RISK MANAGEMENT PROFILES

Big Horn County sugar beet growers look to manage production risk

Big Horn County farmers Ken and Rich Riff own Riff Brothers Farms – 600 acres of dry beans, sugar beets, and barley (usually 200 acres of each). They are particularly worried about production risk with their sugar beet acres this spring. Last fall and winter were extremely dry with mild temperatures, so the brothers know that soil moisture is low. Their beets may require irrigation to germinate or they may need replanting.

The Riffs are looking for some stability and revenue protection for their bottom line. Input prices, including the technologically advanced seed they selected, have never been higher, but they are committed to their beet acreage through membership in the local cooperative.

There are two main crop insurance options available to the Riffs for their sugar beet crop. Multi-peril and catastrophic coverage (CAT) are based on the Riffs' actual production history (APH) and cover against losses in yield at a price set at the time of policy purchase. With multi-peril insurance, the Riffs are able to insure from 50 to 85 percent of their APH yield at 55 to 100 percent of the crop price.

For the coming production year, the established price is $51.30 per ton (an additional price of $59.85 per ton is also obtainable). Sugar beet multi-peril has a replant provision available that offers an indemnity if the stand loss is great enough, if the crop will not produce 90 percent of the final production guarantee, or if it is practical to replant. The Riffs currently have an APH yield of 25 tons per acre.

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CAT coverage protects against losses greater than 50 percent at 55 percent of the APH yield for a total cost of $300 per year. If the Riffs choose to purchase CAT, they will qualify for federal disaster assistance if a substantial loss occurs and disaster payments are available.

Decision and peril

After considering their options, the Riffs chose the maximum yield coverage available at 85 percent, along with a 100 percent price election of $51.30 per ton. This provided them a total revenue guarantee of $1,090.13 per acre (0.85 multiplied by 25 tons per acre multiplied by $51.30 per ton).

As it turned out, the Riffs were right to be concerned about the coming production year. The early spring was dry and caused difficulty in crop emergence. They had to replant 100 of their 200 acres of beets. The summer growing season that followed was also dry, and their ending yield was 12 tons per acre.

The replant provision of the Riffs' contract allowed for a payment equal to the lesser of 10 percent of their APH yield or the value of 1.5 tons. In this case, the tonnage was the lesser amount, equaling $7,695 total ($76.95 per acre).

Harsh summer conditions resulted in an average yield of 12 tons per acre. (The indemnity calculations based on the yield are summarized in Table 1.) The Riffs' production shortfall was 9.25 tons per acre (85 percent of 25 tons per acre, less the actual production). This, multiplied by the price of $51.30 set during the policy purchase, resulted in a total indemnity of $474.53 per acre.

Beyond crop insurance

In addition to insurance payments, the Riffs might also be eligible for a payment under available disaster assistance programs. Participation in these programs in recent years has required enrollment in a federally-backed crop insurance program or Non-insured Crop Disaster Assistance Program (NAP) for all economically significant crops, meaning those that contribute at least 5 percent of the total farm revenue.

Disaster assistance programs can provide significant assistance in cases were large losses are experienced. The details of these programs should be carefully considered in conjunction with levels of participation in crop insurance products when evaluating any risk management strategy.

Had the Riffs chosen not to purchase crop insurance, their production losses would have resulted in lost revenue of $102,600 (the indemnity

Table 1. Riff Brothers crop insurance options summary.

Crop stage	# Acres	APH yield	Coverage %	Price per ton	Coverage (per acre)	Total coverage
Initial:	200	25	85	$51.30	$1,090.13	$218,025
Replant:						
(lesser of 10% of	100	25	10	$51.30	$128.25	
APH or 1.5 tons)					$76.95	$7,695

	# Acres	Final yield per acre	Price per ton	Production shortfall (tons per acre)	Indemnity (per acre)	Total indemnity
Final crop production	200	12	$51.30	9.25	$474.53	$94,905

	Actual production (tons per acre)	Price per ton	Total actual revenue	Replant payment	Indemnity payment	Total crop revenue
Total revenue:	2,400	$51.30	$123,120	$7,695	$94,905	$225,720

payment of $94,905 plus the replant payment of $7,695). If the Riffs had opted to buy only CAT coverage, their shortfall would have been much greater. They would only have received an indemnity payment of $89.78 per acre.

For more information on insurance products, see the RMA website at www.rma.usda.gov. For information on other risk management topics, visit the "Resources" tab at RightRisk.org.

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