

## Crop insurance options for Wyoming barley production

Barley has been a staple major crop in Wyoming for many years due to characteristics that make it suitable for Wyoming's growing season and crop rotations.

Most barley is grown for feed, with some grown for malting.

The average reported yield for all barley in Wyoming was 100 bushels/acre. In 2018, there were 61,239 reported acres of harvested barley in the state, including malt and feed barley. Of those acres, 35,985 acres (75 percent) were insured through the federal crop insurance programs.

Growing these or any other crop is expensive, and it is imperative growers manage at least some of their production and price risk. Several crop insurance options are available.

### Crop insurance options and provisions

Barley insurance options are based on a producer's actual production history (APH) yield

and can insure against declines in yield, price, or both, as with any program crop. Yield protection (YP) plans provide safeguards against revenue declines due to production losses.

For a YP plan, a producer selects the coverage level (up to 85 percent) to be multiplied by the producer's APH yield and the production harvest price (determined by the Risk Management Agency [RMA]) arriving at an insurance guarantee. Once in place, changes in the actual price at harvest do not affect coverage. If a yield loss occurs, indemnities are paid on the difference of the revenue guarantee and actual revenue.

Revenue protection (RP) insurance provides coverage against revenue declines due to a drop in either yield or price. The producer selects coverage of up to 85 percent using their APH yield and projected harvest price, similar to YP policies. RP coverage differs when the actual harvest price (determined by RMA) is greater than the projected price. In these cases, the harvest price is used to calculate the final revenue coverage. A producer could theoretically receive an indemnity payment based on a change in harvest price with no loss in yield.

Harvest price exclusions (HPE) are also available for RP plans; these plans use only the projected harvest price for calculating the revenue guarantee. The advantage of these plans is in their lower premiums when compared to straight RP plans.

Malt barley producers can add a Malting Barley Endorsement (MBE), allowing for a quality adjustment on production under contract (or a growing agreement). A supplemental coverage option (SCO) is available in selected counties and provides additional coverage if selected as part of a producer's Agriculture Risk Coverage (ARC) or Price Loss Coverage (PLC) selection with the Farm Service Agency (FSA).

### Barley crop example

Let's look at Big Horn County producers Dean and Nicole Ford\* to see how the various

crop insurance policies would work for barley in Wyoming (Table 1). They are comparing how the various coverage options stack up for their 200 acres of feed barley.

Currently, they are looking at YP, RP, and RP-HPE policies. Their historic APH yield is 90 bushels per acre, and they will compare each policy at 80 percent coverage. Current harvest price for the YP and RP policies is \$3.25/bu; the preliminary revenue guarantee would be \$234/acre.

Now assume there was a covered yield loss due to weather, resulting in a yield average of 55 bushels/acre. At the harvest price of \$3.25, the indemnity per acre would be \$55.25 under either YP or RP policies.

Next, assume there was a price decline at harvest to \$2.75 per acre, multiplied by the actual yield of 55 bushels/acre resulting in actual revenue of \$151.25 per acre. Subtracting this from the \$234 revenue guarantee results in an indemnity per acre of \$82.75. This indemnity is \$27.50 per acre higher than under the YP policy.

Premium price plays a role in the decision for coverage. As with any type of insurance, a higher coverage level means higher premium costs. As a result, the Fords will need to balance their desire for coverage against the prospective premium expense in their crop budget.

*\* The Ford's operation is a case study example created to demonstrate RightRisk tools and their application. No identification with actual persons (living or deceased), places, or agricultural operation is intended nor should be inferred.*

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Table 1. Barley Insurance Plan Example

Policy Type	Coverage Level (%)	APH Yield (bu/ac)	Harvest Price (\$/bu)	Guarantee (\$/acre)	Actual Yield	Actual Harvest Price	Indemnity Per Acre
YP	80%	90	3.25	234	55	2.75	55.25
RP	80%	90	3.25	234	55	2.75	82.75
RP-HPE	80.00%	90	3.25	234	55	2.75	55.25

### CROP INSURANCE PLANNING TOOLS FROM RIGHTRISK.ORG

The Risk Scenario Planner (RSP) tool allows producers to use a partial budget format to examine the potential risks and returns of a change in business strategy (such as crop insurance) and assess the uncertainty of that strategy.

