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Soybean rust is a production risk covered under standard crop insurance products. If producers take reasonable steps to prevent and control any damage and still face sizable yield reductions, then the insurance pays an indemnity on lost bushels.

Widespread yield losses from soybean rust at the national level could increase prices, a risk for producers who forward price their crop. In South Dakota, producers insure a vast majority of soybean acres and tend to use relatively high levels of coverage. Understanding the typical kinds and levels of coverage gives insights into how to manage the production and price risks from soybean rust.

Common Product Choice

The important issue for producers (and their advisors) is to understand the insurance coverage they purchased. Coverage is available in counties in the eastern half of South Dakota. Growers in South Dakota pick their coverage types and levels by March 15 but do not report acres insured until after planting. The June acreage report shows South Dakota farmers planted 3.80 million acres to soybeans in 2006. Policy sales data show product choice and coverage patterns similar to 2005.

The National Agricultural Statistics Service reports that South Dakota producers planted 3.90 million acres in 2005. The Risk Management Agency, which oversees crop insurance, reports that South Dakota producers purchased insurance on 3.86 million acres. Thus, only 1% of the acres went without insurance.

South Dakota producers covered their acres with one of four farm-level policies: Catastrophic (CAT), Multiple Peril (MPCI), Crop Revenue Coverage (CRC), or Revenue Assurance (RA) in 2005. CAT and MPCI are yield insurance products that covered 1% and 10% of soybean acres, respectively. CRC and RA are revenue insurance products that respectively covered 5% and 83% of soybean acres. Producers bought RA on the largest share of acres because of its favorable price level compared to the yield products and its lower cost relative to CRC.

The 2006 price elections are $5.15 per bushel for yield products and $6.18 per bushel for revenue products and would be the prices paid on production to count. Thus, producers had a strong incentive to again purchase revenue products in 2006.

Two county-level policy types, Group Risk Protection (GRP) and Group Risk Income Protection (GRIP) cover yield and revenue declines, respectively. GRIP has an optional harvest-price feature, making it similar to RA.

A single GRP policy for soybeans was recorded in 2005 in South Dakota. Nationally, however, soybean producers covered 4.58 million acres under GRP and GRIP, with the heaviest use in Illinois and Indiana. A handful of GRP and GRIP policies were sold in South Dakota in 2006.

Common Election Level

In addition to the choice of product, producers choose an optimal yield election coverage level. Actual yields need to be below the coverage level before the insurance pays any indemnity. Soybean producers in South Dakota typically purchase policies with high coverage levels. In 2005 producers covered only 21% of soybean acres in South Dakota at the 65% level or less. They covered 48% of the acres at the 70% level and the remaining 31% at the 75% or higher level.

The 75% level, for example, means producers insure 75% of their proven (historical) yields. If a producer has a proven yield of 40 bu/A and buys 75% cov-

erage, he would not receive any indemnity payment unless actual yield was below 30 bu/A. The deductible amount means the producer bears the full financial responsibility for the other 25%.

Ironically, the Economic Research Service (ERS) estimates that not treating a rust-infected field may result in a yield loss of 25%. With typical insurance coverage, a yield loss would not generally be enough to trigger insurance payments, even with the high coverage levels purchased in South Dakota. The ERS estimates that a field receiving a preventative treatment for rust would only suffer a 1% yield loss. The ERS also estimates that treating an infected field would likely result in a 7% yield loss. Thus, producers will use the market value of any bushels at risk to evaluate the costs to scout for and treat rust.

Ability to Price

Producers often hesitate to forward price or hedge a large portion of their expected production. Nationally, the ERS reported that producers in 2003 only forward priced 13.6% of the value of soybean production by using marketing contracts.

Soybean rust may cause producers to fear a yield loss on their operations, causing them to forgo pricing opportunities. If rust threatens other production regions of the country, producers may forgo pricing opportunities, fearing an eventual spread of the disease to their areas. In the event of substantial yield loss and higher prices, hedging or pricing losses could exceed any insurance indemnity payment.

The concern about hedging losses is mitigated with the use of revenue insurance. CRC, RA with the harvest price option, and GRIP with the harvest price option have indemnity payments tied to the greater of spring and harvest price levels. Producers with these coverage types can prudently forward price a percentage of their crops.

The extent of price increases from rust outbreaks is difficult to estimate. The ERS reported that a minimal outbreak would likely increase soybean prices by less than 1%. A moderate outbreak would likely increase prices by less than 3% while a large outbreak would likely increase prices by just over 6%.

Documenting Good Farming Practices

The crop insurance policies list plant disease as a cause of loss with the caveat "but not damage due to insufficient or improper application of disease control measures."

A producer with insurance could potentially be better off financially with a low yield and high indemnity payment relative to the cost of managing a peril. Insurance companies are concerned about "moral hazard" where the insured producers might act in their own self-interest to the detriment of the insurance company in the short run and the insurance product viability in the long run.

Insured producers are obligated to use "good farming practices" to maintain eligibility. Good farming practices are discussed in the crop policies in a general way and are determined by local agricultural experts. When insurance companies talk about good farming practices they say producers should make "good faith efforts" and take "reasonable" measures to reach the insured level of production.

In other words, if an effective control measure were available, then the producer would be expected to use the measure to maintain insurance against loss associated with the peril.

Will producers have to spray to prevent/control soybean rust, regardless of cost and regardless of the condition of the crop? In the event that a crop has already been damaged by drought, hail, or other perils the producer could forgo treatment if any additional indemnity does not make treatment look cost effective.

Producers will want to work closely with their crop insurance agents to assure compliance with their policies. The regulatory requirements are such that documentation is a key management device when dealing with soybean rust or any similar peril. Prudence suggests producers should document scouting for and any discovery of rust. Producers should also track treatment recommendations and actions to assure that coverage remains sound.

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http://agbiopubs.sdstate.edu/articles/ExEx5057.pdf