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Federal Crop Insurance Corporation

Risk Management Agency

Product Administration and Standards Division

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RAINFALL AND VEGETATION INDEX INSURANCE STANDARDS HANDBOOK

2016 and Succeeding Crop Years

RISK MANAGEMENT AGENCY
KANSAS CITY, MO

TITLE: Rainfall and Vegetation Index Insurance Standards Handbook	**NUMBER: FCIC-18150**
EFFECTIVE DATE: August 31, 2015	**ISSUE DATE: August 31, 2015**
SUBJECT: **Provides the insurance standards for the Rainfall and Vegetation Index Plans of Insurance.**	**OPI: Product Administration and Standards Division** **APPROVED: August 31, 2015** /s/ *Tim B. Witt* **Tim B. Witt** **Deputy Administrator for Product Management**

REASON FOR ISSUANCE

This handbook provides the official FCIC-approved underwriting, administration, and review standards for the Rainfall and Vegetation Index plans of insurance for the 2016 and succeeding crop years.

This handbook:

(1) replaces the 2013 Rainfall and Vegetation Index Insurance Standards Handbook to add Annual Forage, remove references of VI-PRF, change VI examples to reflect API only, add information on irrigated hay and remove information now included in the DSSH and GSH;

(2) may be amended through issuance of slip-sheets or bulletins from RMA or FCIC; and

(3) will remain in effect until rescinded or replaced.

CONTROL CHART

Rainfall and Vegetation Index Insurance Standards Handbook						
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FILING INSTRUCTIONS

This handbook replaces the RMA-18150 Rainfall and Vegetation Index Insurance Standards Handbook issued in August, 2013. This handbook is effective for the 2016 and succeeding crop years and is not retroactive to any 2015 or prior crop year determinations.

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EXHIBITS

PART 1 GENERAL INFORMATION AND RESPONSIBILITIES

1 General Information

A. Handbook Purpose

This handbook provides procedures and information for administering the Rainfall and Vegetation Index plans of insurance.

B. Source of Authority

The Rainfall and Vegetation Index plans of insurance are authorized under Section 522(c) of the Federal Crop Insurance Act. Initially the only crop covered was pasture, rangeland and forage. However, other products that utilized the provisions of the Rainfall and Vegetation Index plans of insurance were approved by the FCIC Board of Directors under Section 508(h) of the Federal Crop Insurance Act.

The pasture, rangeland, forage program is a RMA developed product approved by the FCIC Board of Directors under Section 522(c) of the Federal Crop Insurance Act. The apiculture and the annual forage programs are privately developed products approved by the FCIC Board of Directors under Section 508(h) of the Federal Crop Insurance Act.

The Rainfall Index programs and the Vegetation Index 508(h) program are not codified in the C.F.R.

C. Duration

The apiculture, annual forage, and pasture, rangeland, forage programs will continue until cancelled by FCIC or no premium rate is filed for the crop.

D. AIP Option to Offer

Because it is a privately developed product, AIPs are not required to offer the apiculture or the annual forage programs. Accordingly, each AIP must determine whether they will offer the apiculture or the annual forage program. AIPs that elect to offer the apiculture or the annual forage program must offer it to all eligible producers and must administer the program according to the Rainfall and Vegetation plans of insurance, apiculture or annual forage crop provisions, and the procedures in this handbook.

Because it is a RMA developed product, AIPs are required to offer the pasture, rangeland, forage program to all eligible producers and must administer the program according to the Rainfall and Vegetation plans of insurance, pasture, rangeland, forage crop provisions, and the procedures in this handbook.

1 General Information (Continued)

E. Related Handbooks

The following table provides handbooks related to this handbook.

Important: Not all sections of related handbooks or all procedures in a section apply to Rainfall and Vegetation plans of insurance.

Handbook	Relation/Purpose
GSH	General standards procedures, providing the official FCIC approved standards for policies administered by AIPs.
DSSH	Form standards and procedures, and required statements and disclosures.

F. AIPs and Agents

AIP's may authorize contracted agents to perform all functions and actions provided in this handbook, except for:

(1) determining whether to offer the Apiculture or Annual Forage according to subparagraph D;
(2) reviews;
(3) developing forms and certification statements.

2 Terminology for Apiculture

For ease in the administration of the terms and to avoid the duplication of this handbook or parts of this handbook, when referring to apiculture or the apiculture crop provisions in this handbook the term "acre" is replaced with "colony" and "acres" and "acreage" are replaced with "colonies."

Exception: When referring to "contiguous acreage" the term "acreage" is not replaced with "colonies."

3 Disclaimer Statements

Insureds must sign and be provided a copy of the applicable disclaimer statement provided in exhibit 5. The disclaimer statements provide general information about how the Rainfall and Vegetation Index plans of insurance work and certain aspects of the plans the insured needs to understand.

AIPs must not modify the disclaimers statements provided in exhibit 5.

4 Responsibilities

A. AIP's Responsibilities

AIPs:

(1) must provide persons insured under the Rainfall and Vegetation Index plans of insurance a copy of the Rainfall and Vegetation Index Plan Common Policy and the applicable crop policy;

(2) must report any program issues or concerns related to the Rainfall and Vegetation Index plans of insurance or associated crop policies to RMA, Director of PASD;

(3) electing to offer the apiculture or annual forage programs must offer the program(s) to all eligible producers in the area where the program is offered;

(4) must offer the pasture, rangeland, forage program to all producers where the program is offered; and

(5) must print, and maintain for 3 years, the grid locator map from the RMA web site that clearly shows the point of reference selected by the insured. AIPs are not required to reprint maps every 3 years when no changes have occurred, but must maintain maps.

B. Insured's Responsibilities

To be insured under the Rainfall and Vegetation Index plans of insurance, an insured must:

(1) comply with all terms and conditions of the policy; and
(2) when completing their application, sign applicable disclaimer statement in exhibit 5.

5-10 (Reserved)

PART 2 RAINFALL AND VEGETATION INDEX COMMON PROCEDURES

11 Overview

This part provides procedures that are common to both the Rainfall and Vegetation Index plans of insurance.

12 Provisions Not Applicable to Rainfall or Vegetation Index Plans

The following are not applicable to the Rainfall or Vegetation Index plans of insurance.

(1) Hail and fire exclusion provisions.
(2) High-risk land exclusion option/provisions.
(3) Late planting provisions.
(4) Replant provisions, except as they apply to first and second crop provisions.
(5) Replanting payment provisions.
(6) Prevented planting provisions.
(7) Experience adjustment factors.
(8) Production Reporting
(9) Optional units.
(10) Enterprise units.
(11) Whole farm units.

13 Productivity Factor

Both the Rainfall and Vegetation Index plans of insurance utilize a productivity factor that allows the insured to individualize their coverage based on the productivity of the acreage insured. Insureds may elect a productivity factor between 60 and 150, in 1 percent increments, and only one productivity factor can be selected by county, crop, and intended use.

Example: Insured A is insuring alfalfa acreage with an intended use of haying in a county with a county base value of $269.54 per acre. Insured A believes the alfalfa acreage has a greater value than the county base value and selects a productivity factor of 115, thereby increasing the dollar amount of protection per acre by 15 percent. If insured A believed the alfalfa acreage had less value than the county base value, a productivity factor less than 100 could have been selected, thereby reducing the dollar amount of protection per acre.

14 Percent of Value

Insureds must allocate, on their application, a percent of value to each unit. The percent of value allows insureds with more than one unit to individualize their coverage within the requirements of the program. Using the percent of value, insureds can allocate a percentage of the total insured value to each selected index interval.

Example: Insured A has a 100 percent share in 1,000 insurable acres in the grid and elects to insure all 1,000 acres with an intended use of grazing. The county base value is $20.00 per acre. Insured A selects a 90 percent coverage level, 120 percent productivity factor, and the April - May and July - August index intervals.

14 Percent of Value (Continued)

The dollar amount of protection per acre is $21.60 ($20.00 x .90 x 1.20), and the total policy protection is $21,600 ($21.60 x 1,000 acres). Insured A allocates 60 percent of the total value to the April - May index interval and 40 percent to the July - August index interval.

Based on Insured A's allocation, the policy protection amount for the unit comprised of the April - May index interval is $12,960 ($21.60 x 1,000 acres x 60 percent of value x 1.00 share). The policy protection amount for the unit comprised of the July - August index interval is $8,640 ($21.60 x 1,000 acres x 40 percent of value x 1.00 share). The total policy protection amount ($21,600) does not change.

Regardless of how the total value is allocated between index intervals, the sum of the percentages for all index intervals, by grid ID, share, irrigated practice (if applicable), and intended use, must equal 100 percent.

There may be a minimum and maximum percent of value that can be allocated to an index interval. See the crop provisions and actuarial documents for more information about minimum and maximum amounts that may be allocated.

15 Selecting a Grid

The insured must select the grid where the insured acreage is physically located, or assigned if contiguous acreage, by providing a point of reference. The grid must be selected using the maps contained on RMA's web site.

The size of the grids is different between the Rainfall and Vegetation Index plans. See part 3 and part 4 for information about the grid size for the Rainfall Index and Vegetation Index plan, respectively.

See part 5 for instructions on how to select a grid.

16 Intended Use

Pasture, rangeland, forage acreage must be reported and insured with an intended use of either haying or grazing, as selected by the insured.

Under no circumstances can the same acreage be reported or insured with an intended use of both haying and grazing in the same crop year. If the insured intends to hay and graze the acreage to be insured and the acreage meets the requirements to be insured as either, the insured must select only one intended use for the acreage.

17 Forms and Statements

The DSSH procedures and standards for forms must be adhered to unless otherwise specified in this handbook. Exhibit 5 provides disclaimer statements that must be signed by each person insured under the Rainfall or Vegetation Index plans of insurance.

18 Modifying Acreage Reports

On or before the acreage reporting date, an insured may modify their acreage report for any reason. After the acreage reporting date an acreage report may be modified only:

(1) to correct a clear error, such as the number of acres reported was 871.0 instead of 87.1; and
(2) if the AIP agrees to the modification.

Acreage reports modified after the acreage reporting date must be identified as "corrected."

19 Quality Control Reviews

The SRA, Appendix IV, provides the quality control review requirements for Rainfall and Vegetation Index policies.

20 Loss Adjustment

There are no loss adjustment activities under the Rainfall or Vegetation Index plans of insurance.

21-30 (Reserved)

PART 3 RAINFALL INDEX

31 Rainfall Index Design

The Rainfall Index plan of insurance is a risk management tool to insure against a decline in an index value that is based on the long-term historical average precipitation for the grid and index interval. It is best suited for producers whose production tends to follow and correlate to the historical average precipitation patterns for the grid.

The Rainfall Index plan of insurance:

(1) does **not** measure, capture, or utilize the actual crop production of any producer or any of the actual crop production within the grid; and

(2) utilizes NOAA CPC gridded interpolated precipitation data.

See paragraph 33 for more information about NOAA CPC gridded precipitation data.

Historical indices information for each grid ID and index interval is available on RMA's web site. This information must be used by producers and agents to determine whether the producer's production history follows and correlates to average precipitation patterns for the grid.

32 Grid Area and Index Intervals

A. Grid Area

Unlike other Federal crop insurance area plans of insurance that are based on county boundaries, the Rainfall Index plan of insurance utilizes a numbered grid system. Each grid covers an area equal to .25 degrees in latitude by .25 degrees in longitude. The grids do not follow state, county, or other geopolitical boundaries.

The grids for the Rainfall Index plan of insurance are created by NOAA CPC. Each grid is assigned a specific grid ID, and is individually rated based on the NOAA CPC interpolated historical precipitation data for that grid.

The applicable NOAA CPC data may not be available for grids that extend beyond the United States borders. Without the applicable NOAA CPC data, RMA cannot determine premium rates for acreage physically located entirely within such grids. Therefore, acreage physically located entirely within such grids is not eligible for insurance under the Rainfall Index plan of insurance.

B. Index Intervals

NOAA CPC gridded precipitation data is obtained, by grid, for the following 11 specific 2-month time periods, referred to as index intervals, during a year. Historical NOAA CPC gridded data since 1948 is also obtained, by grid, for each index interval.

(1) January and February.
(2) February and March.
(3) March and April.

B. Index Intervals (continued)

(4) April and May.
(5) May and June.
(6) June and July.
(7) July and August.
(8) August and September.
(9) September and October.
(10) October and November.
(11) November and December.

Not all index intervals are available in all counties. See the actuarial documents to determine which index intervals are available.

C. Selecting Index Intervals

A minimum of two index intervals must be selected for acreage insured under the Rainfall Index plan of insurance. Which index intervals to select are determined by the insured. Selection of index intervals is **critical** to the effectiveness of the Rainfall Index plan of insurance as a risk management tool.

