RISK MANAGEMENT PROFILES

RightRisk™

Gates Creek Land and Livestock compares risk management options for hay and forages

Platte County producers John and Marcia Smith own Gates Creek Land and Livestock, a 100-head commercial cow herd operation with 250 irrigated acres. The Smiths primarily use the irrigated acreage to provide feed for their cow-calf enterprise with 150 acres of alfalfa and 100 acres in corn for both grain and silage. Recent high hay prices have the Smiths considering cutting the corn acreage to 50 acres for silage and seeding the other 50 acres to alfalfa.

Due to rising input prices, the Smiths are concerned their bottom line is not well-protected against the unexpected. Prices for feed are high, and while John and Marcia like that their alfalfa is worth more than double last year's value, they know that if drought or extreme weather reduces production, they will be buying expensive hay for their cattle. Because of this, the Smiths are looking at the following risk management options for the upcoming production season:

1. No insurance.
2. Purchase multi-peril insurance for their forage production.
3. Take advantage of a non-insured Disaster Assistance Program (NAP) from the Farm Service Agency.
4. Acquire Yield Protection (YP) insurance for their silage corn.
5. Invest in Rainfall Index-Pasture Rangeland and Forage (RI-PRF) insurance, which uses rainfall and other data to determine deviation from the rainfall index over a given area and production period.

In determining their best risk management option, the Smiths looked at several factors, including overall per-acre

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coverage and effectiveness. The Smiths ultimately chose to use a combination of strategies: to purchase Yield Protection (YP) coverage for their corn, seed an additional 50 acres of alfalfa insured with a forage-seeding policy, and purchase a multi-peril policy for their existing forages.

Indemnity calculations

The Smiths had an average production year with adequate moisture until late June and early July when two severe storms pummeled the Smiths' forage crops over two weeks. These storms limited silage corn production to 7 tons per acre and total alfalfa production to 2.5 tons per acre as compared to previous APH yields of 21 tons per acre for silage and 4 tons per acre for alfalfa. The hail and heavy rain reduced the new seeding alfalfa to less than 5 acres with an acceptable stand remaining.

The multi-peril policy for the Smiths' alfalfa was 75 percent coverage on their APH yield of 4 tons per acre at $108 per ton. This equates to $324 per acre coverage. The YP policy for their corn silage was set up in a similar manner with a price of $43 per ton with 75 percent coverage, resulting in coverage of $677.25 per acre.

The forage seeding policy was somewhat different from the other two policies as it paid an indemnity based on the number of acres without an acceptable stand count. In this case, the total coverage per acre was $226; the Smiths selected 75 percent coverage, which resulted in $169.50 per acre (Table 1).

Storm damage to the Smiths' crops was covered by their crop insurance policies. Indemnity calculations are shown in Table 2. The new seeding resulted in an indemnity payment of $7,627.50 (50 acres multiplied by $169.50 equals $8,475; subtracting the production of 5 acres acceptable stand multiplied by $169.50 [$847.50] results in a payment of $7,627.50). The corn silage YP and alfalfa multi-peril indemnities were determined by taking the value of actual production (calculated using the policy price) and subtracting it from the total coverage per acre.

The combination of the Smiths' three insurance policies on their hay and forage crops resulted in a total indemnity payment of $34,540. While this did not equal the revenue they expected from the three crops, it helped cover some of the feed needed by their cow-calf enterprise despite the crop losses.

Potential impact of marketing alfalfa

The Smiths have always fed their forage to their own cow herd. Their average yield for the established alfalfa was 4 tons per acre on 150 acres. What would happen if the Smith's planned to sell 300 tons of

Table 1. Crop insurance options summary.

Crop	Number of acres	APH yield (tons)	Coverage (%)	Price ($)	Total coverage ($ per acre)	Total crop coverage ($)
Forage seeding	50	-	75	$226	$169.50	$8,475
Corn silage	50	21	75	$43	$677.25	$33,862.50
Alfalfa	150	4	75	$108	$324	$48,600

alfalfa and keep 300 tons for their own feed needs?

Assume the Smiths decided to purchase crop insurance because hay prices were increasing, and they did not want to be short should disaster occur. Rising hay prices may prompt the Smiths to take one of the following possible actions to sell their expected production.

They could do nothing, refraining from marketing excess production until fall and taking advantage of rising prices should that continue. The Smiths are not locked into a set price for their hay, nor do they need to come up with more hay should their production fall short. In this scenario, the $8,100 indemnity payment would buy approximately 70 to 80 tons of hay if prices stayed at the insurance level ($108 per ton). Purchasing capacity drops off significantly, though, if hay prices increase above the insurance price.

On the other hand, the Smiths could accept a May offer to contract 100 tons for $150 per ton.

Table 2. Yield loss and indemnity payment.

Crop	Actual yield	Actual revenue (per acre)	Coverage (per acre)	Indemnity (per acre)	Total indemnity
Forage seeding	5 acres	-	$169.50	-	$7,627.50
Corn silage	7	$301.00	$677.25	$376.25	$18,812.50
Alfalfa	2.5	$270.00	$324.00	$54.00	$8,100.00

If, following their yield losses, they were forced to purchase hay to cover their contract, the $8,100 indemnity payment would purchase 54 tons of hay at the contracted price. Since the Smiths' feed needs would remain at 300 tons, their production of 375 tons (2.5 tons per acre multiplied by 150 acres) combined with the indemnity payment would easily cover their contracted tonnage.

The Smiths' current coverage would provide less protection if the number of contracted tons increased or the price per ton increased. If the Smiths contracted more than 100 tons, it would be prudent to either increase insurance protection or structure any contracts based on actual production, using an "Act of God" clause for instance, to better account for natural disasters.

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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