the previous four years the RA price has started (and stayed) below the APH price. Thus it has not looked attractive to producers. Some price protection is available for sunflowers. The 2004 loan rate on sunflowers ranges from \$8.84 per cwt. to \$9.58 per cwt. depending on the county. With soybean oil futures trading at relatively high levels, RA may warrant consideration. Sunflower forward contracts often have "Act of God" clauses, and RA with the "Harvest Price Option" would provide similar protection. For additional marketing considerations for sunflowers, especially cross-hedging ideas, see Shane and Flaskerud (1994).

Oats

In 2003, South Dakota producers seeded 420,000 acres of oats, of which 220,000 acres were for grain. The statistics show 230,000 acres harvested with a yield of 68 bushels per acre. Oats production is prevalent across South Dakota with NASS reporting production in each county. The amount of acres per county is higher in the North and yields tend to be higher in the East.

Oats coverage is available in every county in South Dakota with both CAT and MPCl offered. During 2003 producers insured 220,081 acres buying \$10.4 million in coverage. MPCl was purchased on the majority of acres and predominantly at the 65 percent yield election level. The acres insured do not closely match the acres seeded. This may be due to very small acreages not being insured, producers not insuring acres not intended for harvest as grain,

or because the purchase time passed before the planting choice was made.

The sales closing date for oats is March 15. For 2004, the APH price is \$1.35 per bushel (as of December 11, 2003). The T-yields range from 31-48 bushels per acre West River and 45-68 bushels per acre East River. Producers should note that substantial variability exists between adjacent counties, making good production records vital for obtaining proper coverage.

Grain Sorghum

In 2003, South Dakota producers seeded 270,000 acres of grain sorghum and harvested 150,000 acres for grain with a yield of 45 bushels per acre. In addition, producers harvested 50,000 acres for silage with a yield of 7 tons per acre. Production is sporadic across counties and over time. During 1999 only 8 counties had reportable levels of production, while 39 counties had acres planted in 2002. In recent years, production has been concentrated in the Central, South Central, and West Central agricultural reporting districts. Yields tend to be higher the further southeast one moves by county. Grain sorghum grown in the U.S. is primarily used as livestock feed (McNew and Bixley, 2001b).

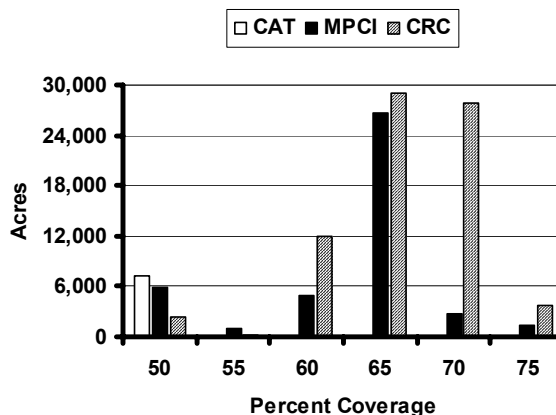
Grain sorghum coverage is available for most South Dakota counties except for Harding, Lawrence, Lincoln, Marshall, Moody, Roberts, and Shannon. CAT, MPCl, and Crop Revenue Coverage (CRC) policies are available. CRC is revenue insurance with limited upside price protection. Those selling a cash crop or feeding the crop often demand CRC.

During 2003 producers insured 124,820 acres buying \$7.9 million in coverage. CRC was purchased on 60 percent of the acres with coverage split between the 65 and 70 percent yield election levels (figure 3). MPCl was purchased on 34 percent of the acres, mainly at the 65 percent level. CAT coverage was purchased on the remaining 6 percent of the acres. Similar to oats, the acres insured do not closely match the acres seeded.

The sales closing date for grain sorghum is March 15. For 2004, the APH price is \$2.05 per bushel (as of December 11, 2003). The CRC price will be determined as percent of the CRC price for corn. In 2003 the CRC spring price of \$2.30 per bushel exceeded the AHP price of \$2.05, making CRC coverage the favorable policy. The 2003 loan rates on sorghum ranged from \$3.17 per bushel to \$3.29

per bushel in South Dakota. The T-yields range from 21-43 bushels per acre West River and 26-59 bushels per acre East River.

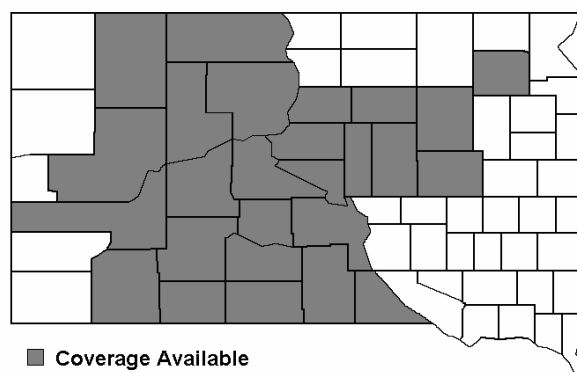
Figure 3. 2003 grain sorghum insurance by policy type and coverage level.



Millet

In 2003, South Dakota producers seeded 210,000 acres of (proso) millet and harvested 165,000 acres with a yield of 17 bushels per acre. Production at the county level is not reported annually. The 1997 Census of Agriculture shows that for 1997 and 1992 Bennett, Faulk, and Sully counties had more than 5,000 acres of millet harvested each of those years. Millet grown in the U.S. is primarily used for birdseed and sometimes as livestock feed (McNew and Bixley, 2001a).

Figure 4. Millet insurance in South Dakota for 2004.



Millet coverage is available across various counties in the west and central parts of South Dakota (figure 4) with both CAT and MPCl offered. During 2003 producers insured 139,852 acres buying \$7.7 million in coverage. MPCl was purchased on the majority of acres and

predominantly at the 70 percent yield election level.

The sales closing date for millet is March 15. For 2004, the APH price is \$2.67 per bushel (as of December 11, 2003). The T-yields range from 24-31 bushels per acre West River and 31-38 bushels per acre East River.

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