

Chapter 9: Insuring Wheat in South Dakota



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Federal crop insurance protection for wheat production was first provided in 1939. Since then, programs have changed routinely. Changing market conditions, yield performance, and crop mixes make choosing crop insurance an annual exercise. Beginning in the 2011 crop year, many wheat insurance products were grouped together into the Common Crop Insurance Policy. The purpose of this chapter is to highlight the main decisions related to optimal choices of insurance policy type and coverage levels.

Managing yield and revenue risks

Conceptually, producers considering crop insurance enter a decision cycle (Fig. 9.1). Choices are based on risk tolerance, marketing considerations, and price levels. Regardless of where one enters the cycle, revisions are necessary to match insurance needs with costs and marketing considerations. Crop insurance does not substitute for sound marketing and risk management strategies. Insurance only covers downside yield and some price risks. Marketing strategies are necessary to reduce the price risk of selling at a single point in time during the year. In a given year, 30-55% of wheat in South Dakota is marketed after October. Producers should also account for any government programs (such as loan deficiency payments) that would provide income protection under certain circumstances.

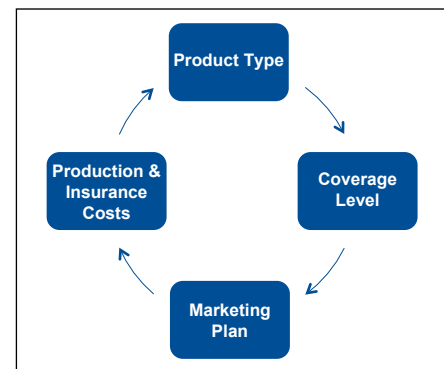


Figure 9.1. Crop insurance decisions.

The main policy types are *Yield Protection (YP)*, *Revenue Protection (RP)*, and *Revenue Protection with the Harvest Price Exclusion (RP-HPE)*. The optimal coverage level generally refers to the yield coverage level or percent of the producer's actual production history. With YP, a producer would receive an indemnity at the fixed per bushel price if the resulting yield falls below the yield coverage level in a given year. With RP there is a fixed guarantee level and either lower yields and/or lower prices may trigger an indemnity payment.

When selecting insurance coverage, there are two cost categories to consider. The first category is the *overall cost of production* that a producer may seek to insure. Depending on the farm's financial situation and the insurance cost, many producers obtain coverage for seed, chemicals, fuel, and perhaps rent. Under this category, the producer may also wish to provide coverage for the fixed cost of machinery or profits.

The second category is the *cost of the insurance products*. The cost of policy type increases as one moves from yield to revenue protection. Across policy types, costs increase with the coverage level. The cost also depends on the crop, the county, and a producer's yield history. The subsidy is substantial and usually means that some level of coverage is economical to purchase regardless of any risk tolerance of the producer.

Price volatility has been high in recent years making insurance coverage more expensive per dollar of coverage purchased. However, the overall dollars or potential loss averted has been higher. In other words, there has been more to lose. Changes in a given year are obscured by changes in the RMA Projected Price and the volatility, both of which drive the premiums.

Proposed insurance decisions can then be weighed against other considerations. What level and under what conditions can some production be prudently hedged? What risks remain? Would unconventional methods be warranted or provide better protection? Eventually the marketing plans are written, the costs to be insured are measured, and the insurance costs are available. Then the final move through the cycle will align the policy type and coverage level with a comprehensive risk management strategy in a cost-effective manner.

Thus, there is a continuum of insurance and marketing choices (Fig. 9.2). Some coverage or use of insurance is expected because of the large subsidy. The subsidy is large enough that minimal insurance will pay for itself over time. Minimal coverage (like catastrophic coverage or CAT) is still available, but has not been widely used in wheat. Relatively high prices reflected in futures prices suggest RP-HPE would be intermediate coverage. It is difficult to justify purchasing YP when RP-HPE is nearly the same cost and provides downside protection. For those forward pricing, standard RP will likely be optimal. The upside protection of RP is often necessary to offset potential hedging losses when yield risk is possible. Given the upside cap on RP, covered sales should be considered if hedging aggressively.