Factors to be considered when determining which index intervals to select include, but are not limited to, type of forage or plant to be pollinated, location, elevation, intended use, and the time period when precipitation is needed under normal conditions for the insured crop.

Selecting index intervals when precipitation is not needed for the insured crop or when precipitation does not normally occur is not an effective use of the Rainfall Index plan of insurance nor is insuring periods when livestock or colonies will be on the property unless that corresponds to when precipitation is critical.

Example: Based on the location of the land, type of grass, and intended use, precipitation is needed in the months of March, April, May, and June for the grass to produce a normal amount of forage under normal conditions during the normal growing season. Selecting index intervals before March or after June would not be an effective use of the Rainfall Index plan of insurance because precipitation received during those index intervals is not as needed for the normal growing season.

33 Precipitation Data

A. NOAA CPC Precipitation Data

The NOAA CPC precipitation data is not simply the measurement of precipitation from a specific rain gauge(s) or reporting station(s) within a grid. Each day, NOAA CPC obtains data from the four reporting stations closest to the center of the grid that report data for that day. The closest reporting station may be located outside the grid for which the data will be used. Each day, different reporting stations may be used because not all reporting stations

A. NOAA CPC Precipitation Data (continued)

report data every day. Accordingly, the gridded precipitation data used is an interpolated value for the entire grid and cannot be traced to a single point or reporting station(s).

A. NOAA CPC Precipitation Data (continued)

RMA does not receive the daily precipitation amount or which reporting station data was used. NOAA CPC data is accepted and used by other government agencies and private entities, and undergoes a rigorous quality control process by the CPC to ensure accuracy.

B. Producer Precipitation Data

Precipitation data maintained by producers or any other source other than NOAA CPC is **not** used in any manner under the Rainfall Index plan of insurance.

The precipitation data used may not match the amount of precipitation received by a producer in a specific location(s) because it is an interpolated value for the entire grid and index interval.

C. Expected and Final Grid Index

An expected grid index is calculated for each grid ID and index interval using the long-term historical gridded precipitation data for the grid ID and index interval. The expected grid index represents the average precipitation for the grid ID during the index interval based on NOAA CPC data from 1948 to two years prior to the crop year.

Example: The expected grid indexes for 2013 crop year represents the average precipitation based on NOAA CPC data from 1948 through 2011.

A final grid index is based on NOAA CPC precipitation data, and is expressed as a percentage. An index of 100 represents average precipitation, an index below 100 represents below average precipitation, and an index above 100 represents above average precipitation. Only the precipitation received during the index interval is used to determine a final grid index. Precipitation received during prior index intervals has no effect on the final grid index for subsequent index intervals.

Example: Precipitation received during the index interval that includes both April and May has no effect on the final grid index for the index interval that includes both June and July.

The NOAA CPC data used to calculate the expected and final grid index is conclusively presumed to be accurate. RMA does **not** alter the NOAA CPC data.

34 Cause of Loss and Indemnity Payments

A. Cause of Loss

The Rainfall Index plan of insurance only covers a decline from the long-term historical normal interpolated precipitation for a grid and index interval, it does not cover other perils such as, but not limited to, flood, fire, and hail.

B. Indemnity Payments

Indemnity payments are earned by eligible insureds only when the final grid index is less than the trigger grid index. The insured's amount of production is not considered when determining eligibility for an indemnity payment.

Because the Rainfall Index plan of insurance is an area plan and does **not** measure, capture, or utilize any actual crop production, an insured may experience a loss of production and **not** receive an indemnity payment. However, it is also possible for an insured to receive an indemnity payment without suffering a loss of actual production.

The NOAA CPC data used to calculate the expected and final grid index is conclusively presumed to be accurate. RMA does **not** alter the NOAA CPC data.

35-50 (Reserved)

PART 4 VEGETATION INDEX

51 Vegetation Index Design

The Vegetation Index plan of insurance is a risk management tool to insure against a decline, caused by natural occurrences, in an index value that is based on the long-term historical average for the same area of land for the same period of time. It is best suited for producers whose past production correlates with the historical average vegetation index patterns for the grid.

The Vegetation Index plan of insurance:

(1) does **not** measure, capture, or utilize the actual crop production of any producer or any of the actual crop production within the grid; and

(2) utilizes NDVI data obtained from U.S. Geological Survey EROS.

See paragraph 53 for more information about U.S. Geological Survey EROS NDVI data.

Historical indices information for each grid ID and index interval is available on RMA's web site. This information can be used by producers and agents to determine whether the producer's production history correlates with the historical average vegetation index patterns for the grid.

52 Grid Area and Index Intervals

A. Grid Area

Unlike other Federal crop insurance area plans of insurance that are based on county boundaries, the Vegetation Index plan of insurance utilizes a numbered grid system. Each grid covers an area equal to approximately an 8 kilometer by 8 kilometer area. The grids do not follow state, county, or other geopolitical boundaries.

The grids for the Vegetation Index plan of insurance are created by RMA using U.S. Geological Survey EROS 1 kilometer by 1 kilometer gridded data aggregated to an 8 kilometer by 8 kilometer area. Each grid is assigned a specific grid ID, and is individually rated based on the U.S. Geological Survey EROS historical NDVI data for that grid.

B. Index Intervals

NDVI data is obtained, by grid, for the following 10 specific 3-month time periods, referred to as index intervals, during a year. Historical NDVI data since 1989 is also obtained, by grid, for each index interval.

(1) January, February, and March.
(2) February, March, and April.
(3) March, April, and May.
(4) April, May, and June.
(5) May, June, and July.
(6) June, July, and August.
(7) July, August, and September.

B. Index Intervals (continued)

(8) August, September, and October.
(9) September, October, and November.
(10) October, November, and December

Not all index intervals are available in all counties. See the actuarial documents to determine which index intervals are available.

C. Selecting Index Intervals

Which index intervals to select are determined by the insured. Selection of index intervals is **critical** to the effectiveness of the Vegetation Index plan of insurance as a risk management tool.

Factors to be considered when determining which index intervals to select include, but are not limited to, type of plant being pollinated, location, elevation, other biomass within the grid, and the time period when vegetative growth is needed for sustaining colonies under normal conditions.

Selecting index intervals when vegetative growth does not normally occur or is not needed is not an effective use of the Vegetation Index plan of insurance.

Example: Based on the location of the land and type of plant being pollinated, flowering normally occurs in the months of April, May, and June. Selecting index intervals before April or after June would not be an effective use of the Vegetation Index plan of insurance because vegetation growth important to pollination normally does not occur during those index intervals.

53 NDVI Data

A. U.S. Geological Survey EROS NDVI Data

NDVI is a measure indicating the density of photosynthetic biomass on the ground based on the processing of satellite imagery. Photosynthesis activity of all biomass, including row crops, irrigated crops, trees, and even weeds is included in the NDVI data. The NDVI data is obtained from the U.S. Geological Survey EROS data center. The NDVI data is readily accepted worldwide and undergoes a rigorous quality control process before being released by the EROS data center.

RMA does not alter the U.S. Geological Survey EROS NDVI data.

B. Expected and Final Grid Index

An expected grid index is calculated for each grid ID and index interval using the long-term historical average NDVI data for the grid ID and index interval. The expected grid index represents the average density of photosynthetic biomass on the ground within the grid ID during the index interval based on NDVI data from 1989 to two years prior to the crop year.

B. Expected and Final Grid Index (continued)

Example: The expected grid indexes for 2013 crop year represents the average density of photosynthetic biomass on the ground based on U.S. Geological Survey EROS NDVI data from 1989 through 2011.

A final grid index is based on U.S. Geological Survey EROS current NDVI gridded data, and is expressed as a percentage. An index of 100 represents average NDVI value, an index below 100 represents below average values, and an index above 100 represents above average values.

NDVI measurements are obtained for each grid throughout the index interval and are averaged to determine the final grid index for each grid. Each EROS bi-weekly composite value within the index interval is given equal weight when determining the final value. Therefore, readings taken during the beginning or end of an index interval do not have a greater significance than any other reading during the index interval. However, the density of photosynthetic biomass on the ground in the **prior** index interval does have a carryover affect and can impact the final grid index of the subsequent index interval.

Example: Higher than normal spring temperatures result in higher than normal density of photosynthetic biomass on the ground in April, May, and June. The higher than normal density of biomass carried over into July and August, was reflected in the NDVI measurements for those months, and impacted the final grid index for the July, August, and September index interval.

The U.S. Geological Survey EROS NDVI data used to calculate the expected and final grid index is conclusively presumed to be accurate. RMA does **not** alter the U.S. Geological Survey EROS NDVI data.

54 Cause of Loss and Indemnity Payments

A. Cause of Loss

The Vegetation Index only covers a decline, caused by natural occurrences, from the long-term historical average NDVI value for a grid and index interval.

B. Indemnity Payments

Indemnity payments are earned by eligible insureds only when the final grid index is less than the trigger grid index. The insured's amount of production is not considered when determining eligibility for an indemnity payment. Because the Vegetation Index plan of insurance is an area plan and does **not** measure, capture, or utilize any actual crop production, an insured may experience a loss of production and **not** receive an indemnity payment. However, it is also possible for an insured to receive an indemnity payment without suffering a loss of actual production.

55-70 (Reserved)

PART 5 IDENTIFYING ACREAGE AND GRID ID

71 Use of RMA Web Site

The grid ID is determined based on a point of reference selected by the insured using the interactive maps and tools on RMA's web site. The point of reference must be provided using the maps and tools contained on RMA's web site. RMA's web site allows a user to navigate through various pages to collect information, identify land, establish a point of reference and determine the grid ID.

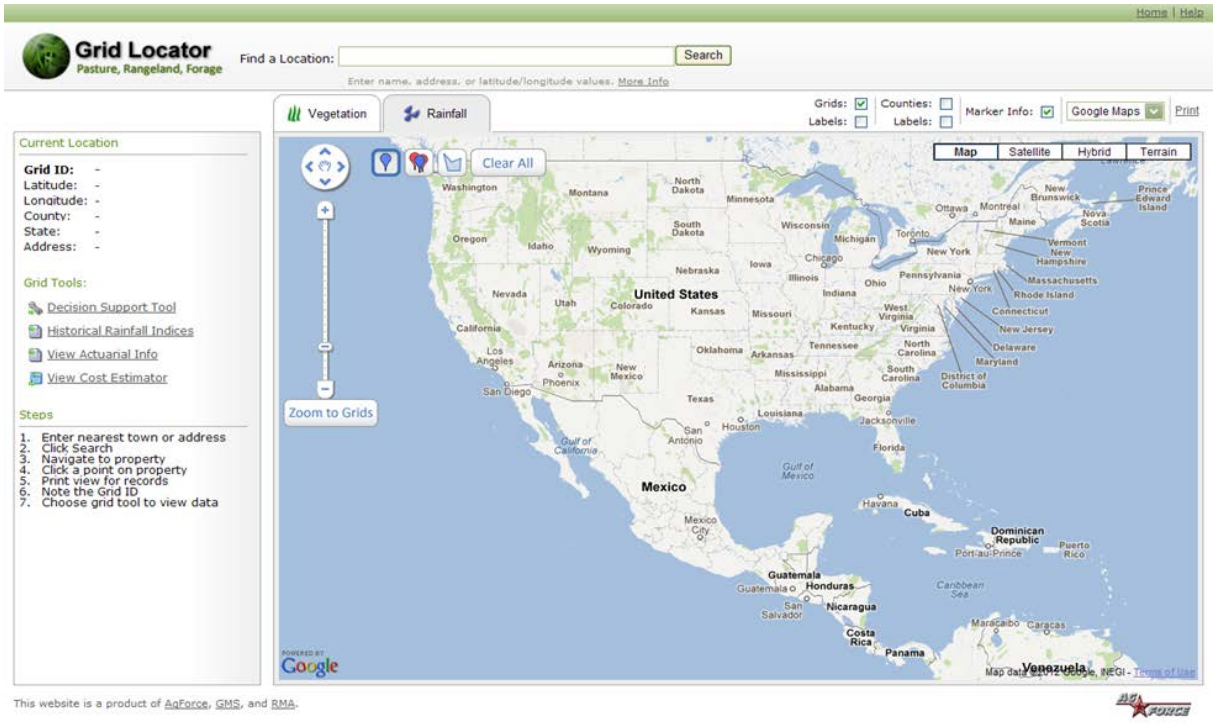
A direct link, titled "Grid ID Locator, Decision Support Tool, Historical Indices," to the maps and tools is located on the specific crop page. The specific crop pages can be accessed from the Rainfall and Vegetation Indices page. The link takes the user to the "Grid Locator" page for the crop selected.

