



University of Wyoming Extension Profitable & Sustainable Agricultural Systems Risk Management Agency

Big Horn County producers use partial budgeting for profit answers – Part IV

By James Sedman and John Hewlett

We examined the Big Horn County HR Ranch's use of partial budgeting tools (available from RightRisk.org) in past articles to evaluate production decisions such as buying supplemental feed or culling cows.

The partial budgeting tool can be used to examine past risk management decisions as well; this analysis can then be used for risk planning. In this case, we examine the decision to use insurance for pasture the previous year and, if it was adequate, whether to use this year.

Pasture, Range and Forage – Vegetative Index Insurance

Pasture, rangeland, forage insurance (PRF-VI) was developed to be an effective, localized insurance option for livestock producers. The program insures against loss on pasture and hay land by using satellite data from the U.S. Geological Survey to measure productive capacity in approximately 4.8-by-4.8- (or 23-square mile) mile grids.

Producers can insure in one to three month periods to coincide with their grazing (or haying) programs. Indemnities are paid when the measured vegetative index drops below the normal index data for the selected grid area.

Producers determine total coverage provided by the selected coverage level (70 to 90 percent) and the selected productivity factor (60 to 150 percent). The productivity factor is the percentage insured of the county base value per acre.

There are several programs available online for PRF-VI insurance. Producers can log on to www.rma.usda.gov and click the "policies and pilots" link to access the online calculator and links to determine their grid points, coverage costs, and indemnity information for previous years.

Coverage Consideration

For our analysis, assume the HR purchased a PRF-VI policy last year for summer pasture. Its county index value was \$8.72 per acre.

Ranch managers were con-

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Enter Values in Highlighted Cells			Final	Payment	Payment		Final	Payment	Payment		Final	Payment	Payment	
2				Index	Factor	Amount		Index	Factor	Amount		Index	Factor	Amount	
3															
4	Guarantee	\$64,746		90	0.000	\$0.00		60	0.500	\$32,373.00		30	1.000	\$64,746.00	
5	Coverage Level	90		89	0.017	\$1,079.10		59	0.517	\$33,452.10		29	1.000	\$64,746.00	
6	Trigger	90		88	0.033	\$2,158.20		58	0.533	\$34,531.20		28	1.000	\$64,746.00	
7	Expected Value	100		87	0.050	\$3,237.30		57	0.550	\$35,610.30		27	1.000	\$64,746.00	
8	Final Index	50		86	0.067	\$4,316.40		56	0.567	\$36,689.40		26	1.000	\$64,746.00	
9	Total Loss Factor	0.30		85	0.083	\$5,395.50		55	0.583	\$37,768.50		25	1.000	\$64,746.00	
10	Factor Value/pt	0.017		84	0.100	\$6,474.60		54	0.600	\$38,847.60		24	1.000	\$64,746.00	
11				83	0.117	\$7,553.70		53	0.617	\$39,926.70		23	1.000	\$64,746.00	
12	Paymt Calc Factc	0.667		82	0.133	\$8,632.80		52	0.633	\$41,005.80		22	1.000	\$64,746.00	
13				81	0.150	\$9,711.90		51	0.650	\$42,084.90		21	1.000	\$64,746.00	
14	Payment Amount	\$43,164		80	0.167	\$10,791.00		50	0.667	\$43,164.00		20	1.000	\$64,746.00	
15				79	0.183	\$11,870.10		49	0.683	\$44,243.10		19	1.000	\$64,746.00	
16				78	0.200	\$12,949.20		48	0.700	\$45,322.20		18	1.000	\$64,746.00	
17				77	0.217	\$14,028.30		47	0.717	\$46,401.30		17	1.000	\$64,746.00	
18				76	0.233	\$15,107.40		46	0.733	\$47,480.40		16	1.000	\$64,746.00	
19	Payment Factor			75	0.250	\$16,186.50		45	0.750	\$48,559.50		15	1.000	\$64,746.00	
20	cannot be less			74	0.267	\$17,265.60		44	0.767	\$49,638.60		14	1.000	\$64,746.00	
21	than zero, or			73	0.283	\$18,344.70		43	0.783	\$50,717.70		13	1.000	\$64,746.00	
22	greater than one.			72	0.300	\$19,423.80		42	0.800	\$51,796.80		12	1.000	\$64,746.00	
23				71	0.317	\$20,502.90		41	0.817	\$52,875.90		11	1.000	\$64,746.00	
24	Payment amount			70	0.333	\$21,582.00		40	0.833	\$53,955.00		10	1.000	\$64,746.00	
25	cannot exceed			69	0.350	\$22,661.10		39	0.850	\$55,034.10		9	1.000	\$64,746.00	
26	guarantee.			68	0.367	\$23,740.20		38	0.867	\$56,113.20		8	1.000	\$64,746.00	
27				67	0.383	\$24,819.30		37	0.883	\$57,192.30		7	1.000	\$64,746.00	
28				66	0.400	\$25,898.40		36	0.900	\$58,271.40		6	1.000	\$64,746.00	
29				65	0.417	\$26,977.50		35	0.917	\$59,350.50		5	1.000	\$64,746.00	
30				64	0.433	\$28,056.60		34	0.933	\$60,429.60		4	1.000	\$64,746.00	
31				63	0.450	\$29,135.70		33	0.950	\$61,508.70		3	1.000	\$64,746.00	
32				62	0.467	\$30,214.80		32	0.967	\$62,587.80		2	1.000	\$64,746.00	
33				61	0.483	\$31,293.90		31	0.983	\$63,666.90		1	1.000	\$64,746.00	

