Integrated Pest & Crop Management





2014 Harvest Time Crop Insurance Analysis

by Raymond E. Massey

The USDA Risk Management Agency reported projected harvest prices used. The table below presents the projected price which was used when signing up for crop insurance and the harvest price which affects Revenue Protection insurance calculations.

Most farmers in Missouri are pleased as their yields come in above their Actual Production History. For farmers who bought Yield Protection, most are not going to get an indemnity. Some isolated farms that had planting or harvesting problems, wet fields, insects or other yield reducing events may get an indemnity due to yield loss. If they do get an indemnity they will be happy to find that their yield shortfall is valued at a higher price than the price they are likely to receive for their crops sold in the spot market.

For farmers who bought Revenue Protection, their high yields are likely to mean they won't be receiving an indemnity. Revenue Protection insurance pays an indemnity when the guaranteed revenue is greater than the actual revenue. The actual revenue is calculated as their actual harvest times the harvest price reported by the RMA. Yields and/or prices must decline sufficiently to receive an indemnity.

The last column in the table indicates how much prices declined from the spring to the fall. Corn prices declined to 76% of springtime projected price; soybean prices declined to 85% pf projected price. Anytime the harvest price as a percent of projected price is less than a farmer's chosen coverage level, all the "deductible" due to price has been covered. Any yield reduction from APH results in an insured loss that generates an indemnity. In some cases an insured loss will occur even if the yield is above the farmer's APH. For example, a corn farmer who purchased 85% revenue protection coverage on corn acres would have an insured loss even if their yield was 110% of their APH.

Crop	Projected Price	Harvest Price	Harvest Price as a % of Projected Price
Corn	$4.62	$3.49	76%
Organic Corn	$8.97	$6.77	75%
Cotton	$0.78	$0.64	82%
Organic Cotton	$1.36	$1.22	90%
Grain Sorghum	$4.46	$3.37	76%
Popcorn	$0.20	$0.15	76%
Rice (long grain)	$0.14	$0.13	90%
Rice (short grain)	$0.17	$0.15	90%
Soybeans	$11.36	$9.65	85%
Organic Soybeans	$19.12	$16.24	85%

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Downy Brome: Don't let it creep up on you this Fall

by Mandy D. Bish and Kevin bradley

Downy brome (Bromus tectorum) is a winter annual grass that was introduced into the U.S. from Europe in the 1800's through a contaminated shipment of grain. Now this pest (Figure 1) is found throughout North America and is classified as a noxious weed in Colorado and Connecticut. Downy brome is most problematic in winter wheat fields and pastures, and, as of 2000, had infested over 98 million acres of U.S. rangeland[1].

The grass typically germinates in the fall, overwinters in the vegetative state, and resumes growth in early spring[2]. The leaf sheaths and blades of downy brome are generally light green in color and densely covered with soft hairs. The leaves are rolled in the shoot, lack auricles and have membranous ligules that are usually less than $^1/_{10}$ of an inch in length (Figure 2A). The seed head (or panicle) is dense, soft, and droops with nodding spikelets. The awns on each seed are approximately ½" long (Figure 2B). Downy brome can be confused with cheat in appearance and growth habit; however, the leaf blades of cheat usually have fewer hairs, and the awns on the seed are shorter.

The life cycle of this grass makes it competitive with winter wheat (Figure 3). Studies have shown that downy brome densities of 108 and 538 plants per meter squared reduced wheat yields by 40 and 92%, respectively[3]. Under ideal conditions this pest may produce over 400 lb of seed per acre[2]; replenishing the weed seed bank for the next season.

Downy brome can sometimes emerge prior to wheat planting in Missouri, so if at all possible wheat producers should take advantage of this weakness and apply an effective burndown (usually containing glyphosate) herbicide treatment prior to planting. If downy brome emerges after wheat has been planted, herbicide applications should be made in the fall on small (preferably 2-leaf) plants. Some of the more effective herbicides for the control of this species include Maverick, Olympus Flex, and PowerFlex HL. Of the 3, PowerfFlex HL has the least restrictive crop rotational interval following application. It should be noted that downy brome with resistance to Group 2 herbicides (ALS inhibitors) including sulfosulfuron (Maverick) was reported in Kentucky[4] in 1997 and downy brome with resistance to Group 1 (ACCase inhibitors) was reported in Oregon in 2005[4].

Figure 1: Downy brome is a winter annual grass that has infested over 98 million U.S. acres.

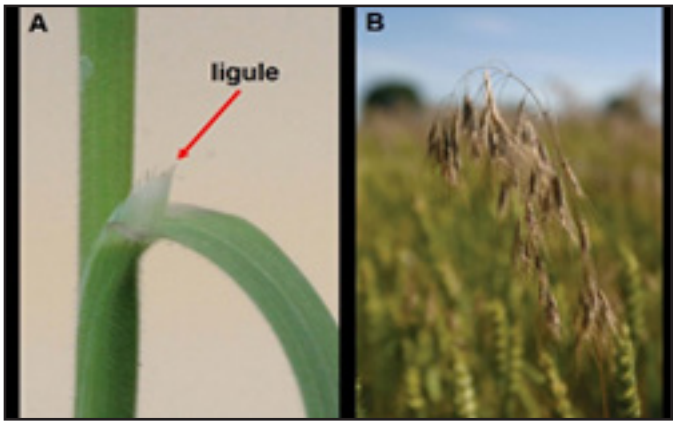

Figure 2: Characteristics of downy brome: A) The ligule is membranous and less than 1/10th of an inch. B) The seed head droops with nodding spikelets and the awns are approx. ½" long.