The example web pages and maps provided in this part are for pasture, rangeland, forage under the Rainfall Index plan of insurance. There are slight differences in some of the web pages between the pasture, rangeland, forage, annual forage, and apiculture; however, the basic design, functionality, and navigation are the same.

72 Grid Locator

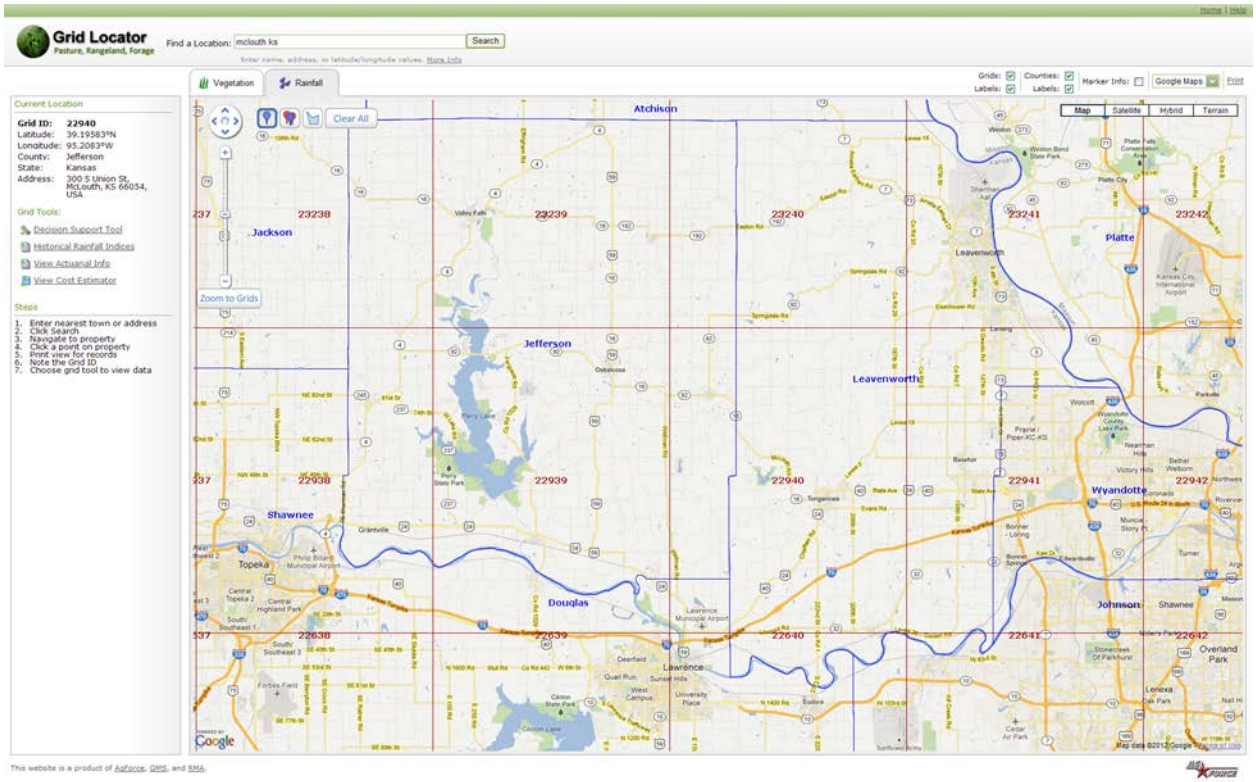
The user may select different view options for the Grid Locator map. Options include the standard, which is the default, satellite, hybrid, and terrain map views. The map size can be changed by using the "Zoom to Grids" bar located to the left of the map. Grid IDs and boundaries and county names and boundaries can be displayed by selecting the applicable boxes located above the map. Additional tools and information are located to the left of the map.

The following is an example of the Grid Locator page for pasture, rangeland, forage.



72 Grid Locator (Continued)

The following is an example of the Grid Locator page for pasture, rangeland, forage zoomed in to display county names and boundaries and grid IDs and boundaries. In the example, the grid boundaries are outlined with red lines and the county boundaries are outlined with a blue line.



73 Identifying Acreage

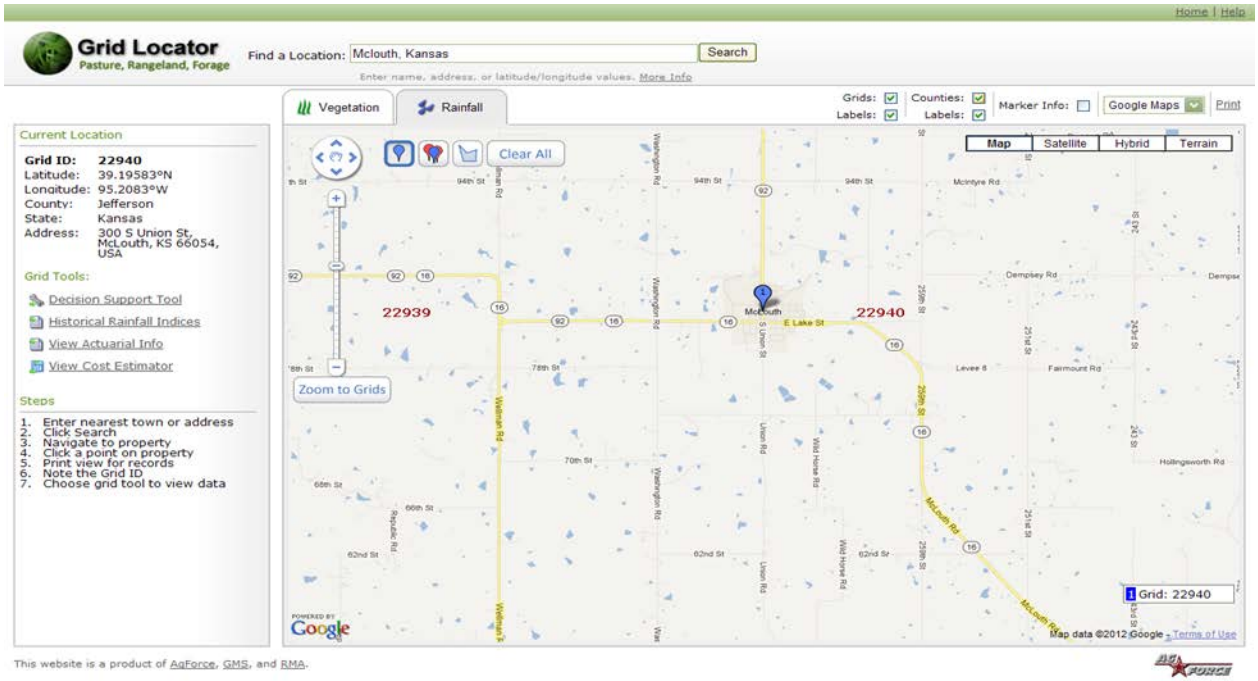
A. Locating an Insured's Acreage

The Grid Locator map and tools provide multiple options for identifying the insured's acreage to establish a point of reference and determine the grid ID. The following table provides one method for locating the insured's acreage.

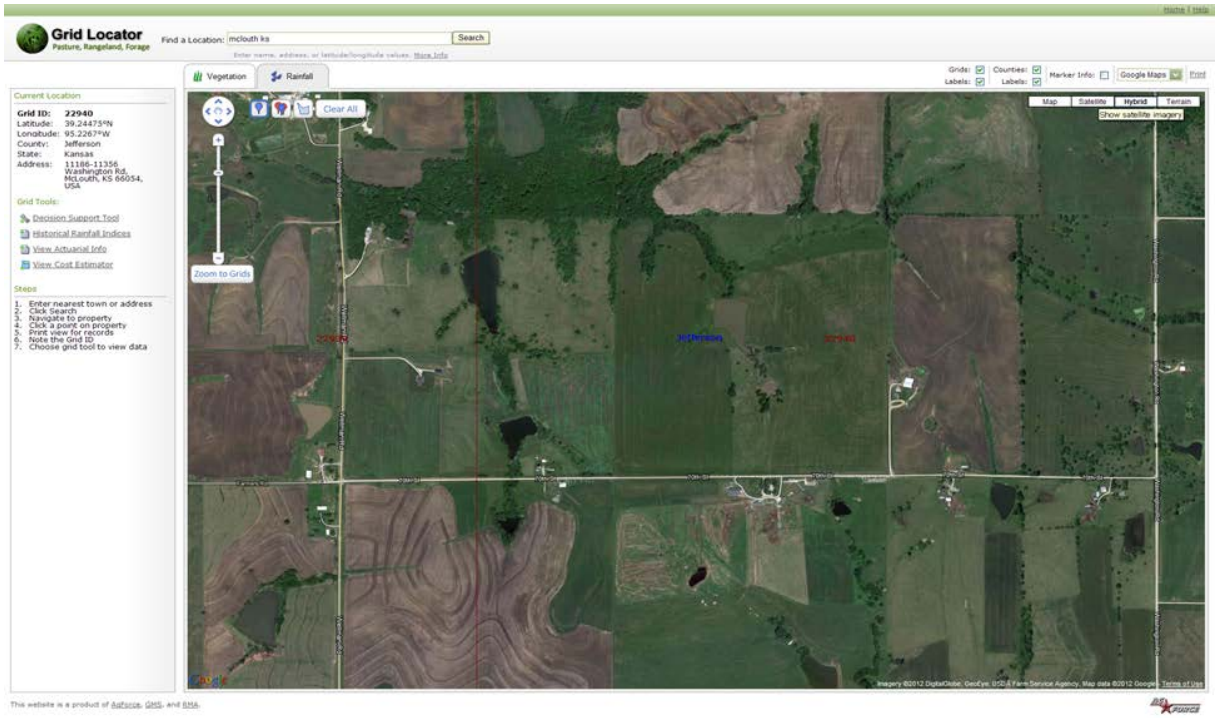
Step	Action
1	In the "Find a Location" search box located at the top of the Grid Locator page, enter the city and state near the acreage to be insured, or the county and state in which the acreage to be insured is physically located, then click the "Search" button.
2	Navigate close to where the acreage to be insured is physically located by using the directional arrows above the Zoom to Grids bar. Use of the zoom function and alternative map views may help identify roads, ponds, buildings, rivers, or other landmarks or features that will help navigate to the applicable acreage.
3	Use the zoom function and directional arrows to display the acreage to be insured in enough detail that a point of reference can be established within the field boundaries.

A. Locating Insured's Acreage (continued)

The following is an example of the Grid Locator page for pasture, rangeland, forage when "Mclouth, Kansas" is searched by using the "Find a Location" search box.



The following is an example of the Grid Locator page for pasture, rangeland, forage using the hybrid map view to navigate to acreage located a few miles from Mclouth, Kansas using roads and other landmarks to locate the acreage.



B. Determining Grid ID

The point of reference selected by the insured will determine the grid ID. The insured must establish a point of reference for the acreage to be insured. AIPs must print, and maintain for 3 years as outlined in Part 1, the grid locator map from the RMA web site that clearly shows the point of reference selected by the insured.

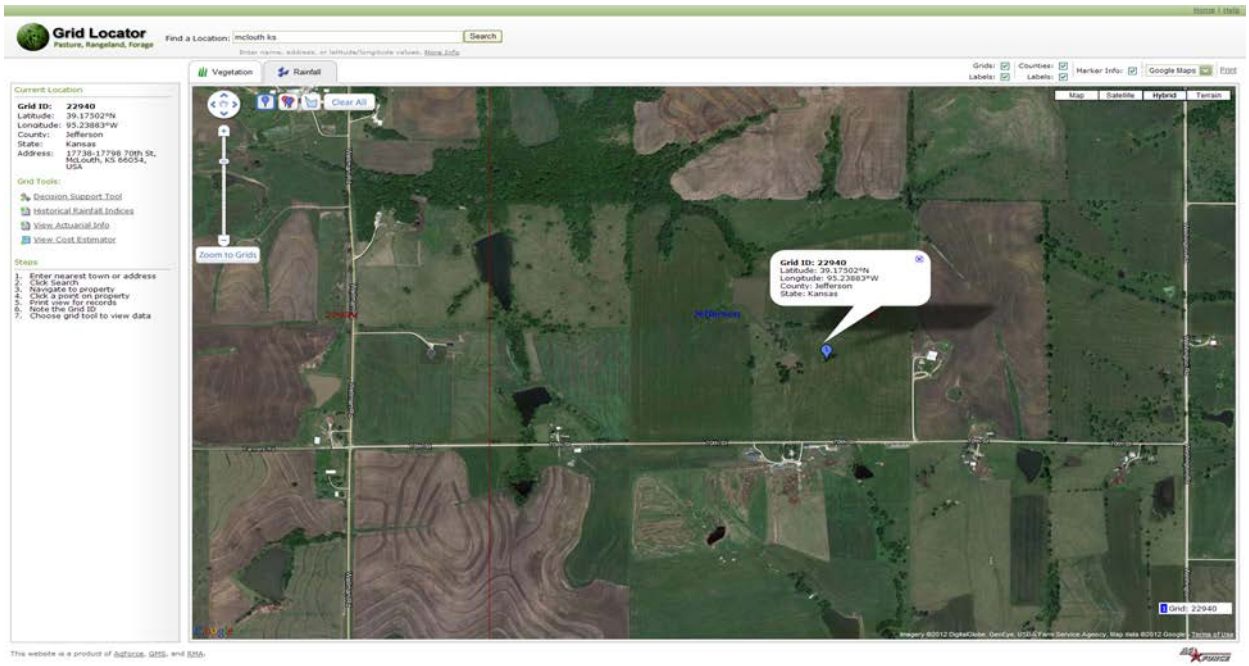
Establish a point of reference by positioning the curser within the boundaries of the acreage to be insured and clicking the left mouse button. A blue or red point of reference symbol will be displayed on the map where the point of reference is established. In addition, a popup information balloon containing the following for the point of reference will display.

