

South Dakota State University
**Open PRAIRIE: Open Public Research Access Institutional
Repository and Information Exchange**

Extension Extra

SDSU Extension

9-1-2010

Pasture, Rangeland, and Forage Pilot Insurance Program in South Dakota

Martin Beutler

South Dakota State University

Follow this and additional works at: http://openprairie.sdstate.edu/extension_extra

Recommended Citation

Beutler, Martin, "Pasture, Rangeland, and Forage Pilot Insurance Program in South Dakota" (2010). *Extension Extra*. Paper 184.
http://openprairie.sdstate.edu/extension_extra/184

This Other is brought to you for free and open access by the SDSU Extension at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in Extension Extra by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact michael.biondo@sdstate.edu.



Pasture, Rangeland, and Forage Pilot Insurance Program in South Dakota

Martin Beutler, Extension ranch economist

South Dakota has been selected to participate in one of two government-subsidized pasture, rangeland, and forage risk management pilot insurance programs.

These programs were developed by the USDA Risk Management Agency (RMA) to provide livestock producers the ability to purchase insurance protection for losses of forage produced for grazing or harvested for hay. One pilot program is based on a rainfall index and is being piloted in 16 states other than South Dakota.

The second pilot insurance program is based on a vegetation index. This program is being piloted in nine states, including South Dakota

VEGETATION INDEX PROGRAM

The vegetation index pilot program uses the Normalized Difference Vegetation Index (NDVI) data from the U.S. Geological Survey Earth Resources Observation and Science data center (EROS) located in Eastern South Dakota.

The NDVI is a measure of vegetation greenness and correlates to forage condition and productive capacity in approximately 4.8- x 4.8-mile grids. In general, the healthier the plants in a given grid, the higher the NDVI value. Losses are calculated based on the deviation from normal within the grid and interval(s) selected.

Producers may choose one or more 3-month vegetative intervals that fit their forage species production.

The program's goal is to provide a safety net for producers who face drought conditions.

States participating in this vegetation index insurance pilot program include Arizona, Idaho, Nebraska, Colorado, Oklahoma, Oregon, Pennsylvania, South Carolina and South Dakota.

Insurance for this program is a group plan provided by private insurance companies with the federal government subsidizing over half the cost of the premiums. Premiums

will be the same at all participating crop insurance providers.

Insurance payments are determined through the use of satellite technology that assesses the losses in forage production across diverse range and pasture environments. The program does not measure individual production on a given pasture.

Data from satellite images are used to determine the "greenness" of a given "index grid" of land. In comparing the current greenness level to those determined historically, an index is developed that reflects current production levels. If the index falls below a level set by the program and producers at sign up, then payments are made to producers for the forage loss.

The determination of the vegetation index centers on the greenness of the plants (i.e., moisture within the leaves, temperature, chlorophyll content, etc.) within the index grid, not the level of use of the plants. Having some severely utilized forages within a grid index has little effect on the index valuation and provides no real advantage in determining if a loss has occurred. Thus there is no reward for poor management of the rangeland resource.

DEFINITIONS

Insurable Acreage: Hayland and grazingland that is not planted annually. However, overseeding into acreage of existing forage crops is acceptable. Annually planted crops currently are not insurable.

Insured Acres: The number of insurable acres selected to be insured by a producer. You can choose to insure either grazingland, hayland, or both. You are not required to insure 100% of the crop type(s). If you choose to insure the crop types under this policy you cannot insure the same crop under any other FCIC subsidized program

PRODUCER DECISIONS

Each producer will be asked to make several choices when insuring grazingland or hayland production including: coverage level, index intervals, protection factor and number of acres.

The first step is to determine which index grid or grids are representative of the forage grown by the producer. This can easily be accomplished by visiting the RMA website, <http://www.rma.usda.gov/policies/pasturerangeforage/>. Under the “Vegetation Index” heading, choose the “Grid ID Locator: Interactive Map.” On the Interactive Map page, enter a city name close to your operation. This will bring up a grid map that you may move around to zoom in, out, move map up, down, etc., until your grazing or haying land is represented by one or more grids. Keep track of the grid number(s). You will need them when purchasing coverage under the program.

You do not have to purchase coverage on 100% of your acreage. You can also use more than one grid index. You can separate your hay ground from your range and pasture acreage. You cannot however, elect to insure your acreage more than once in the plan year. It might be convenient to view the map and index grids with your crop insurance agent for assistance in assigning acreage to one or more grids based on the location and use of the insured acreage.

The next step is to determine at what coverage level you want to purchase insurance. Forage produced in a “normal year” in the grid(s) selected will be represented by 100%. The program allows producers to insure up to 90% of that production. Think of this in terms of car insurance, where normal forage production represents the value of the car and 90% represents the level of coverage purchased. The difference can be thought of as the “deductible” you are willing to cover yourself if you have a claim. Producers can choose 70-, 75-, 80-, 85-, or 90-percent coverage levels.

You also need to select a “protection factor.” A protection factor is a percentage multiplier that allows the insured to individualize coverage based on their individual crop productivity. Producers can select between 60% and 150% of the grid average.

If your average forage production is 20% higher than the grid average, your production factor would be 120%. However, if you choose this higher value, it will involve a higher premium. The higher

the protection factor, the higher the policy premium.

