

Factors to Consider in Selecting a Crop Insurance Policy

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Introduction

Cotton producers are exposed to significant risks throughout the production year. These risks are typically larger and more extensive than those faced by producers of other major row crops due to the comparatively large capital investments in specialized equipment, practices and inputs required to produce cotton competitively. It is critical that cotton producers be aware of effective risk management alternatives and use them appropriately. Crop insurance is one such risk management tool, but traditionally has been confusing to producers and crop consultants. The purpose of this publication is to identify important factors that producers should consider when selecting a crop insurance policy. This publication is intended as a guideline for producers and not a decision aid. Producers should consult their insurance agent before making insurance policy purchases.

Need for Risk Protection

The first factor to be considered when deciding on an insurance policy is the need for risk protection. Every individual has a different attitude toward exposure to unknown events or risks. This basic attitude toward risk is known as a risk preference. Many things, including the financial position of the producer and exposure to other risks, may influence a person's risk preference. A more strongly risk averse producer would tend to be more comfortable with a higher level of crop insurance protection, while a less risk averse producer would be inclined to purchase a lower level of protection.

Another item to be considered is the existence of off-farm income, savings and or diversification. Many farming households receive income from the off-farm employment of the producer, the spouse, or both. If a significant portion of the total household income is derived from off-farm employment, then a lower level of crop insurance protection may be acceptable. Savings accounts and diversification have a similar effect. Large savings or diversification in other industries reduces the risk of an inability to pay for the cost of producing a crop.

In any case, it is important to realize that Catastrophic (CAT) coverage, while very minimal in terms of the coverage provided, is nearly free. If the only real concern of the producer is total loss of crop, then the CAT insurance policy proves to be a low level of risk management protection for just a few dollars. Moreover, it is important to

note that recent federal disaster assistance programs have provided a higher level of assistance to producers who had purchased at least the CAT level of crop insurance coverage.

Unit Structure Availability

Different types of crop insurance policies have different unit structure availability. It is important that producers understand the concept of unit structure and then choose their insurance policy according to what best meets their individual needs.

The term unit or insurance unit refers to a parcel of land that is insured separately from other parcels. An individual farm may be divided into several units defined by ownership or lease arrangements, management practices, or location. Four alternative unit structures are available under various types of crop insurance coverage: basic units, optional units, enterprise units and whole farm units. Producers may be able to receive a discount in their premium if they are able to move toward a larger insurance unit. It should be noted, however, that not all unit structures are permissible for every type of insurance. For example, Crop Revenue Coverage (CRC) is not available on whole farm units. Table 1 identifies the available unit structures for each of the types of crop insurance available on cotton.¹

Table 1. Available Unit Structure for Different Types of Crop Insurance

	Types of Units			
	Basic	Optional	Enterprise	Whole Farm
CAT	Yes			
APH	Yes	Yes	Yes	
IP			Yes	
CRC	Yes	Yes	Yes	
RA*	Yes	Yes	Yes	Yes

*Includes both RA-BPO and RA-HPO.

Note: GRP coverage is based on county averages so unit structure is not applicable on that product.

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¹ Additional information on unit structure is available in *Crop Insurance for Cotton Producers: Key Concepts and Terminology*, published by Cotton Inc.

Correlation With Area Production

Since the introduction of Group Insurance policies, a producer must also factor in their relationship with other area producers to effectively choose the most suitable insurance policy. Group insurance policies pay indemnities based on county production averages. Individual producer actual yields are not used; rather the county average yield determines losses.

If a producer's individual production on a yearly basis is consistent or follows county production trends fairly closely in direction and magnitude, then a group insurance policy could be an attractive option. Conversely, if a producer's production has a weak relationship with area production, then group policies are not likely to be an effective risk management tool.

Government Aid Programs

Government aid programs represent another potential source of risk protection for producers. The complicating factor is that many government aid programs must be "triggered" by some event in order for producers to receive payments. The two most prominent alternative programs are the marketing loan program and disaster aid.

