



Big Horn County dry bean growers use yield protection insurance – Part two

By James Sedman and John Hewlett

Yield Protection Insurance

We looked at the situation faced by the Riff brothers in Big Horn County, Wyoming, in a previous article.

They had decided to protect their dry bean crop of 240 acres (120 acres each of pinto and northern beans) against loss by purchasing a Yield Protection (YP) insurance policy. YP insurance is similar to the multi-peril policies of the past where a producer's actual production history (APH) yield determines the total insurance guarantee. The harvest price is determined at the time of purchase and the producer also chooses the coverage level resulting in a total guarantee. The Riff brothers' APH yield was 2,100 pounds per acre for both pinto and great northern beans. They chose to insure 120 acres of each crop at the 75 percent coverage level and 100 percent of the price – \$0.31/lb. for northrens, and \$0.30/lb. for pintos. This resulted in a total guarantee per acre of \$488.25 for northrens and \$472.25 for pintos (price times

coverage level times APH yield).

Peril and Results

Shortly after crop emergence, the Riffs farm received several bouts of torrential rain and hail that severely affected yields two ways. First, they were unable to irrigate the pintos (center pivot irrigation system) for six weeks following the severe weather due to standing water, resulting in a pinto bean yield of 450 pounds per acre. While the northrens fared somewhat better, the yield was still low at 850 pounds per acre due to hail. The indemnity payments are calculated in the table below.

Comparison of Strategies

Before the season began, the Riffs considered three main options for their dry bean risk management plan: no insurance, catastrophic coverage (CAT), or YP insurance that they ultimately chose to purchase.

Dry Bean Risk Management Strategies Compared

Option	Yield	Guarantee Level	Price	Total guarantee	Indemnity	Premium/acre	Net per acre
No insurance:							
Northern	850	0	\$0.31	0	0	0	\$263.50
Pintos	450	0	\$0.30	0	0	0	\$135.00
CAT coverage:							
Northern	850	50%	\$0.31	\$179.03	\$34.10	\$2.50	\$295.10
Pintos	450	50%	\$0.30	\$173.25	\$99.00	\$2.50	\$231.50
YP coverage:							
Northern	850	75%	\$0.31	\$488.25	\$224.75	\$20.00	\$468.25
Pintos	450	75%	\$0.30	\$472.50	\$337.50	\$20.00	\$452.50

Comparing the various options, there are a wide variety of outcomes as shown in the table below. Remember, CAT coverage provides for 55 percent of the established price on a 50-percent or greater yield loss. In the Riffs' case, the CAT guarantee would be 50 percent of 2,100 lbs./acre times 55 percent of the price. CAT coverage is available for \$300

per crop insured; in this case, the premium would cost only \$2.50/acre.

While CAT coverage is more effective than no insurance, it is not as effective in terms of premium dollars as the YP insurance.

When considering which strategy to follow, the temptation is to save money on premium costs; however, this usually does not consider which will be most effective in managing risk. Depending on the structure of the Riffs' operating cost, this could mean the difference between covering costs in spite of a yield disaster and losses of several hundred dollars/acre.

James Sedman is a consultant to the Department of Agricultural and Applied Economics in the University of Wyoming College of Agriculture and Natural Resources, and John Hewlett is a farm and ranch management specialist in the department. Hewlett may be reached at (307) 766-2166 or hewlett@uwyo.edu.

Dry Bean Indemnity Calculation Under YP Insurance

Crop	Actual yield	APH yield	Yield guarantee	Coverage level	Price	Indemnity	Premium (\$/acre)
Northern	850	2,100	1,575	0.75	\$0.31	\$224.75	\$20.00
Pinto	450	2,100	1,575	0.75	\$0.30	\$337.50	\$20.00

For More Information

Yield or revenue protection insurance can help cover losses from yield or revenue declines. For more information on yield protection, consult a crop insurance agent or visit the Western Risk Management Library online at agecon.uwyo.edu/riskmgt

Nature is helping us with grasshopper control

By Jeff Edwards

You may have noticed the grasshopper populations did not develop as anticipated in certain areas this year – this may be due in part to assistance from our arthropod helpers.

Fortunately, nature has a way of taking care of its own. There is a handful of predators and parasites that utilize grasshoppers as prey and are assisting with reducing populations. Here are some you may have seen but didn't know what they were.

Predatory wasps – There are several members in this group, but one in particular has been one of the more visible predators around the state this summer and is a member of the sand wasp family. This wasp is responsible for making the mini-volcano cones in yards and driveways. These predators are collecting grasshoppers and crickets; they sting their prey, which results in paralysis. Once paralyzed, the wasp will return the prey back to the nest, stuff it down the hole, and lay an egg on the body of the victim. The egg then hatches, and the larva will feed and develop on the living prey that was left behind for them. Fortunately for us, these wasps have no interest in humans; the males can be territorial

and may chase you. Both male and females may bite curious dogs that stick their noses next to the hole.

Bee flies – Bee flies are true flies; they are relatively small, stout, and hairy-bodied as adults. They usually have long, slender mouth parts – as adults they usually feed on the nectar of flowers and can be seen hovering near flowers. They search for locations where grasshoppers are laying eggs in the soil and hang around waiting for the female grasshopper to finish. After grasshoppers deposit their eggs, the bee fly will hover over the hole and flick its own egg down the hole where the larva will feed and develop on the grasshopper egg mass. They overwinter in the soil and emerge in the spring after temperatures rise.

Robber flies – Robber flies are also in the fly family; the adults are true predators and not specific to just eating grasshoppers. They will

sume them.

Tiger beetles – Tiger beetles are very similar in their habits to robber flies. They feed on a wide range of hosts, including grasshoppers, and vary in color from solid black to metallic green to metallic red. They are also non-poisonous and will bite if given the opportunity.

Blister beetles – The good bug-bad bug. The "good" part first. The larvae of these insects are actually predators of grasshopper eggs, so you will find them in sandy locations where grasshoppers are actively nesting or have laid eggs in the past. The "bad" portion is that this beetle as an adult feeds on the flowers of many different plants – including alfalfa. This alone is not an issue, but the blood of these

insects can cause welts on humans and blisters in the digestive tract of horses that can be fatal. Usually, when the grasshopper populations are peaking, so are the blister beetle populations. A couple of management strategies can help eliminate this problem in your alfalfa:

1) If at all possible, cut earlier than normal (fewer blossoms in the field).

2) Back off crimping the alfalfa as it is being cut. If beetles are present and don't get crushed, they will leave the alfalfa for other food sources.

3) Chemical treatments are an option prior to cutting, but you must weigh the cost benefit in your program and be aware of any pre-harvest intervals associated with the product.

There are other predators and parasites out there helping us every day. Keeping them around and letting them do their job is good!

Jeff Edwards is an educator based in the Goshen County office of the University of Wyoming Cooperative Extension Service. He can be reached at (307) 532-2436 or at jedward4@uwyo.edu.