After deciding how many acres to insure and in which grid, the next step is to decide the index interval. The growing year for the Vegetation Index program is defined as April through October. Within this time period there are five vegetative intervals: April–June (II), May–July (III), June–Aug. (IV), July–Sept. (V), and Aug.–Oct. (VI).

Acres cannot be insured in overlapping intervals. For example, if acres are insured in interval IV (June–Aug.), then intervals II, III, V, and VI are not available because June, July, and August are part of those intervals as well. Each insured acre can only be insured in one interval during the plan year. Producers cannot place less than 10% of the insured acres in any one chosen interval.

PREMIUMS AND SUBSIDIES

Premiums are determined by the choices made by the producer at the time of sign-up and are evaluated individually for each index grid. Subsidy rates are more than 50% of the cost premium and are based on the level of coverage selected. There is no application fee.

Payments occur if the vegetation index falls below the normal vegetation index at the selected coverage level and protection factor. Payments are made once the vegetation index value and a resulting loss has been determined at the end of each time interval.

WEBSITE HELPS

The RMA website explains the program in detail and has an interactive worksheet (fig. 1) producers can use to evaluate various rates, productivity factors, and perfor-

Index Interval	Insured Acres per Index Interval	Policy Protection per Unit	Premium Rate per \$100	Total Premium (\$/acre)	Premium Subsidy (\$/acre)	Producer Premium (\$/acre)	Actual Index Value	Indemnity (\$/acre)
Jan-Mar								
Feb-Apr								
Mar-May								
Apr-Jun	5,000	\$39,600	13.70	\$1.09	\$0.55	\$0.53	121.1	\$0.00
May-Jul	N/A 2	\$0	14.82	\$0.00	\$0.00	\$0.00	74.1	\$0.00
Jun-Aug	N/A 2	\$0	15.06	\$0.00	\$0.00	\$0.00	50.2	\$0.00
Jul-Sep	5,000	\$39,600	19.66	\$1.56	\$0.79	\$0.76	46.8	\$5.70
Aug-Oct	N/A 2	\$0	21.73	\$0.00	\$0.00	\$0.00	103.1	\$0.00
Sep-Nov								
Oct-Dec								
Per Acre	N/A	N/A	N/A	\$1.32	\$0.67	\$0.65	N/A	\$2.85
Policy Total	10,000	\$79,200	N/A	\$13,211	\$6,737	\$6,473	N/A	\$28,512

County Base Value per Acre: \$8.80
 Dollar Amount of Protection per Acre: \$7.92
 Total Insured Acres: 10,000
 Total Policy Protection: \$79,200
 Subsidy Level: 51%

Figure 1. RMA Decision Support Tool

mance in years from 1989 to 2010. The decision tool gives producers an idea of the level of indemnity and returns from their insurance investments for their specific index grids (located in South Dakota). The decision tool and other information can be found at <http://www.rma.usda.gov/policies/pasturerangeforage/>. Figure 1 shows the decision tool.

WHERE TO PURCHASE COVERAGE

This insurance program is a group insurance plan available through private crop insurance providers. For a list of participating providers in your area, contact your local Farm Service Agency (FSA) office or the USDA RMA office in Billings, Mont., at (406) 657-6447.

EXAMPLE

A hypothetical producer has 10,000 acres of grazing land in Perkins County (see fig. 1). His land is located in index grid #47303 southwest of Lemmon, S.D. The index grid number was found by looking on the RMA website and selecting "Grid ID Locator: Interactive Map option under the Vegetation Index heading." The year being evaluated in this example is 2006.

This producer has elected to insure up to 90% of normal vegetation at a 100% productivity factor. He has also elected to split his insurable acres into vegetation index II and V with 5,000 acres in each. In other words, he is insuring 5,000 acres against forage loss between April 1 and June 30 and another 5,000 acres between July 1 and Sept. 30.

The program determined that the value of the protection per acre for this index grid in 2006 would have been \$7.92 per acre. The total value of protection provided by the policy would have been \$79,200. The premium charged is \$1.33 per acre with \$1.09 per acre in Interval II and \$1.56 per acre in Interval V. The total premium charge for this policy is \$13,211. However, the federal government, under USDA, subsidized 51% of the premium. The cost to the producer would have been \$6,473 for \$79,200 worth of coverage.

The historic index shows that in 2006 the actual index value for Interval II was 121.1, which would have been above the coverage selected in the policy. Hence, there would have been no indemnity payment to the producer for Interval II in 2006. However, in Interval V, the actual index value fell to 46.8, which resulted in an indemnity payment

of \$5.70 per acre, or a total payment to the producer of \$28,512.

This example can be evaluated for each year from 1989 to 2010. In many of those years the producer would have paid the premiums and received no payment, as forage production would have been at least 90% of "normal." In other years when significant drought occurred, the producer would have received a payment.

Your participating crop insurance agent can help you evaluate your forage insurance decisions under this pilot program.



South Dakota
Cooperative Extension Service

South Dakota State University, South Dakota counties, and U.S. Department of Agriculture cooperating. South Dakota State University is an Affirmative Action/Equal Opportunity Employer and offers all benefits, services, education, and employment opportunities without regard for race, color, creed, religion, national origin, ancestry, citizenship, age, gender, sexual orientation, disability, or Vietnam Era veteran status.

EXEX5059 Access at http://pubstorage.sdstate.edu/AgBio_Publications/articles/ExEx5059.pdf