(1) Grid ID.
(2) Latitude.
(3) Longitude.
(4) County.
(5) State.

The same information will display to the left of the map under "Current Location." Use the zoom function and different map views to identify the acreage to be insured and ensure the point of reference is accurate and within the boundaries of acreage to be insured.

If the point of reference selected is not within the boundaries of the acreage to be insured, remove the point of reference by clicking the "Clear All" button in the upper left hand corner of the map.

The following is an example of the Grid Locator page with a point of reference established for acreage located in grid ID 22940 a few miles from Mclouth, Kansas.



74 Point of Reference

The point of reference identifies the acreage to be insured and determines the grid ID. Insureds may need to provide multiple points of reference depending on the acreage and crop insured.

Important: The same acres cannot be insured in more than one grid ID or county. The total amount of an insured's insured acres of the crop in a county cannot exceed 100 percent of the insured's insurable acreage of the crop in the county.

The following table provides a reference for determining how many points of references are needed.

IF the crop is …	**AND the acreage is …**	**AND the intended use and practice (where applicable) is……**	**AND the insured chooses to …**	**THEN the insured must establish a point of reference …**
pasture, rangeland, forage	noncontiguous	the same for all the acreage		within the acreage boundaries for each of the noncontiguous acreage in a grid. See subparagraph 75 A for examples.
		different for part of the acreage		for each intended use or when a producer has both an irrigated and non-irrigated hay practice within the acreage boundaries for the noncontiguous acreage in a grid. See subparagraph 75 B for examples.
	contiguous	the same for all the acreage	combine the contiguous acreage into one grid	within the acreage boundaries within the grid selected by the insured. See subparagraph 76 B for examples.
			separate the contiguous acreage into separate grids	within the acreage boundaries within each grid selected by the insured. See subparagraph 76 B for examples.
		different for part of the acreage	combine the contiguous acreage into one grid	for each intended use or when a producer has both an irrigated and non-irrigated hay practice within the acreage boundaries within the grid selected by the insured. See subparagraph76 C for examples.
			separate the contiguous acreage into separate grids	for each intended use or where the producer has both an irrigated and non-irrigated hay practice within the acreage boundaries within each grid selected by the insured. See subparagraph 76 C for examples.

74 Point of Reference (Continued)

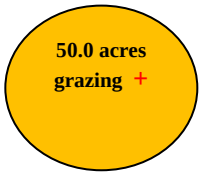
Apiculture and Annual Forage	Noncontiguous			within the acreage boundaries for each of the noncontiguous acreage in a grid. See subparagraph 75 C.
	Contiguous		combine the contiguous acreage into one grid	within the acreage boundaries within the grid selected by the insured. See subparagraph 76 D.
			separate the contiguous acreage into separate grids	within the acreage boundaries within each grid selected by the insured. See subparagraph 76 D.

75 Noncontiguous Acreage - Point of Reference

A. Pasture, Rangeland, Forage with the Same Intended Use and Irrigation Practice

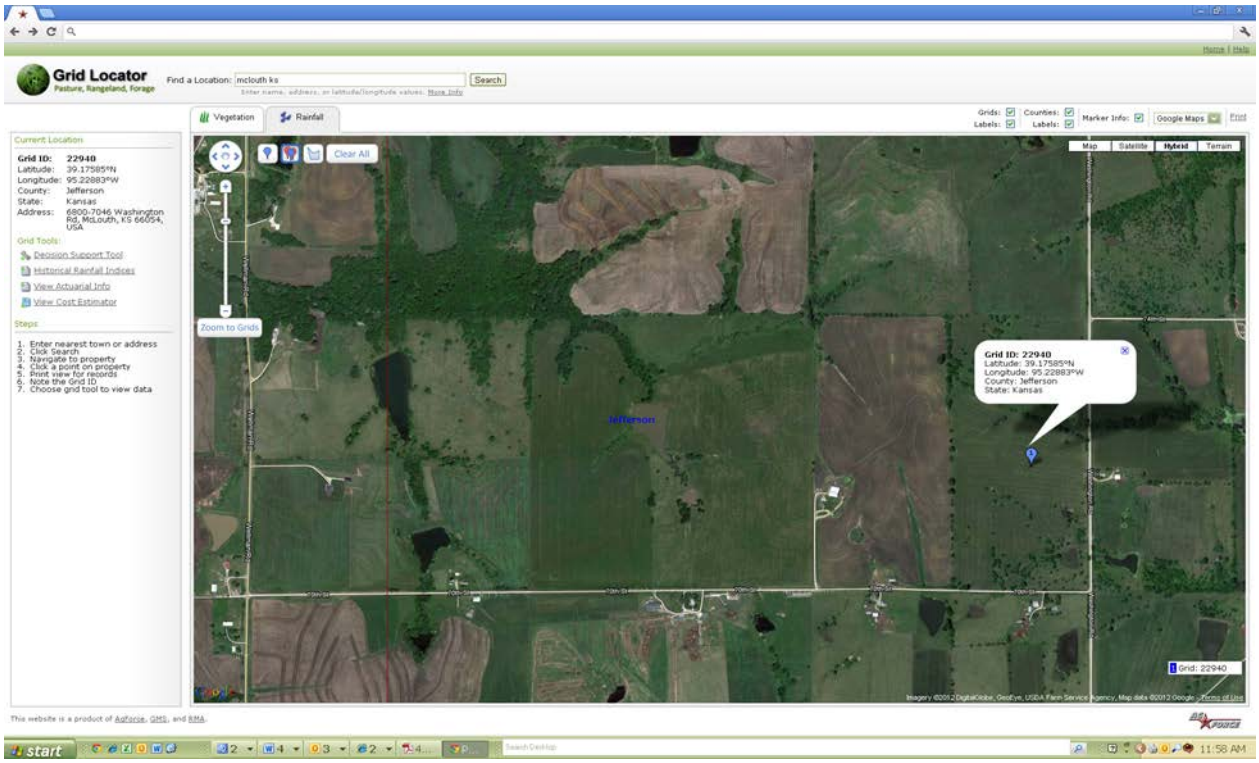
For noncontiguous acreage in a grid, the insured must establish a point of reference, by intended use and irrigation practice; if applicable, within the acreage boundaries.

The following is an example of noncontiguous acreage with all acreage having the same intended use and irrigation practice. Only one point of reference is required because it is noncontiguous acreage with the same intended use and irrigation practice. The red "+" represents the point of reference.

Grid 1 	Grid 2
Grid 3	Grid 4

The following is an example of the Grid Locator page with a point of reference established for noncontiguous acreage. Only one point of reference is required because it is noncontiguous acreage with the same intended use and irrigation practice for all the acreage.

A. Pasture, Rangeland, Forage with the Same Intended Use (continued)



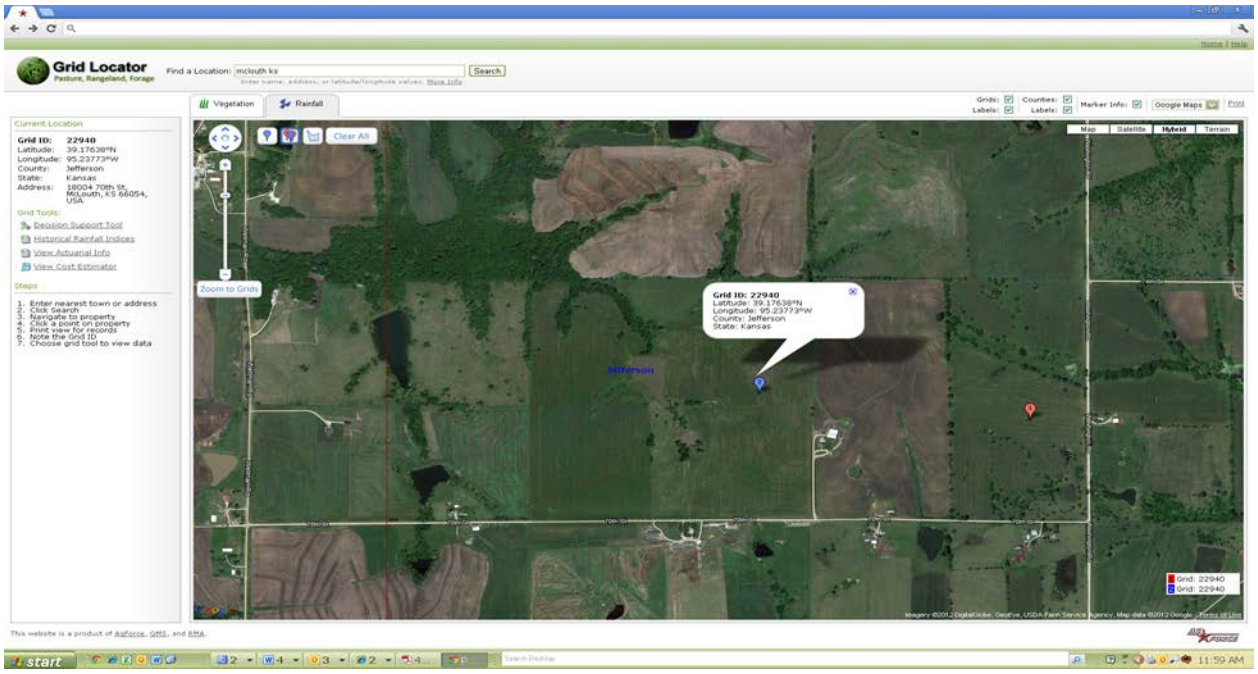
Click the icon with the three point of reference symbols located in the upper left hand corner of the map to establish multiple points of reference on the map. The border of the icon will be blue when selected. Each point of reference will remain displayed on the map.

The following is an example of two separate noncontiguous fields with all acreage in both fields having the same intended use and irrigation practice. A point of reference must be established for each field because they are noncontiguous fields. The red "+" represents the point of reference.

Grid 1 **50.0 acres grazing** + **50.0 acres grazing** +	Grid 2
Grid 3	Grid 4

A. Pasture, Rangeland, Forage with the Same Intended Use (continued)

The following is an example of the Grid Locator page with two points of reference established. There are two separate noncontiguous fields in the same grid with all acreage in both fields having the same intended use and irrigation practice. A point of reference must be established for each field because they are separate noncontiguous fields.