FOR MORE INFORMATION

Pasture, rangeland, forage-vegetation index (PRF-VI) insurance can be a valuable asset to Wyoming livestock producers planning for drought. The sign-up deadline for PRF-VI is November 15, so contact a local insurance agent for details on the policy. Visit the RMA website at www.rma.usda.gov for information on PRF-VI and for the online grid locator and premium/coverage calculators. PRF-VI information and budgeting resources (including partial, enterprise, and whole farm) are available for production decisions and risk management planning at RightRisk.org. Producers can log on to RightRisk.org and click the "Risk Mgmt Tools" link under the Resources tab to begin using the budgeting tools.

servative in purchasing 70-percent coverage with a 90-percent productivity factor resulting in \$5.49 per acre coverage for a premium of \$0.35 per acre (\$30,195 of total coverage and \$1,375 total premium for 5,500 total acres). Their policy paid an indemnity of \$3,097.

They want to determine if this is adequate coverage for this year or if the maximum amount (90-percent coverage and 150-percent productivity factor) would deal with

the expected continuing drought.

This maximum coverage equates to \$64,746 in total coverage with a total premium cost of \$6,047. Using the loss factor worksheet available at RMA's website (see table), we find that, at this level of coverage, it takes a loss of approximately 16 percent of insured value to recoup the premium.

In the final installment in this series, we will use the partial budgeting tool available from

RightRisk.org to determine if this coverage level is feasible

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.

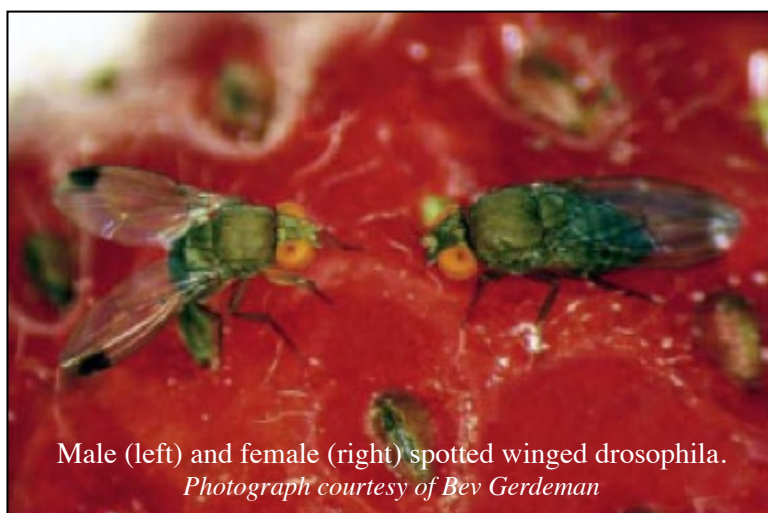
Fruit growers beware – a new pest is munching Wyoming fruit

By Jeff Edwards

Be aware a new fruit pest has been identified in Wyoming.

This August, the spotted winged drosophila (*Drosophila suzukii*) was identified in Goshen County near Torrington and earlier this month in Laramie County near Cheyenne. SWD has a wide host range – most generally ALL types of fruit, including tomatoes. What is somewhat unique to this fruit fly is that it will lay eggs and develop on non-ripe fruit and seems to prefer soft-fleshed fruit such as raspberries, strawberries, blueberries, and grapes.

SWD is a native to Southeast Asia and may have been introduced to the U.S. in 2008 possibly via fruit from Hawaii. Since 2008, this pest has travelled coast-to-coast and has taken up residence in nearly every fruit-producing location in between.



Male (left) and female (right) spotted winged drosophila. Photograph courtesy of Bev Gerdeman

Tiny Maggots on Fruit

Traditionally, fruit fly species are more of a nuisance pest as they prefer overripe or physically damaged fruit. The injury from this insect most observed is the presence of numerous, tiny, pale-colored maggots in the flesh of ripe berries.

Professor and extension spe-

cialist Whitney Cranshaw at Colorado State University identified this pest in Fort Collins, Colorado, in 2012 and Brush in 2013. Male SWD have a dark spot on the forewing (see photo). "The infested fruit appears to melt as the tiny maggots feed and grow," says Cranshaw. It is also reported

the fly can complete its lifecycle on dropped and dried fruit. The rapid spread and establishment of this pest means that Wyoming fruit growers will need to include integrated pest management (IPM) strategies for this pest from this day forward – it is here to stay.

Online Resources

Recommendations for monitoring, trap design, and control can be found in recent university publications available at <http://bit.ly/msuswd> (Michigan State University) or <http://bit.ly/ucdswd> (UC, Davis), and there are other resources available on the Web.

There are limited chemical control options available in Wyoming since this is a new pest. If you do choose to use insecticides, be certain to read, follow, and understand the label – particularly references and instruction on how to prevent resistant populations from developing. Also be aware

of the pre-harvest interval (the amount of time that must pass between application and harvest for consumption).

Identification in Wyoming

In Wyoming, if you suspect you have this pest, contact Scott Schell, University of Wyoming assistant extension entomologist, at 307-766-2508 or sschell@uwyo.edu, for guidance on sample shipping and identification.

For some, this may fall in the category of, "What I don't know can't hurt me," and the reality is we have probably been consuming these and other critters unintentionally. For me, I prefer to keep my protein source and fruit separate on my plate. Please contact Scott or myself about this pest.

Jeff Edwards is the UW Extension pesticide applicator training coordinator. He can be reached at (307) 837-2000 or jedward4@uwyo.edu