

## Chapter 16

### The Influence of Soybean Rust on Crop Insurance

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Soybean is a widely insured crop, susceptible to many yield-reducing problems. The recent introduction of soybean rust into the United States has raised concern among producers that the disease may seriously reduce crop yields and corresponding financial returns. There is also a concern about how crop insurance will respond to those losses. Federal crop insurance is available in the most common soybean-producing areas of the United States, and soybean rust is considered an insured peril. However, to determine the extent to which crop insurance provides financial protection, it is important to recognize the type of insurance and the level of insurance purchased. This knowledge helps one adequately prepare for a range of financial scenarios related to soybean production.

Not all soybean acres in the United States are insured. Insurance may not be available in some cases because of location (dry area/flood plain) or unusual production practice (such as a double-crop where the crop may not reach full maturity). Other producers may be unwilling to purchase insurance — despite a large premium subsidy. They may deem the cost too high for the coverage available, or the returns too low relative to their expected risk of loss.

For producers with insurance, soybean rust is handled like any other insured peril. Specifically, producers cannot ignore soybean rust and then claim the disease caused a loss. They must follow Good Farming Practices and do what is possible to minimize damage due to the disease. Further, some types of insurance will not cover individual farm-level losses. For example, group products only guard against county-level yield losses. Finally, damage assessments of losses from soybean rust may not be large enough to trigger an indemnity payment. Even with insurance, the financial responsibility may fall entirely on the producer. Accurate documentation of all actions related to soybean rust is critical to any future claim.

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#### Insurance Products

Several insurance products are available, and each has different advantages to the producer. All policies are subject to a purchase deadline. The purchase deadline for soybean insurance is either February 28 or March 15, depending on the state. An insurance product must be purchased by the deadline date for the crop to be covered. Producers pick a product type that matches their financial needs and that is cost effective. The type chosen will vary across locations and over

time. Common soybean crop insurance options include the following:

- Yield insurance products, such as:
  - Multiple Peril Crop Insurance (MPCI)
- Revenue insurance products, such as:
  - Revenue Assurance (RA)
  - Crop Revenue Coverage (CRC).

While most crops are insured on an individual basis, as previously mentioned, there are also group policies available that only cover county-level effects. Of these products, Group Risk Protection (GRP) only covers county average yield declines, while Group Risk Income Protection (GRIP) only covers county average declines in revenue. Group Risk Protection (GRP) has increased in use in recent years, especially in Illinois and Indiana.

The different product types may have different price elections used to determine the amount of coverage and indemnity levels in the event of a loss. The prevailing use of revenue insurance products gives additional protection against any potential price risk associated with rust. For example, if soybean rust were to cause significant yield losses at the national level, then the price of soybeans could increase. Producers with revenue

insurance can still reasonably forward-price or contract a portion of their crop. Without revenue insurance, lost bushels and higher replacement costs to fulfill any contracts could quickly offset any indemnity payments. With revenue insurance products, indemnity payments are linked to the greater of spring and harvest price levels.

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### Level of Coverage

The coverage level usually refers to the yield election chosen. MPCI is often purchased at the 50 percent level, which is a minimal amount of yield coverage. Another common choice is RA at the 70 percent level. The 70 percent level means that actual yields have to fall below 70 percent of the producer's historical or proven yields. The producer is responsible for the deductible, which is the remaining 30 percent of the value of the crop.

In these examples, insurable causes of loss (including soybean rust) would have to exceed 50 percent in the MCPI example or 30 percent in the RA example in order to recover any loss caused by soybean rust. If expected yield losses from soybean rust are not above the deductible level (30 percent or 50 percent in this example), the producer would bear the total financial loss, even with insurance. Thus, producers will have to use the current market price, treatment cost, and

soybean rust risk to estimate the cost effectiveness of managing rust. Note: Price declines may trigger payments on the RA example, regardless of yield loss.

Producers have a financial responsibility to try to prevent and control damage from rust and similar problems. The insurance policies typically indicate that in order to maintain coverage, producers must use “Good Farming Practices” and cannot claim “damage due to insufficient or improper application of disease control measures.” Thus, if a reasonable control measure is available, then a producer would need to try to use the method to mitigate any losses.

Producers are encouraged to visit with their insurance agent on any company-specific expectations regarding soybean rust and other perils. Further, record keeping is important in showing that Good Farming Practices have been followed. Producers should keep track of all management actions that have been performed on a crop, what they do (or pay to have done), and when they do it. The producer may be expected to keep receipts, labels, and records should a claim be necessary.

The <http://www.sbrusa.net> web site hosts a Good Farming Practices Tool (the link to it is in the lower right-hand corner of the screen, labeled GFP

Tool) that can help producers document management decisions in concert with the history of soybean rust risk in their state (see Figure 16.1). This tool was developed by the USDA-Risk Management Agency (RMA) with input from state Extension specialists. To be eligible for a claim, producers must record all actions taken to prevent or treat soybean rust in their crop, and this tool aids in the required record keeping.