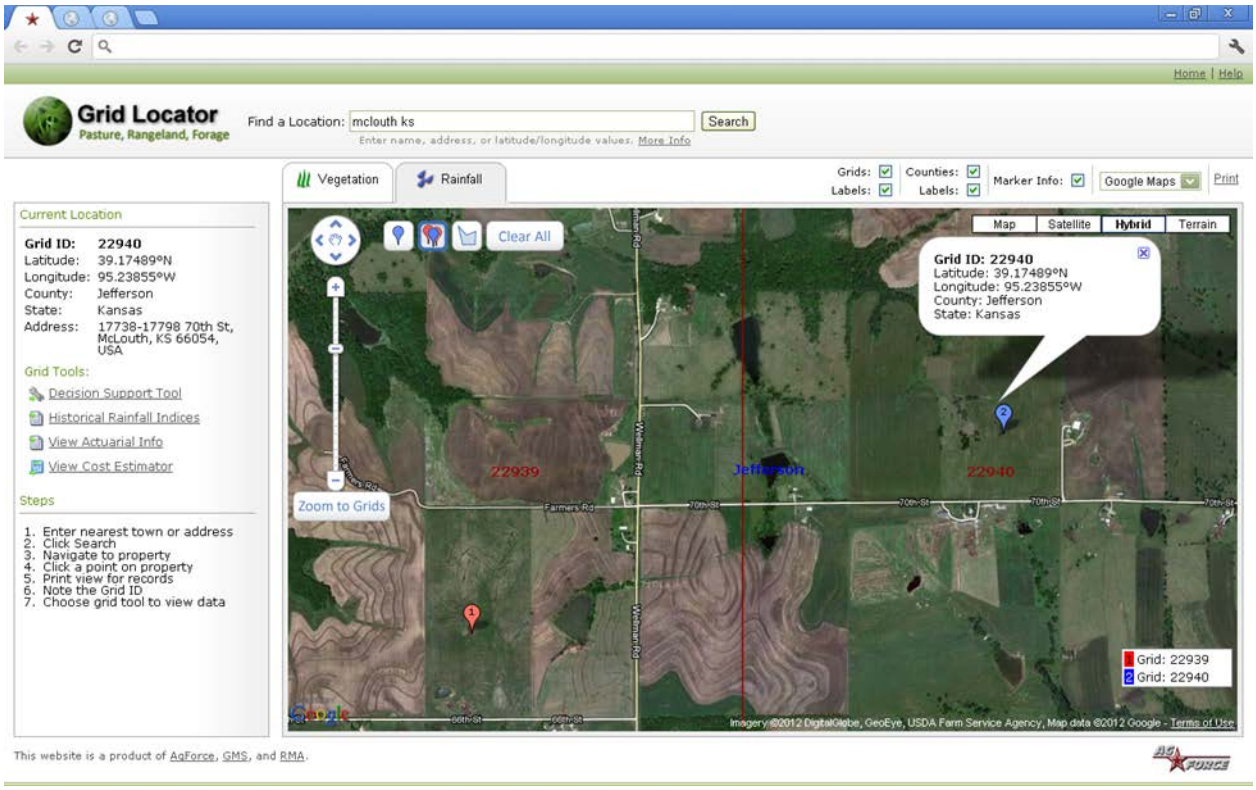


The following is an example of two noncontiguous fields located in separate grids. All acreage in both fields has the same intended use and irrigation practice. A point of reference must be established for each field because they are noncontiguous fields located in separate grids. The red "+" represents the point of reference.

Grid 1 **50.0 acres grazing** +	Grid 2
Grid 3	Grid 4 **50.0 acres grazing** +

The following is an example of the Grid Locator page with two points of reference established. There is one noncontiguous field in grid ID 22939 and another noncontiguous field in grid ID 22940. A point of reference must be established for each field because they are separate noncontiguous fields located in separate grids.

A. Pasture, Rangeland, Forage with the Same Intended Use (continued)



B. Pasture, Rangeland, Forage with the More Than One Intended Use or Irrigation Practice

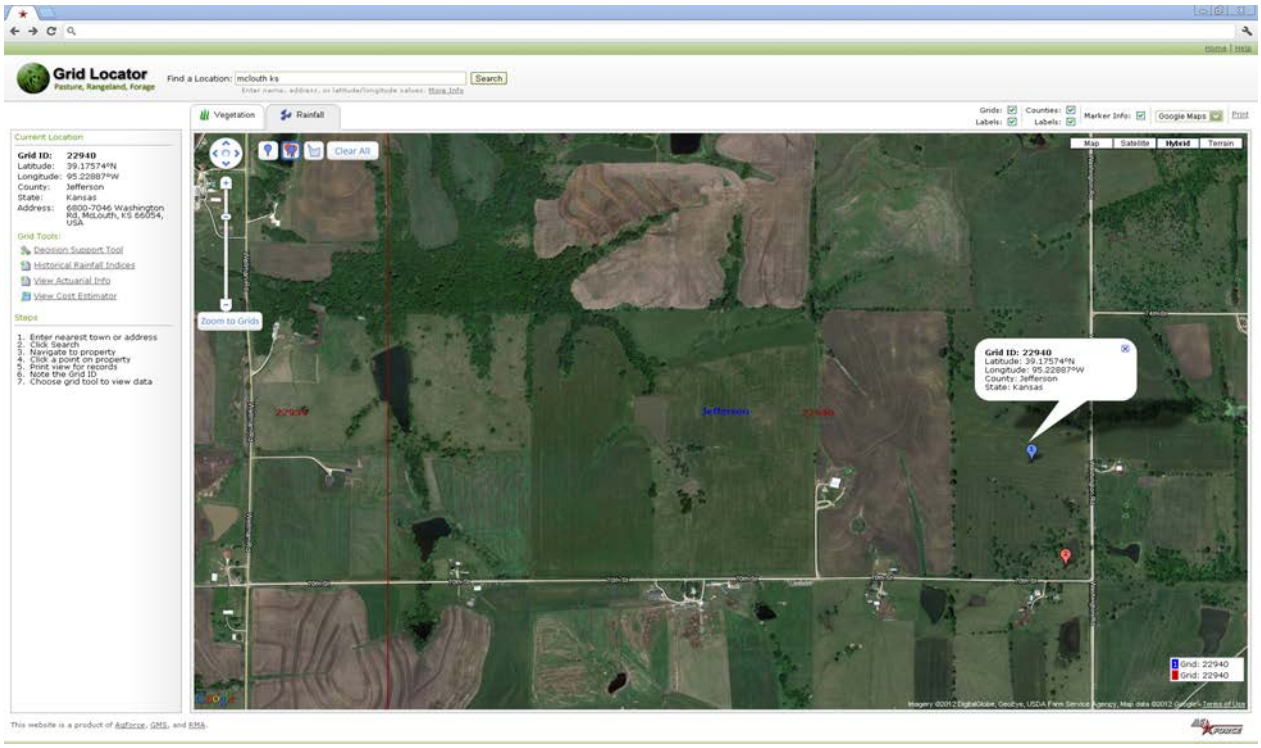
For noncontiguous acreage in a grid, the insured must establish a point of reference, by intended use and irrigation practice; where applicable, within the acreage boundaries.

The following is an example of noncontiguous acreage located in one field with some of the acreage having an intended use of grazing and the remaining acreage having an intended use of haying. Two points of reference are required, one for the acres intended for grazing and one for the acres intended for haying. The red "+" represents the point of reference.

Grid 1 40.0 acres grazing + + 10.0 acres haying	Grid 2
Grid 3	Grid 4

B. Pasture, Rangeland, Forage with the More Than One Intended Use or Irrigation Practice (Continued)

The following is an example of the Grid Locator page with two points of reference established. Some of the acres within the noncontiguous field have an intended use of grazing and the remaining acres have an intended use of haying or the acres within the one noncontiguous field are irrigated and the acres within the second noncontiguous field are non-irrigated. A separate point of reference must be established for each intended use and irrigation practice where applicable.



C. Apiculture

Intended use is not applicable under the apiculture program. Therefore, under the apiculture program, a point of reference is established for noncontiguous acreage in the same manner as under the pasture, rangeland, forage program when all acreage has the same intended use and irrigation practice.

See subparagraph A for examples of establishing a point of reference for noncontiguous acreage when all acreage has the same intended use.

A. Pasture, Rangeland, Forage with the Same or More Than One Intended Use

For contiguous acreage in a grid, the insured must establish a point of reference, by intended use and irrigation practice (when applicable), within the acreage boundaries within the grid selected by the insured. Because contiguous acreage is located in more than one grid or county the insured must choose whether to:

(1) combine the contiguous acreage and assign it all to one grid; or
(2) separate the contiguous acreage and assign portions into separate grids.

If the insured chooses to separate the contiguous acreage into separate grids, the insured may assign any number of the contiguous acres to each applicable grid by intended use and irrigation practice when applicable. However, the sum of the acres assigned to all grids cannot exceed the total number of contiguous acres.

Example: Part of insured A's 50.0 contiguous acre field is physically located in grid ID 1 and part is physically located in grid ID 2. Insured A can:

(1) combine the acres and assign all 50.0 to grid ID 1;

(2) combine the acres and assign all 50.0 acres to grid ID 2; or

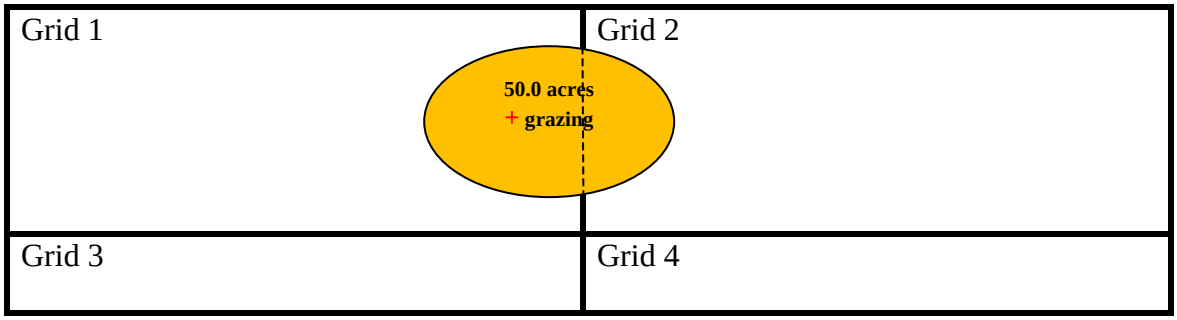
(3) separate the acres and assign any number of acres less than 50.0 to grid ID 1 and assign the remaining acres to grid ID 2.

The sum of the number of acres assigned to grid ID 1 and grid ID 2 cannot exceed 50.0 acres.

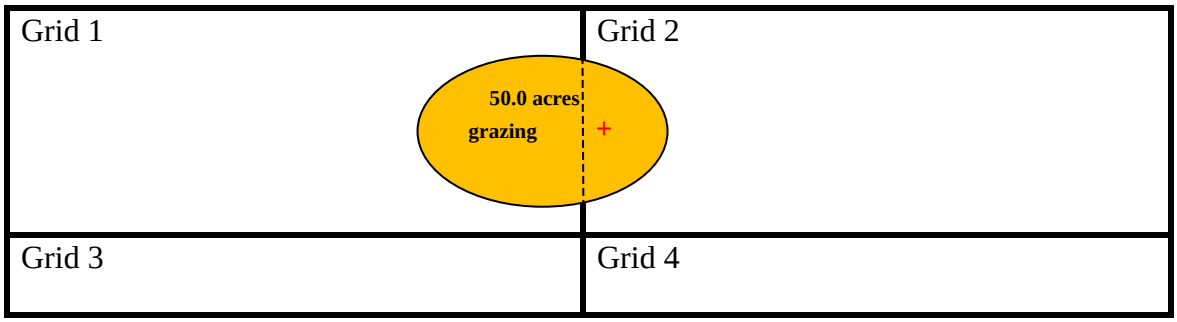
IF …	**THEN …**
all contiguous acreage is combined and assigned to one grid ID	one point of reference must be established, by intended use and irrigation practice; when applicable, within the boundaries of the contiguous acreage within the grid selected.
the contiguous acreage is separated into more than one grid	a separate point of reference must be established, by intended use and irrigation practice; when applicable, within the boundaries for the contiguous acreage within each grid selected.

B. Pasture, Rangeland, Forage with the Same Intended Use

The following is an example of contiguous acreage where the insured chose to combine all the acreage and assign it to grid ID 1. All the acreage has the same intended use and irrigation practice. The insured must establish one point of reference within the field boundaries within grid ID 1. The red "+" represents the point of reference.

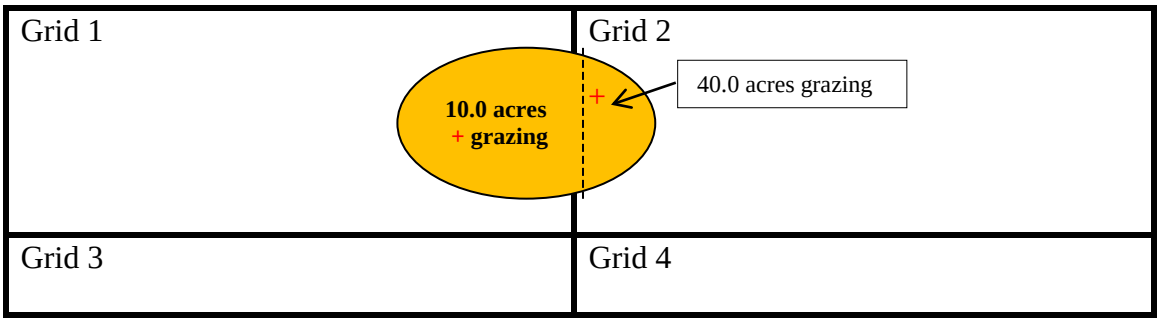


The following is an example of contiguous acreage where the insured chose to combine all the acreage and assign it to grid ID 2. All the acreage has the same intended use and irrigation practice. The insured must establish one point of reference within the field boundaries within grid ID 2. The red "+" represents the point of reference.