Figure 3: A patch of downy brome in a winter wheat field. When found in high densities, downy brome can cause significant yield losses of wheat.

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In pastures or haylands, young or immature downy brome can make suitable forage, but when the plant matures, it becomes less palatable and the awns become stiff and can sometimes injure livestock. Additionally, the crude protein content of mature plants drops to less than 3% making this plant less ideal for grazing[2]. For control in pastures, a multi-pronged approach is recommended which includes establishing more aggressive grasses to outcompete downy brome and mechanical techniques such as fire, mowing and tillage. There are no selective herbicides available for the control of this grass in a tall fescue pasture or hayland, so spot treatment of small downy brome patches is one of the only options in these settings.

For more information on downy brome and other weeds, please visit our Web site: www.weedid.missouri.edu or download the free ID WEEDS app. For more information on the identification of grass weeds that are common in Missouri, purchase or download a free copy of: IPM 2014, Identifying Grass Seedlings: http://weedscience.missouri.edu/publications/ipm1024.pdf.

[1]DiTomaso, JM. (2000) Invasive weeds in rangelands: Species, impacts and management. Weed Science 48: 255-265.

[2]Morrow, LA. and Stahlman, PW. (1984) The history and distribution of downy brome (Bromus tectorum) in North America. North America Weed Science 32: supplement.

[3]Rydrych, DJ. And Muzik, TJ. (1968) Downy brome competition and control in dryland wheat. Agronomy Journal 60: 279-280.

[4]Heap, I. (2014) The international survey of herbicide resistant weeds. Online. Internet. Monday, October 13, 2014. Available: www.weedscience.com

Weather Data for the Weekly Period Nov.23-29, 2014

Station	County	Weekly Temperature (ºF)						Monthly Precipitation (in.)		Growing Degree Days‡	
		Avg. Max.	Avg. Min.	Extreme High	Extreme Low	Mean	Departure from long term avg.	November 1-29	Departure from long term avg.	Accumulated Apr 1-Oct 31	Departure from long term avg.
Corning	Atchison	48	27	66	17	38	+2	0.10	-1.82	3719	+268
St. Joseph	Buchanan	47	29	64	20	38	+1	0.28	-1.54	3565	+123
Brunswick	Carroll	47	31	66	21	39	0	1.15	-1.54	3727	+235
Albany	Gentry	46	26	66	15	36	-1	0.23	-1.75	3394	+43
Auxvasse	Audrain	*	*	*	*	*	*	*	*	*	*
Vandalia	Audrain	46	30	65	22	37	-3	1.41	-1.61	3419	-76
Columbia-Bradford Research and Extension Center	Boone	48	30	67	23	39	-2	1.07	-2.04	3515	-151
Columbia-Capen Park	Boone	50	28	71	21	39	-2	0.90	-2.22	3516	-283
Columbia-Jefferson Farm and Gardens	Boone	48	31	68	23	40	-1	0.80	-2.30	3649	-30
Columbia-Sanborn Field	Boone	48	32	68	24	41	0	0.89	-2.30	3866	+57
Columbia-South Farms	Boone	48	31	67	23	40	-1	0.91	-2.21	3604	-68
Williamsburg	Callaway	49	31	68	22	40	0	1.75	-1.70	3562	+66
Novelty	Knox	44	27	66	17	35	-4	1.02	-1.81	3211	-204
Linneus	Linn	45	29	64	20	37	-1	1.18	-1.21	3368	+12
Monroe City	Monroe	45	27	65	17	36	-3	1.14	-2.00	3358	-119
Versailles	Morgan	51	33	69	23	42	0	0.99	-2.52	3858	+77
Green Ridge	Pettis	50	31	68	20	40	0	1.15	-1.94	3627	+90
Lamar	Barton	53	32	70	24	43	0	1.00	-2.79	3968	+11
Cook Station	Crawford	51	31	71	20	41	-2	1.84	-2.36	3656	-105
Round Spring	Shannon	52	27	71	20	39	-3	2.94	-1.18	3484	-114
Mountain Grove	Wright	51	32	69	25	41	-1	1.69	-2.69	3556	-23
Delta	Cape Girardeau	49	32	59	26	41	-4	1.87	-2.86	3805	-372
Cardwell	Dunklin	53	34	64	28	44	-3	2.28	-2.38	4298	-268
Clarkton	Dunklin	52	34	63	26	44	-2	2.10	-2.20	4185	-307
Glennonville	Dunklin	52	35	63	28	43	-3	1.76	-2.53	4236	-221
Charleston	Mississippi	52	34	64	27	43	-3	2.26	-1.86	4204	-20
Portageville-Delta Center	Pemiscot	52	35	62	28	44	-3	2.09	-2.18	4396	-143
Portageville-Lee Farm	Pemiscot	53	36	64	28	45	-2	2.09	-2.19	4411	-92
Steele	Pemiscot	52	35	62	28	44	-3	2.26	-2.37	4278	-273

‡Growing degree days are calculated by subtracting a 50 degree (Fahrenheit) base temperature from the average daily temperature. Thus, if the average temperature for the day is 75 degrees, then 25 growing degree days will have been accumulated.

Weather Data provided by Pat Guinan
GuinanP@missouri.edu
(573) 882-5908

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Editor: Amy Hess (hessa@missouri.edu)