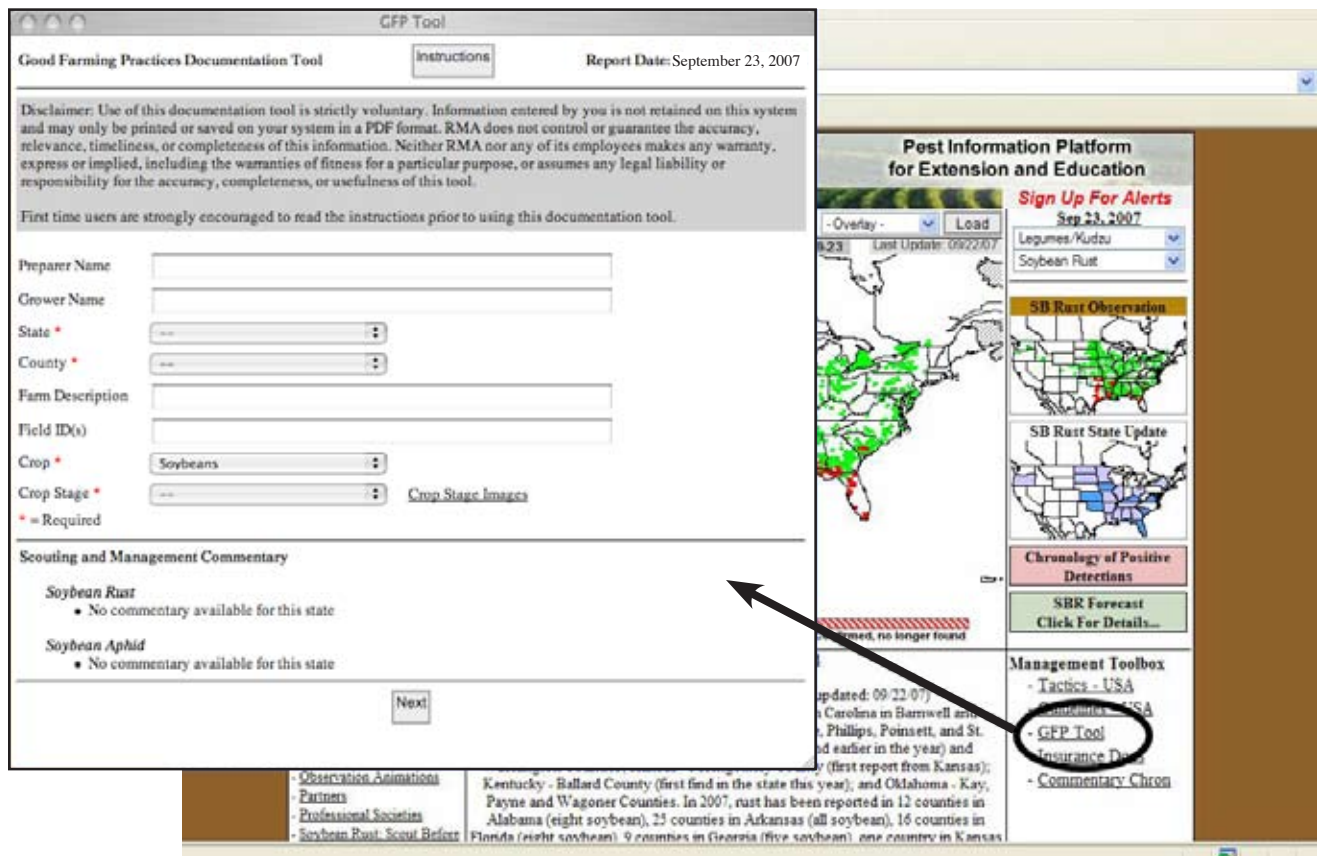


Figure 16.1. GFP tool for producers.

## Determining Loss

Production-based plans of insurance, such as those described earlier, compare the production to count (PTC) to the guarantee. PTC is calculated for crop insurance indemnity purposes using both appraised production and harvested production. For indemnity calculations, PTC is used along with actual production history (APH), acres planted, insurance level of coverage, quality adjustments, uninsured causes of loss, price election, and share in the crop.

To determine production lost due to uninsured causes, the insurance company representatives may talk to the producer to determine what happened and how the producer responded, gather information from agricultural experts to determine Good Farming Practices (GFP), consider recommendations for chemical treatments, and consider what should have happened. The fields in question will also be compared to similar fields in the area where producers followed GFP relative to differences in production practices.

For the following example, we will assume a producer has an APH of 50 bushels per acre, plants 100 acres, elects 60 percent coverage, and has 100 percent share in the crop. In this case, the guarantee calculation is as follows:

$$50 \text{ bushels per acre} \times 100 \text{ acres} \times 60\% \times 100\% = 3,000 \text{ bushels guarantee}$$

If the producer harvested 100 percent of the 100-acre crop at 20 bushels per acre, the result was 2,000 bushels of harvested production.