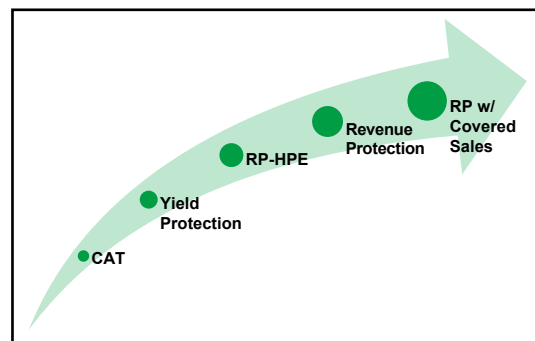


Figure 9.2. Continuum of insurance and marketing choices.

At the far extreme are very high coverage levels and full hedging or risk protection. This can be overdone. The subsidy declines as the coverage level increases. In essence, a producer would approach the point where he or she pre-pays the cost of routine yield variability. Over-hedging is another concern as potential hedge losses (usually from extreme price increases) can exceed insurance indemnity levels. Thus, some optimal insurance coverage exists.

Crop insurance information

There are several sources of crop insurance information. A crop insurance company or an agent can provide insights and details. A lender may provide a valuable second opinion on the adequacy of coverage based on risk exposure and common practices of other customers. Some commodity brokers are also well versed in the interaction of marketing and insurance tools. The ultimate responsibility, however, remains with the producer.

Wheat coverage details are outlined in the “Common Crop Insurance Policy,” the “Small Grains Crop Provisions,” and the “Commodity Exchange Price Provisions,” or CEPP. Copies are available from crop insurance agents and on the Risk Management Agency (RMA) website (www.rma.usda.gov). Coverage for winter wheat is only available in counties in the southwest two-thirds of South Dakota (Fig. 9.3). In other counties, winter wheat may be covered by written agreements from insurance companies.

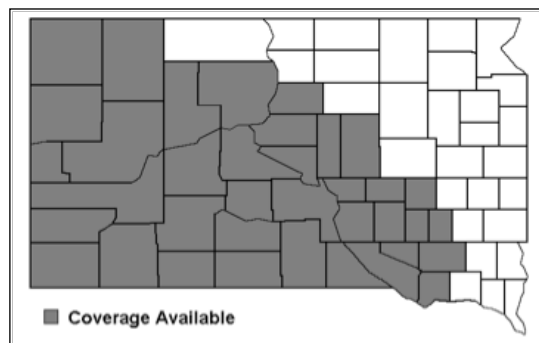


Figure 9.3. Winter wheat counties of South Dakota.

Several dates are critical to assure the proper coverage is chosen and in place when needed. The critical dates for winter and spring wheat coverage are dependent on wheat type and location. For winter wheat, the sales closing date is September 30, and the final planting date is October 15. The acreage must be reported by November 15. For spring wheat, the sales closing date is March 15, and the earliest planting date is either March 16 or March 26 for southern and northern counties, respectively. For spring wheat, the final planting date is May 5 or 15 for southern and northern counties, respectively. Spring wheat acreage must be reported by June 30.

Regardless of the wheat type, after the final planting date there is a 25-day late planting period with reduced coverage levels. The coverage for both types ends on October 31 of the crop year. In the event of a loss, producers have 15 days to make a claim to their insurance agent.

Policy type specifics

While dates and details are important, the overriding issues that producers struggle with are the choice of policy type and optimal coverage level. Revenue insurance products have dominated wheat coverage in recent years. Relatively high wheat prices have encouraged forward pricing and the use of revenue insurance. In 2011, across spring and winter wheat, over 90% of insured acres in South Dakota were covered by RP. Another 6% of acres were covered by YP. The remaining acres were covered by catastrophic coverage or RP-HPE. Relatively high wheat prices will likely make RP the preferred product.

Winter wheat coverage in South Dakota uses Kansas City Board of Trade (KCBT) contract prices. Under the old policies, winter wheat producers had to consider the harvest price month when making revenue insurance choices. Now there are common projected price discovery and harvest price discovery periods for the policies. The respective harvest periods from an insurance settlement perspective align with the time when historically about 75% of winter and spring wheat is harvested.

For South Dakota winter wheat, the RMA price discovery periods are based on the KCBT September HRW Wheat contract. Spring wheat coverage in South Dakota uses Minneapolis Grain Exchange (MGE) September HRS Wheat contract prices. The average of the futures closes during the discovery periods sets the respective prices. Discovery periods for spring and winter wheat are summarized in Table 9.1.

Table 9.1. Discovery periods for the 2012 wheat crop.