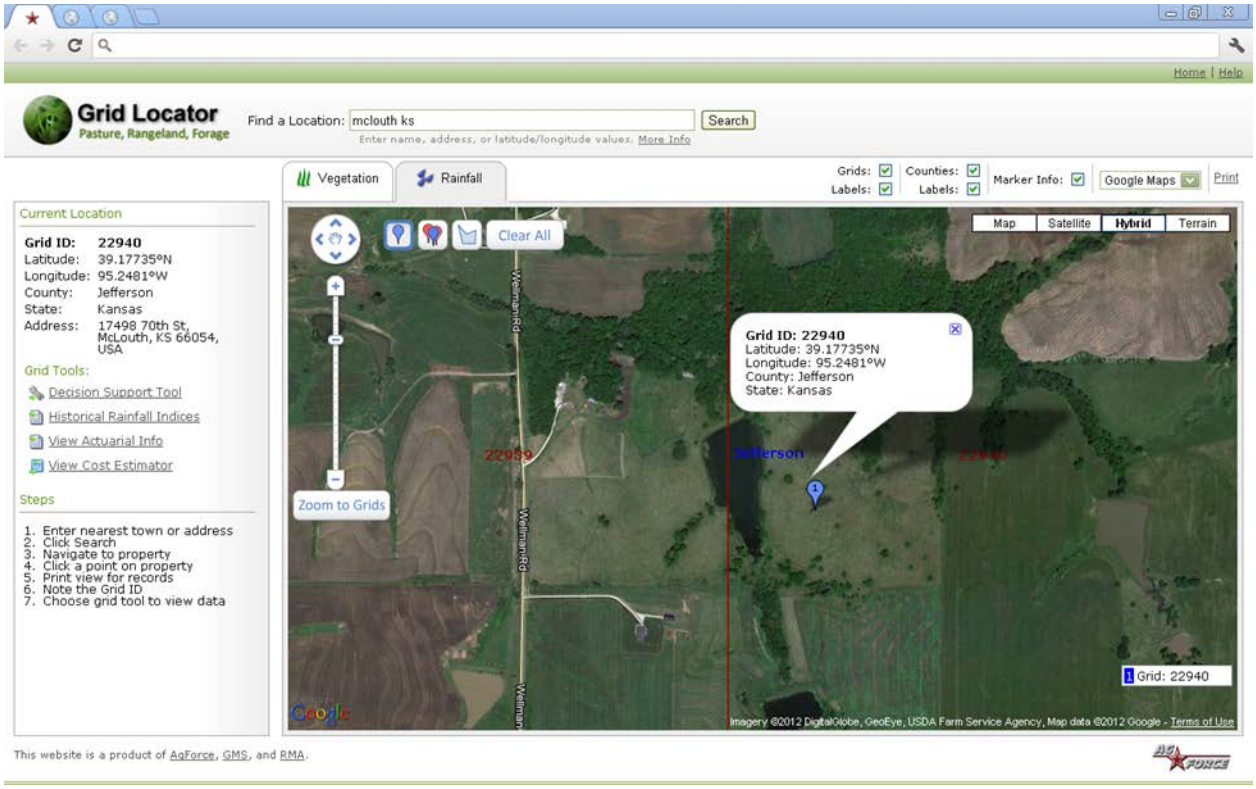
The following is an example of contiguous acreage where the insured chose to separate the acreage and assign 10.0 acres to grid ID 1 and assign 40.0 acres to grid ID 2. All the acreage has the same intended use and irrigation practice. The insured must establish two points of reference, one within the field boundaries within grid ID 1 and one within the field boundaries within grid ID 2. The insured could have assigned any number of the contiguous acres to either grid ID regardless of the number of acres physically located in each grid. However, the sum of the number of acres assigned to grid ID 1 and grid ID 2 cannot exceed 50.0 acres. The red "+" represents the point of reference.

B. Pasture, Rangeland, Forage with the Same Intended Use (continued)



The following is an example of the Grid Locator page with one point of reference established for 70.0 contiguous acreage physically located in two grids. The insured chose to combine the acreage and assign all 70.0 acres to grid ID 22940. All the acreage has the same intended use and irrigation practice. The insured must establish one point of reference within the field boundaries within grid ID 22940.

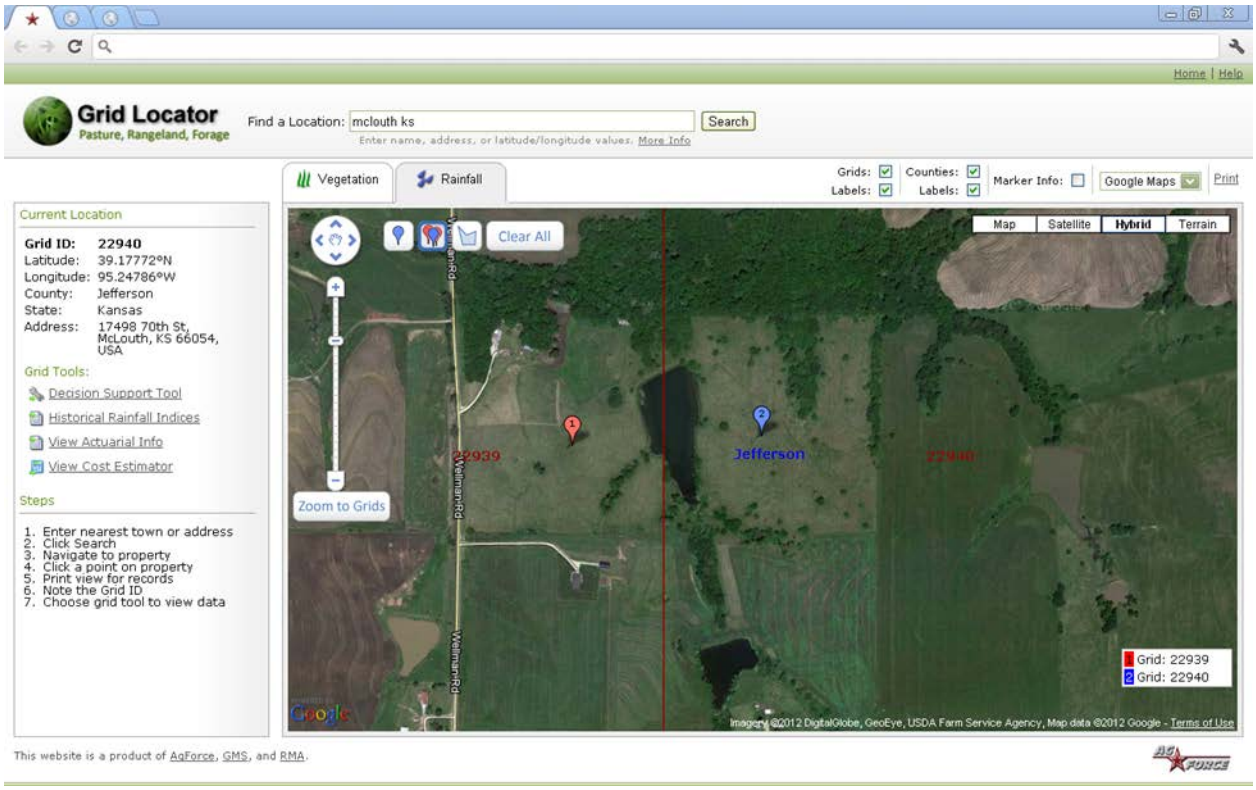
If the insured had chosen to combine the acreage and assign all 70.0 acres to grid ID 22939, the one point of reference would have to be within the field boundaries within grid ID 22939.



B. Pasture, Rangeland, Forage with the Same Intended Use (continued)

The following is an example of the Grid Locator page with two points of reference established for 70.0 contiguous acreage physically located in two grids. All the acreage has the same intended use and irrigation practice. The insured chose to separate the acreage and assign some of 70.0 acres to grid ID 22939 and some to grid ID 22940. The insured must establish two points of reference, one within the field boundaries within grid ID 22939 and one within the field boundaries within grid ID 22940.

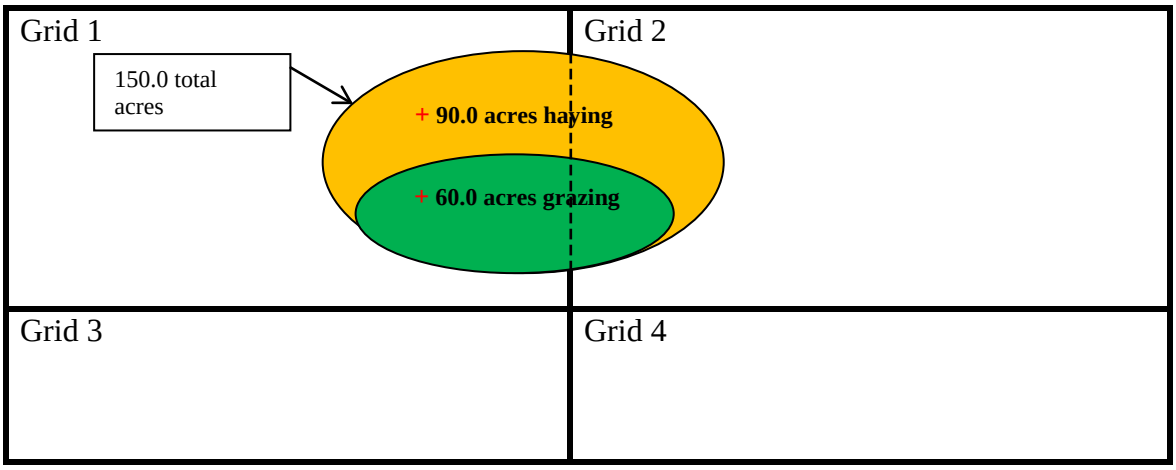
The insured can assign any number of the contiguous acres less than 70.0 to one grid ID and the remaining acres to the other grid ID regardless of the number of the contiguous acres physically located in each grid. However, the sum of the number of acres assigned to grid ID 22939 and grid ID 22940 cannot exceed 70.0 acres.



C. Pasture, Rangeland, Forage with the More Than One Intended Use

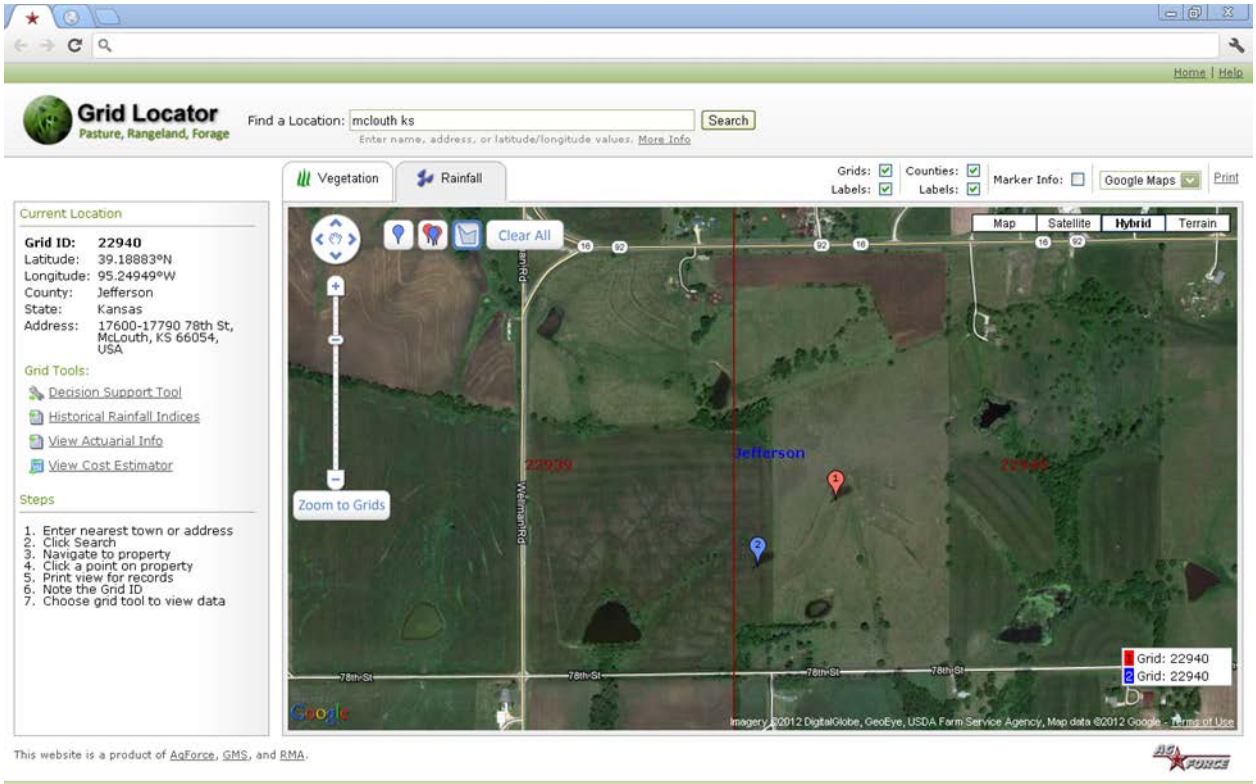
The following is an example of contiguous acreage located in one field with some of the acreage having an intended use of grazing and the remaining acreage having an intended use of haying. The insured chose to combine all 90.0 acres with an intended use of haying and assign it to grid ID 1, and combine all 60.0 acres with an intended use of grazing and assign it to grid ID 1. Two points of reference are required, one for the acres intended for grazing and one for the acres intended for haying. The red "+" represents the point of reference.