### Example No. 1 — No quality adjustment and no uninsured causes of loss:

$$3,000 \text{ bushels coverage} - 2,000 \text{ bushels PTC} = 1,000 \text{ bushels shortfall.}$$

The indemnity is based upon 1,000 bushels x price election x 100 percent share. In this case, the shortfall is fully covered at the market price determined by the insurance product or contract.

### Example No. 2 — No quality adjustment and uninsured causes of loss:

Producer lost 500 bushels due to some uninsured causes of loss.

$$2,000 \text{ bushels harvested} + 500 \text{ bushels uninsured causes} = 2,500 \text{ bushels PTC.}$$

$$3,000 \text{ bushels coverage} - 2,500 \text{ bushels PTC} = 500 \text{ bushels shortfall.}$$

The indemnity is based on 500 bushels x price election x 100 percent share. In this case, the shortfall is only partially covered at the market price determined by the insurance product or contract.

### Example No. 3 — Quality adjustment and no uninsured causes of loss:

The 2,000 bushels harvested are extremely low quality and quality adjusted from 2,000 bushels to 1,000 bushels PTC using the quality adjustment statements contained in the Special Provision of Insurance (SPOI). These reductions are generally known as discounts.

$$\text{So for } 3,000 \text{ bushels coverage} - 1,000 \text{ bushels PTC} = 2,000 \text{ bushels shortfall is the result.}$$

Special Provisions of Insurance are part of the insurance contract, modify the crop provisions, exist on a county crop basis, and contain the quality adjustment discount factor (DF) charts. The indemnity is based upon 2,000 bushels x price election x 100 percent share. Quality losses are not likely to be an issue with soybean rust, but under the conditions that favor soybean rust late in the season, other causes of quality loss might occur, such as those caused by seed-infecting fungi. In this case, the shortfall actually exceeds the loss in harvested yield, and coverage will be at the market price determined by the insurance product or contract.

Uninsured causes of loss appear to be the largest single concern for producers dealing with soybean rust insurance issues. Since crop insurance policies list plant disease as a cause of loss, the loss is covered as long as the terms of the agreement are upheld by the producer. The most frequent concern is insufficient or improper application of disease-control measures. This is not an insurable cause of loss. **As long as an effective control measure is available, producers are expected to use it to maintain full insurance coverage.**

In response to the question, “Must producers spray to prevent/control soybean rust, regardless of cost and regardless of the condition of the crop?”

The short answer is “Yes.” If the producer elects, due to economic or other reasons, not to fully protect the crop, then any losses attributed to that management decision are not covered and are considered uninsured causes of loss. As such, the uninsured causes of loss would be added to the PTC value for a field, reducing the indemnity to the producer.

For example, a producer has a 50 bushels per acre APH on his or her soybeans and an appraised production of 20 bushels per acre. Soybean rust then infects the soybean acreage. If the producer chose not to spray, he or she would lose an additional 2 bushels per acre. Thus, sprayed soybeans would yield 20 bushels per acre, and unsprayed soybeans would yield 18 bushels per acre. Even if the costs of spraying were greater than the value of 2 bushels per acre, crop insurance must consider these 2 bushels as lost due to uninsured causes if the producer elected not to spray. In a situation such as this where the insured loss is already great relative to the insured value, the decision to spray is not a difficult one. Where the decision will be more difficult is when there is only a small difference from the insured value of the crop. Nonetheless, when it is time to make the decision to treat for soybean rust, the decision must be made.

With proper documentation there are some exceptions

or contingencies to the requirement to treat for soybean rust. If the weather conditions prevent spraying, that is a covered contingency; if the crop is later than R6 when rust is detected, that is a covered contingency; if effective treatments are not available, that is a covered contingency; and if the commercial applicators are not available, that is also a covered contingency.

If producers have questions about their particular crop insurance plans, they should contact their crop insurance provider. It is important that growers understand any restrictions of their particular plan of insurance and the SPOIs involved. In the future, those without insurance may consider purchasing it. Producers may change their choice of product if their current one does not adequately protect farm-level risks and/or revenue. Producers may also want to evaluate their choice of units covered should only portions of their units be particularly susceptible to rust or similar perils.

*In the end, soybean rust is an insured cause of loss as long as Good Farming Practices are followed and efforts are made to manage the causes of loss. Documentation of all actions related to soybean rust is critical. Contact your crop insurance agent with questions.*

### Summary

A range of crop insurance products is available to soybean producers to protect against financial losses caused by soybean rust. The most important point to take away from any discussion of soybean rust and crop insurance is that crop insurance covers losses caused by soybean rust unless the producer did not follow accepted Good Farming Practices. Losses due to uninsured causes include failure to follow Good Farming Practices (often noted as GFP in USDA-RMA and IPM-PIPE documents) such as not spraying when advised by an agriculture expert, inadequate seeding rates, and inappropriate chemical usage such as incorrect chemical used, incorrect chemical application, or incorrect timing. If losses caused by soybean rust are not expected to exceed the deductible applied to the insurance policy, then producers will need to decide the cost-effectiveness of initiating control measures relative to crop price and estimated yield loss.