Crop	Projected Price Discovery Period	Harvest Price Discovery Period
Winter Wheat	August 15 to September 14, 2011	July 1 to July 30, 2012
Spring Wheat	February 1 to February 28, 2012	August 1 to August 31, 2012

The RMA Projected Price is used in both YP and RP. Basis is not factored into the RMA Projected Price. As such, the RMA Projected Price will likely be larger than the expected local cash price. The price election level on RP and RP-HPE is fixed at 100%. Producers selecting YP can adjust the price election level below 100% to reduce the cost and level of guarantee if no forward pricing is likely. Historically, there would be a large difference between the yield and revenue insurance price election levels.

RP will increase should the harvest price be higher than the projected price. The 200% limit on the price change by harvest remains in effect. As stated in the CEPP, “The harvest price will not be greater than the projected price multiplied by 2.00,” rewording earlier endorsement limits. Thus, RP is capped once the projected price doubles.

If a producer hedges aggressively, suffers a large yield loss, and the market price increases beyond 200% of the projected price, then hedge losses may exceed indemnity payments. Covered sales seem like the best way to mitigate this low probability event. Forward contract sales or short futures hedges are covered by buying call options on the same number of bushels at a strike price below 200% of projected price.

Producers with RP can select the harvest price exclusion. For most crops, the harvest price exclusion is not expected to be attractive or common. The standard RP is designed to cover price increases and is ideal when producers forward price. Winter wheat is a possible exception. South Dakota winter wheat producers tend to purchase low levels of coverage. They have also stated that higher coverage levels are not cost-effective given the overall profitability of the crop. Given the high yield risk for much of South Dakota, there is also a general reluctance to aggressively forward price winter wheat. RP-HPE may be appealing from the standpoint that it provides downside revenue protection at a slightly higher cost than YP. It also costs less than standard revenue protection, which may not be necessary if little forward pricing is expected.

Coverage level specifics

Once a policy type has been selected, the coverage level needs to be chosen. With RP there is no price election option; one must use 100% of the projected price (Table 9.2). For YP, a producer can select less than 100% of the projected price. To minimize the insurance premium, a producer could use a price election that closely aligns covered price with the expected cash price. For example, if expected basis is \$0.50 per bushel below an RMA projected price of \$5.00 per bushel, a price election of 90% would match well and reduce the cost of price protection accordingly.

Table 9.2. Summary of insurance options.

Insurance Option	Detail
Yield Protection (YP)	Price election level can be adjusted to below 100%. The least expensive option but no downside price protection. May be of interest if no forward pricing is likely.
Revenue Protection with Harvest Price Exclusion (RP-HPE)	Price election level fixed at 100%. Slightly higher cost than YP but provides downside price protection. May be of interest if little forward pricing is likely.
Revenue Protection (RP)	Price election level fixed at 100%. Most expensive, but may be best choice if forward pricing. Capped upside protection to offset potential hedging losses when yield risk is possible.

Across policy types the yield coverage level must be chosen. Wheat producers with revenue insurance products used 65% and 70% coverage levels in 2011. The optimal level will depend on a producer’s willingness and ability to self-insure the deductible amount and the cost of different coverage levels. The elections range from 50% to 85% coverage for RP and YP. Producers should be able to find a policy that meets their needs. The optimal level is a farm-specific decision and would also be influenced by any forward pricing or protection strategies employed.

Final thoughts

Insurance is an important part of wheat production in South Dakota. Programs and needs are constantly changing; therefore, it is recommended that coverage be reviewed annually. Producers may want to visit with their agent about how units are treated, prevented planting rules and necessary production records. Producers may also want to visit with their commodity broker about matching marketing to the product type, limiting hedging based on the coverage level, and making covered sales.

Not covered in this publication are: group risk policies (uncommon in South Dakota because of high intra-county yield variability), CAT, durum, unit structure, irrigation, and special issues that arise when both winter and spring wheat are produced and insured on the same farm in a given year.

When a change is made to either insurance or marketing, consider running through the cycle again. When internally consistent, the proper insurance will be in place for the risks faced, hedges will help manage risk, and any worst-case scenarios will have a minimal impact on profitability.

Additional information and references

Risk Management Agency. Available at www.rma.usda.gov

Minneapolis Grain Exchange. Available at www.mgex.com

Kansas City Board of Trade. Available at www.kcibt.com

Acknowledgements

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Diersen, M. 2012. Insuring wheat in South Dakota. In Clay, D.E., C.G. Carlson, and K. Dalsted (eds). *iGrow Wheat: Best Management Practices for Wheat Production*. South Dakota State University, SDSU Extension, Brookings, SD.

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