C. Pasture, Rangeland, Forage with the More Than One Intended Use (continued)



The following is an example of the Grid Locator page with two points of reference established for contiguous acreage physically located in two grids. Some of the acreage has an intended use of grazing and the remaining acreage has an intended use of haying.

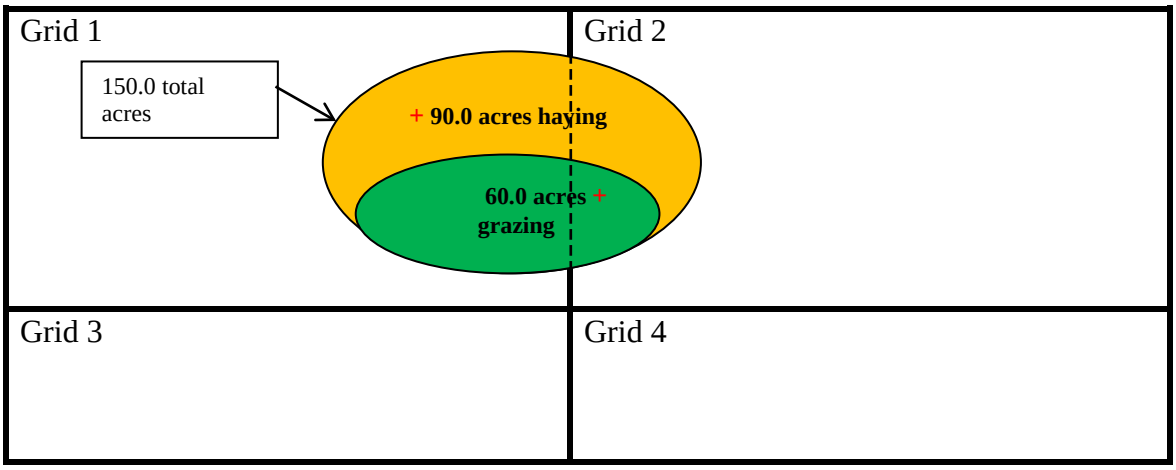
The insured chose to combine all acres with an intended use of haying and assign it to grid ID 22940, and combine all acres with an intended use of grazing and assign it to grid ID 22940. Two points of reference are required, one for the acres intended for grazing and one for the acres intended for haying.



C. Pasture, Rangeland, Forage with the More Than One Intended Use (continued)

The following is an example of contiguous acreage located in one field with some of the acreage having an intended use of grazing and the remaining acreage having an intended use of haying.

The insured chose to combine all 90.0 acres with an intended use of haying and assign it to grid ID 1, and combine all 60.0 acres with an intended use of grazing and assign it to grid ID 2. Two points of reference are required, one in grid ID 1for the acres intended for haying and one in grid 2 for the acres intended for grazing. The red "+" represents the point of reference.



The following is an example of contiguous acreage located in one field with some of the acreage having an intended use of grazing and the remaining acreage having an intended use of haying. The insured chose to separate the acreage intended for haying and assign 20.0 acres to grid ID 1 and assign 70.0 acres to grid ID 2. The insured chose to combine all 60.0 acres with an intended use of grazing and assign it to grid ID 2.

The insured must establish three points of reference, one within the field boundaries within grid ID 1 for the acreage intended for haying, one within the field boundaries within grid ID 2 for the acreage intended for haying, and one within the field boundaries within grid ID 2 for the acreage intended for grazing. The red "+" represents the point of reference.

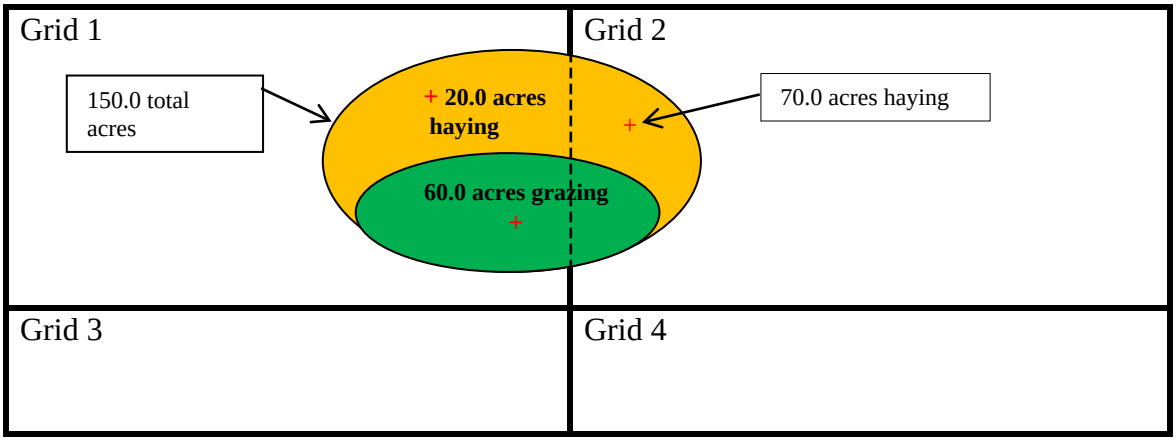
The insured could have assigned any number of the contiguous acres intended for haying to either grid ID regardless of the number of acres physically located in each grid. The insured could have also assigned any number of the contiguous acres intended for grazing to either grid ID regardless of the number of acres physically located in each grid. However, the sum of the:

(1) number of acres intended for haying assigned to grid ID 1 and grid ID 2 cannot exceed 90.0 acres;

(2) number of acres intended for grazing assigned to grid ID 1 and grid ID 2 cannot exceed 60.0 acres; and

C. Pasture, Rangeland, Forage with the More Than One Intended Use (continued)

(3) all acres assigned to grid ID 1 and grid ID 2 cannot exceed 150.0 acres.



The following is an example of the Grid Locator page with four points of reference established for contiguous acreage physically located in two grids. Some of the acreage has an intended use of grazing and the remaining acreage has an intended use of haying.

The insured chose to separate the acreage intended for haying and assign some acres to grid ID 22939 and assign the remaining acres intended for haying to grid ID 22940. The insured also chose to separate the acreage intended for grazing and assign some acres to grid ID 22939 and assign the remaining acres intended for grazing to grid ID 22940.

The insured must establish the following four points of reference.

(1) One point of reference within the field boundaries within grid ID 22939 for the acreage intended for haying assigned to that grid ID.

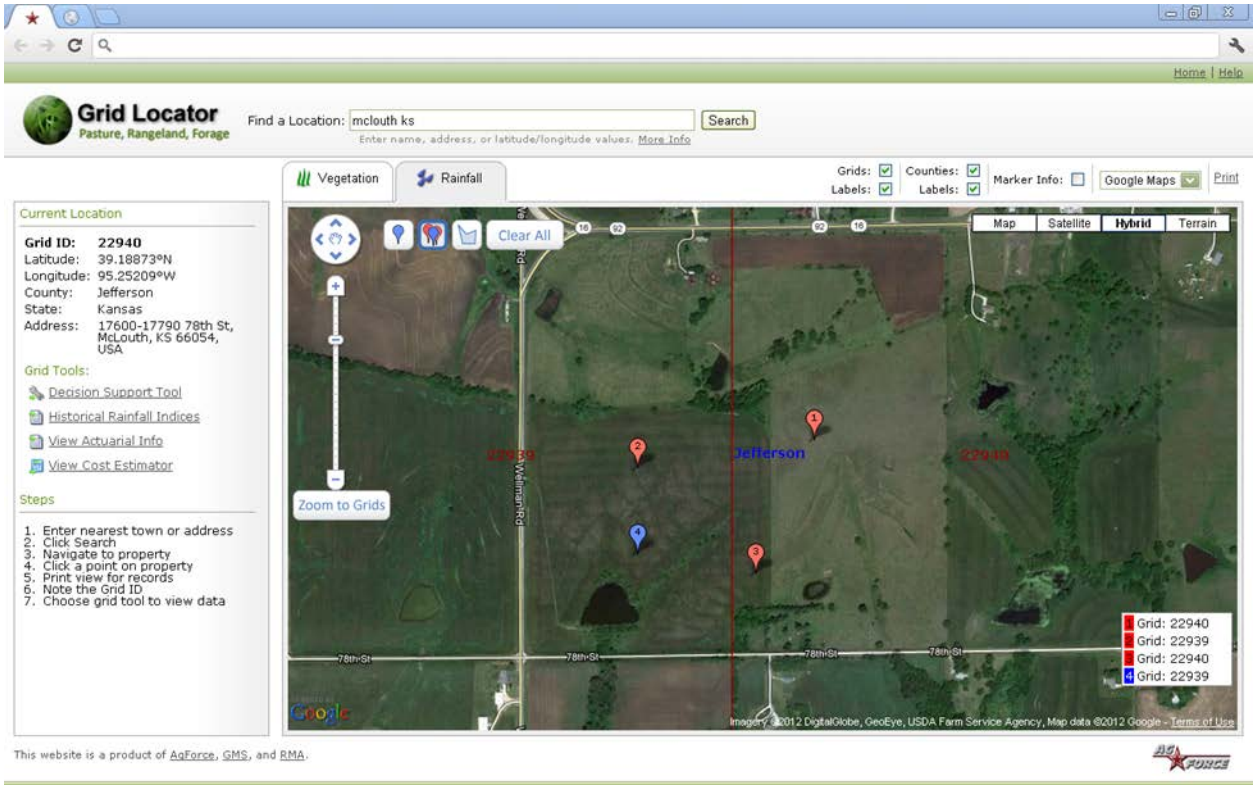
(2) One point of reference within the field boundaries within grid ID 22940 for the acreage intended for haying assigned to that grid ID.

(3) One point of reference within the field boundaries within grid ID 22939 for the acreage intended for grazing assigned to that grid ID.

(4) One point of reference within the field boundaries within grid ID 22940 for the acreage intended for grazing assigned to that grid ID.

The insured could have assigned any number of the contiguous acres intended for haying to either grid ID regardless of the number of acres physically located in each grid. The insured could have also assigned any number of the contiguous acres intended for grazing to either grid ID regardless of the number of acres physically located in each grid.

C. Pasture, Rangeland, Forage with the More Than One Intended Use (continued)



NOTE: The above examples can be used to illustrate the point of reference requirements for irrigated and non-irrigated haying where those practices are separated. Where the example shows intended use, substitute irrigated and non-irrigated practice.

D. Apiculture and Annual Forage

Intended use and irrigation practice is not applicable under the annual forage or apiculture programs. Therefore, under the annual forage or apiculture program, points of reference are established for contiguous acreage in the same manner as under the pasture, rangeland, forage program when all acreage has the same intended use.

See subparagraph B for examples of establishing a point of reference for noncontiguous acreage when all acreage has the same intended use.

Acronyms and Abbreviations

The following table provides the acronyms and abbreviations used in this handbook.

Approved Acronym/Abbreviation	Term
AIP	Approved Insurance Provider
C.F.R.	Code of Federal Regulations
GSH	General Standards Handbook
CPC	Climate Prediction Center
DSSH	Document and Supplemental Standards Handbook
EROS	Earth Resources Observation and Science
FCIC	Federal Crop Insurance Corporation
grid ID	grid identification number
GSH	General Standards Handbook
NDVI	Normalized Difference Vegetation Index
NOAA	National Oceanic and Atmospheric Administration
PASD	Product Administration and Standards Division
RMA	Risk Management Agency
U.S.	United States
USDA	United States Department of Agriculture

Definitions

Contiguous means:
(1) for pasture, rangeland, forage, acreage in a county or grid that continues into an adjoining state, county or grid without interruption. Acreage separated by only a public or private right-of-way, waterway, or an irrigation canal will be considered contiguous.
(2) for apiculture, acreage which contains locations owned or controlled by the insured, or rented by the insured for cash or crop share, in a county or grid that continues into an adjoining county or grid without interruption and is occupied and foraged by insurable colonies. Acreage separated by only a public or private right-of-way, waterway, or an irrigation canal will be considered contiguous.