Consider the federal marketing loan program. If price falls below a set loan rate, then a payment is made. When this occurs, much of the price risk facing producers is covered by this program. During periods that the marketing loan program is making deficiency payments, the price risk protection of revenue insurance policies is redundant. Predicting prices and potential government loan payments very far into the future is extremely difficult. However, when the likelihood of prices below the loan rate seems high, then straight yield policies become more attractive risk management instruments.

Another government aid program to consider is the disaster relief spending that is often activated on an "as needed" basis. If a producer traditionally never has significant individual losses unless major widespread losses are incurred, then the producer may be tempted to rely solely on federal disaster relief. However, several issues should be considered. First, recent ad hoc (after the fact) disaster relief programs have given higher assistance payments to those who have insurance. Second, ad hoc disaster relief usually provides a low level of coverage (similar to CAT), which might not be sufficient for the producer. Third, federal disaster assistance may not be approved until long after the disaster has occurred, and producers cannot be sure that ad hoc disaster relief will be approved at all in any given disaster situation.

Crop Insurance and Marketing Strategies

Producers also need to consider how a particular crop insurance product will fit into their overall marketing plan. Revenue insurance products provide some level of price

protection while yield insurance products do not. Producers should think about how the coverage offered through their chosen insurance product may complement or substitute for other price protection strategies such as forward contracting or using futures and options. More information is available on this topic in the publication *Integrating Crop Insurance and Marketing Decisions*, published by Cotton Inc.

Need For Special Features

Another major factor to be considered when deciding on insurance product or coverage level is the need for special features. Special features include provisions related to replanting, prevented planting, and alternative farm practices such as irrigation and double cropping. When any of these items are a concern, a producer must consider which type of insurance policy offers such features.

Regarding specialized farming practices such as irrigation and double cropping (FAC-multiple crops on same land in one production year), producers must be sure to select insurance policies that allow for such practices. For example, if a producer wants to begin irrigating his cotton crop in a county that has otherwise traditionally been strictly dryland, purchasing a non-irrigated insurance policy would not be valuable due to the lower yields typically associated with dryland cotton.

Replanting and prevented planting features in regions with uncertain early season weather have proven to be valuable to producers. A producer must consider geographic and topographic conditions when determining the importance of these features. If a producer consistently struggles with suitable planting weather due to fluctuating temperatures, excessive rainfall, or other environmental conditions, then an insurance policy containing replanting and prevented planting provisions could be very valuable.²

The need for special features in a policy can affect not only the choice of policy type but also the choice of coverage level for any given policy. For example, replanted and prevented planting provisions will not be available on CAT coverage. For this reason, a producer who needs or wants these provisions on a policy must generally select a coverage level higher than 50%.

Coverage Level

Producers may wonder about what coverage level to select with a given crop insurance policy. Obviously, selecting a coverage level involves weighing a tradeoff between a higher level of protection and a higher total premium. Additionally, the decision may be influenced by the portion of the premium that is subsidized. The higher the coverage level, the lower the amount that is subsidized by USDA. Table 2 shows premium subsidy factors by coverage level. This factor represents the percent of

² It is important to note that replanting and prevented planting payments are only made to producers if planting complications are due to a cause insured by the purchased policy, the condition is general to the surrounding area, planting did not occur prior to the earliest planting date, no replanting payments have already been received for the crop year, if appraisals establish that production will not exceed the level set by the crop provisions, or if it is practical to replant.

Table 2. Premium Subsidy Factors for Crop Insurance on Cotton

Premium Subsidy Factors	Coverage Level								
	CAT*	50	55	60	65	70	75	80*	85*
APH, CRC, RA	1.00	0.67	0.64	0.64	0.59	0.59	0.55	0.48	0.38
GRP	1.00	na	na	na	na	0.64	0.64	0.59	0.59

*where available

the total premium that is paid by USDA.