Logon to RightRisk.org and select the Resources tab, then Risk Management Tools to begin.

### FOR MORE INFORMATION

To see how Wyoming barley growers can use crop insurance products in their risk management planning, view Wyoming Barley Production: Opportunities to Manage Production, Quality and Revenue Risks, available at the Western Risk Management Library [bit.ly/2WhXreO](http://bit.ly/2WhXreO).

The policy paper includes numerous in-depth examples of how various crop insurance options can work for feed and malting barley in a grower's operation, including comparison examples showing results from available insurance plans. Visit RightRisk.org for more information on crop insurance and other risk management planning tools.

## Dual-purpose winter wheat can provide both forage and grain

An early fall planting of winter wheat can provide winter grazing and summer grain.

Oklahoma research shows grain yields in a dual-purpose crop may be either higher or lower than a grain-only crop depending on planting date, soil fertility, and grazing management.

According to USDA data, around 12 million acres of winter wheat are planted annually in Oklahoma, Texas, and New Mexico.

An Oklahoma State University team conducting research on dual-purpose wheat estimates that around half those acres are managed for dual-purpose use and provide fall and winter feed for 3 million stocker cattle.

Hard red and soft white wheat can be used in a dual-purpose system, but grain yield will vary significantly between varieties. While grazing recovery is highly dependent on growing conditions and grazing management, some varieties do better in a dual-purpose system than others.

The success of a dual-purpose system requires adjustments to planting time and rate, variety selection, soil fertility, and grazing management. The following guidelines for

dual-purpose wheat are based on research in Oklahoma and Kansas.

- Increase seeding rate by about 30 percent in irrigated systems, or 50 percent in dryland systems.
- Plant two to four weeks earlier than the optimum date for a grain-only system. Winter wheat planted at the end of August yielded over 2,000 lbs/acre of forage dry matter compared to 500 lbs/acre from a late September planting.
- Increase nitrogen rates by 30-40 lbs/acre for every 1,000 lbs/acre of anticipated dry forage yield or 100 lbs of animal weight gain.
- Maintain around 50 to 60 percent green canopy cover at grazing termination to allow wheat to fully recover.
- Carefully monitor spring growth, and do not graze wheat past the first hollow stem date. When the wheat breaks dormancy in the spring, cattle should be removed when there is about 5/8th of an inch of hollow stem below the developing

seed head. Grazing past this point will cause significant grain yield loss. The date of first hollow stem varies year to year and between varieties.

A dual-purpose winter wheat field can be grazed in early fall and winter, and then again in the spring as long as cattle are removed prior to first hollow stem. Winter wheat also provides flexibility as it can be grazed out completely depending on the price of cattle and wheat.

Winter spelt and rye could also be used in a dual-purpose system. North Dakota growers report that winter rye works well when used for both fall grazing and summer hay. They report rye is hard to kill, but it's the first thing to green up in spring and can handle heavy grazing pressure.

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### ADDITIONAL READING

Dual Purpose Wheat: Management for Forage and Grain Production. Oklahoma State University Cooperative Extension Service. 2017 - [bit.ly/dualpurposewheat](http://bit.ly/dualpurposewheat).

Kaitibie, S., et al., 2003. Optimal Stocking Density for Dual-Purpose Winter Wheat. *Journal of Applied and Agricultural Economics* - [bit.ly/wheatstocking](http://bit.ly/wheatstocking).

Taylor, K., et al., 2010. Optimal Grazing Termination Date for Dual-Purpose Winter Wheat Production. *Journal of Agricultural and Applied Economics* - [bit.ly/wheatgrazing](http://bit.ly/wheatgrazing).