Since premiums are designed to be actuarially fair, the higher indemnity payments associated with higher coverage levels should be just about completely offset by the higher premiums that must be paid. The decision of what coverage level to select thus comes down mostly to an individual producer's attitude toward risk and ability to withstand risk. The financial position of the operation is a key factor to consider in this regard. An example will help to illustrate this point. This example uses a CRC policy; however, the principles illustrated here are relevant whatever type of policy is being considered.

Consider the case of a producer growing 500 acres of cotton with an APH of 800 pounds per acre. Suppose that the RMA-established base price for cotton in the spring is \$0.65 per pound. The producer is interested in purchasing a Crop Revenue Coverage (CRC) policy. In this producer's county, CRC coverage can be purchased at levels from 50% to 85% of expected revenue. At the 60% coverage level, for example, the producer's per acre revenue guarantee would be

$$1) \quad 800 \times 0.60 \times \$0.65 = \$312 \text{ per acre,}$$

and the producer's portion of the premium for this coverage (not including the administrative fee) would be \$7 per acre.

At the 80% coverage level, the producers per acre revenue guarantee would be

$$2) \quad 800 \times 0.80 \times \$0.65 = \$416 \text{ per acre,}$$

and the producer's share of the premium would be \$31 per acre. Taking into account the differences in premium, the 80% coverage level provides \$80 per acre more protection than the 60% coverage.

Now, suppose that due to locally wet weather late in the

year, the producer experiences a significant loss in production, picking just 500 pounds of cotton per acre. Suppose also that the cotton market has improved somewhat from earlier in the year so that the Harvest Price is \$0.72 per pound. The producer's final revenue guarantee under the terms of a CRC policy would be

$$3) \quad 800 \times 0.60 \times \$0.72 = \$346 \text{ per acre}$$

at the 60% coverage level and

$$4) \quad 800 \times 0.80 \times \$0.72 = \$461 \text{ per acre}$$

at the 80% coverage level. Taking premium differences into account, the final guarantee on the 80% coverage is \$91 per acre higher than the final guarantee on the 60% coverage. The producer's actual revenue (for crop insurance purposes)³ is

$$5) \quad 500 \times 0.72 = \$360.$$

In this example, if the producer had purchased a CRC policy at the 60% coverage level, no indemnity would be received; however, a CRC policy with 80% coverage would pay the producer an indemnity of \$101 per acre (the \$461 Final Guarantee minus the producer's Actual Revenue of \$360).

The point of this illustration is not that higher coverage levels are better than lower coverage levels. Indeed, as pointed out earlier, if premiums are actuarially fair, then on average the higher indemnities associated with higher coverage levels will be just covered by the higher premiums associated with those coverage levels. The real point of this illustration is that the choice of coverage level can, at times, have an important impact on a producer's financial position. If, for instance, the producer in this example knows that he must generate revenues of at least \$375 per acre in order to be able to meet pressing financial obligations, then he should by all means consider a coverage level that will provide that. On the other hand, if

³The producer's indemnity will be the difference between the Final Guarantee and the producer's actual yield times Harvest Price. The Harvest Price under a CRC policy is the November average price of the December cotton futures contract on the New York Board of Trade. Depending on how an individual markets his or her cotton, the price actually received for cotton may be different from the Harvest Price.

the producer's financial position is such that major loss will not jeopardize the survivability of the operation, then the additional expense for higher coverage levels may not be justified.

Conclusions

Crop insurance represents an important risk management tool for cotton producers. However, the decision regarding what type of crop insurance policy and what level of coverage to purchase can be quite complex. It is important for producers to carefully evaluate their coverage needs—including the need for special provisions—their marketing plans, their level of participation in other government programs, and their current financial position in making a crop insurance purchase decision. The goal should be to purchase a policy that provides adequate coverage that is cost effective and that integrates well with the other management strategies and objectives of the operation.



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