Expected grid index means a grid index determined by FCIC based on:
(1) for the Vegetation Index policies, the mean NDVI values by index interval calculated using the historical NDVI gridded data, or successor data, normalized and expressed as a percentage, such that the mean is 100. The data used to calculate the expected grid index is conclusively presumed to be accurate.
(2) for the Rainfall Index policies, the mean accumulated precipitation by index interval, calculated by using NOAA's interpolated historical gridded precipitation data, or successor data, normalized and expressed as a percentage such that the mean is 100. The data used to calculate the expected grid index is conclusively presumed to be accurate.

Final grid index means a grid index determined by FCIC based on:
(1) for the Vegetation Index policies, the current NDVI values, using the current NDVI gridded data, for each grid ID and index interval, expressed as a percentage. The data used to calculate the final grid index is conclusively presumed to be accurate.
(2) for the Rainfall Index policies, the NOAA's interpolated current gridded precipitation data or successor data, for each grid ID and index interval, expressed as a percentage. The data used to calculate the final grid index is conclusively presumed to be accurate.

Grid means an area identified by longitude and latitude used to determine the expected grid index, final grid index, premium and indemnity. For the Vegetation Index policies, the grid is an 8 kilometer by 8 kilometer area established using NDVI gridded data. For the Rainfall Index policies, the grid is a 0.25 degree gridded area, or successor area, established by NOAA.

Grid identification number (grid ID) means a specific number assigned to each grid.

Normalized Difference Vegetation Index (NDVI) means a measure indicating the density of photosynthetic biomass on the ground, resulting from the processing of satellite imagery. NDVI data is obtained from EROS and is conclusively presumed to be accurate.

Point of reference means the location provided by the insured of the insured acreage. The point of reference must be provided using the maps contained on RMA's web site.

RMA's web site means a web site hosted by RMA and located at http://www.rma.usda.gov/ or a successor web site.

Trigger grid index means the result of multiplying the expected grid index by the coverage level selected by you.

Disclaimers

A. Rainfall Index Disclaimer

The following is the Rainfall Index Disclaimer form that must be signed by each insured when completing their application.

Rainfall Index Disclaimer

By signing below, I certify that I understand the following.

1. The Rainfall Index plan of insurance is **not** a plan of insurance against a loss of actual production. The terms and conditions of the Rainfall Index are different from those of an Actual Production History plan of insurance. The Rainfall Index plan of insurance does **not** measure, capture, or utilize the actual crop production of any producer or any of the actual crop production within the grid, county or state. It is based upon grid indices, not individual farm yields.

2. Selecting index intervals when precipitation is not needed for the insured crop or when precipitation does not normally occur is not an effective use of the Rainfall Index plan of insurance.

3. The Rainfall Index is a risk management tool to insure against a decline in an index value that is based on the long-term historical average precipitation for the grid and index interval. It is best suited for producers whose production tends to follow and correlate to the historical average interpolated precipitation patterns for the grid.

4. **It is possible for me to have low crop production or receive low precipitation amounts on the acreage I insure and still not receive an indemnity payment under this plan.**

5. The only insurable cause of loss is having a final grid index less than my trigger grid index.

6. There are historical indices, information, and other tools on the RMA web site to help me determine if the Rainfall Index is suitable for my risk management needs.

Insured's signature: _____ Date: _____

B. Vegetation Index Disclaimer

The following is the Vegetation Index Disclaimer form that must be signed by each insured when completing their application.

Vegetation Index Disclaimer

By signing below, I certify that I understand the following.

1. The Vegetation Index plan of insurance is **not** a plan of insurance against a loss of actual production. The terms and conditions of the Vegetation Index are different from those of an Actual Production History plan of insurance. The Vegetation Index plan of insurance does **not** measure, capture, or utilize the actual crop production of any producer or any of the actual crop production within the grid, county or state. It is based upon grid indices, not individual farm yields.

2. Selecting index intervals when vegetative growth does not normally occur or is not needed is not an effective use of the Vegetation Index plan of insurance.

3. The Vegetation Index is a risk management tool to insure against a decline, caused by natural occurrences, in an index value that is based on the long-term historical average for the grid and index interval. It is best suited for producers whose past production correlates with the historical average vegetation index patterns for the grid.

4. **It is possible for me to have low crop production on the acreage I insure and still not receive an indemnity payment under this plan.**

5. The only insurable cause of loss is having a final grid index less than my trigger grid index that is due to natural causes.

6. There are historical indices, information, and other tools on the RMA web site to help me determine if the Vegetation Index is suitable for my risk management needs.

Insured's signature: _____ Date: _____

Rainfall Index - Pasture, Rangeland, Forage Example

A. Overview

This exhibit provides an example of a producer who has elected to insure pasture, rangeland, forage acreage under the Rainfall Index plan of insurance. It also provides an illustration of how indemnities would be calculated.

The same basic information is applicable to the Vegetation Index plan of insurance and the apiculture program. However, there are some differences between the Rainfall Index and Vegetation Index plans, and between the apiculture, annual forage, and pasture, rangeland, forage programs. Some of the differences include, but are not limited to, the number of index intervals required to be insured, limitations on the maximum percent of value that may be selected in an index interval, growing seasons, the applicability of different intended uses, and the payment calculation factor.

See the Rainfall and Vegetation Index Plan Common Policy, Annual Forage Crop Provisions, Apiculture Crop Provisions and actuarial documents for more information about each plan and crop policy.

The following information is applicable to this example.

(1) The county base value per acre for an intended use of grazing is $20.00.

(2) The expected grid index is 100 for each grid ID, intended use, and index interval.

(3) The premium rate for 90 percent coverage level for an intended use of grazing is:

(a) 0.1000 in the April - May index interval; and
(b) 0.1100 in the July - August index interval.

(4) The premium subsidy factor for 90 percent coverage level is 51 percent.

(5) Some of the calculations in the example are rounded to the nearest whole dollar.

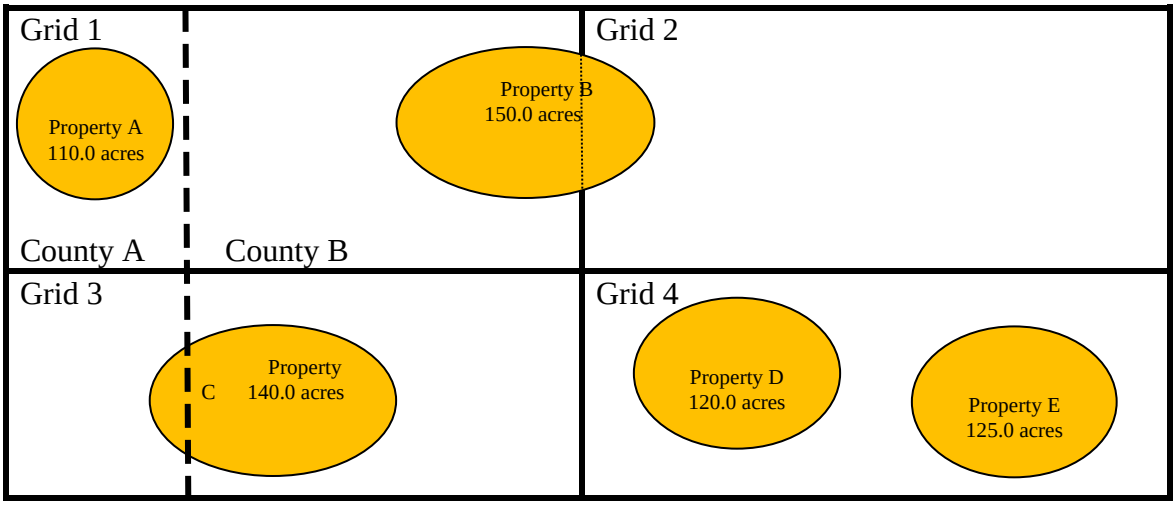
B. Producer A's Acreage Information

Producer A has five properties with a total of 645.0 acres in two counties. The acreage is spread out over four separate grids. Producer A has 100 percent share in all the acreage.

Using RMA's web site and grid locator, producer A locates the five properties and corresponding grids. See part 5 for more information about identifying acreage and grid IDs.

The following illustrates the location of the five properties.

B. Producer A's Acreage Information (continued)



C. Points of Reference

The location and number of points of reference required are determined by Producer A's choices. Producer A makes the following choices regarding the five properties.

(1) Not to insure property A.

(2) Insure all 150.0 acres in property B with an intended use of grazing, but separate the contiguous acreage and assign 100.0 acres to grid ID 1 and 50.0 acres to grid ID 2.

(3) Not insure 40.0 acres in property C with an intended use of haying.

(4) Insure 100.0 acres in property C with an intended use of grazing and combine the contiguous acreage into County B.

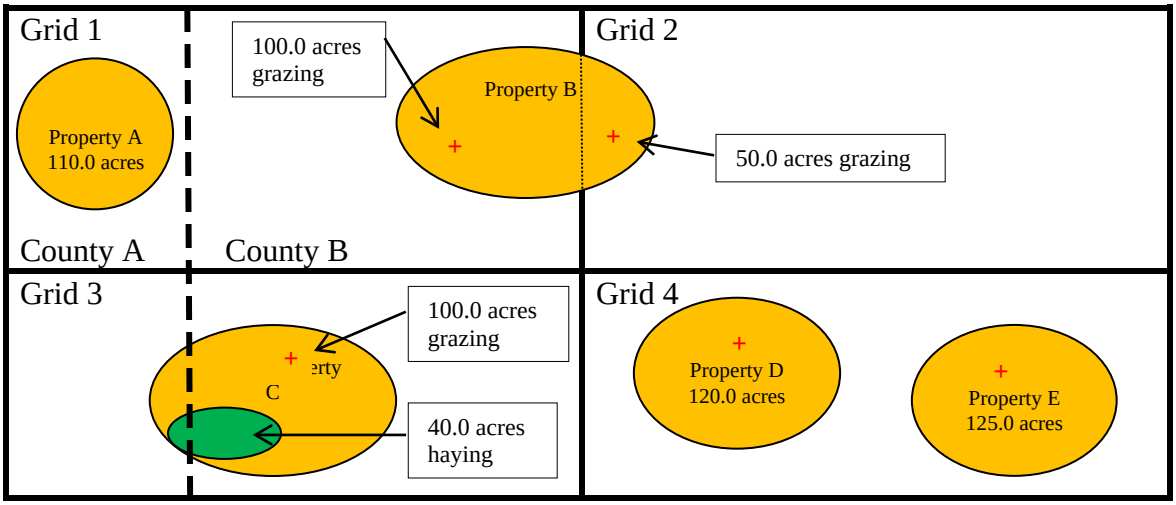
(5) Insure all 120.0 acres in property D with an intended use of grazing.

(6) Insure all 125.0 acres in property E with an intended use of grazing.

Based on Producer A's choices, five separate points of reference must be established by Producer A. The following illustrates the location of the five properties with the points of reference selected by Producer A. The red "+" represents the point of reference.

There is no point of reference for property A or the 40 acres in property C intended for haying because Producer A chose not to insure any acreage property A and not insure the acreage intended for haying in property C.

C. Points of Reference (continued)



D. Insurance Choices

For all the acreage to be insured, Producer A selects:

(1) a 90 percent coverage level for all acreage to be insured;
(2) a 120 percent productivity factor;
(3) index interval 628 (April – May) and 631 (July and August);
(4) a percent of value of 60 percent for index interval 628; and
(5) a percent of value of 40 percent for index interval 631.

E. Protection and Premium

The following are based on Producer A's acreage, intended uses, and insurance choices.

The dollar amount of protection per acre is $21.60. Dollar amount of protection per acre equals county base value per acre multiplied by the coverage level selected multiplied by the productivity factor selected ($20.00 x .90 x 1.20).

The total policy protection is $10,692. The total policy protection is the sum of the policy protection for each unit. The following table provides the policy protection for each unit.

Grid ID	Index Interval	Unit	Policy Protection Per Unit
1	628	xxxxx	$1,296.00 ($21.60 x 100.0 acres x 60 percent of value x 1.00 share)
	631	xxxxx	$864.00 ($21.60 x 100.0 acres x 40 percent of value x 1.00 share)
2	628	xxxxx	$648.00 ($21.60 x 50.0 acres x 60 percent of value x 1.00 share)
	631	xxxxx	$432.00 ($21.60 x 50.0 acres x 40 percent of value x 1.00 share)
3	628	xxxxx	$1,296.00 ($21.60 x 100.0 acres x 60 percent of value x 1.00 share)
	631	xxxxx	$864.00 ($21.60 x 100.0 acres x 40 percent of value x 1.00 share)
4	628	xxxxx	$3,175.00 ($21.60 x 245.0 acres x 60 percent of value x 1.00 share)
	631	xxxxx	$2,117.00 ($21.60 x 245.0 acres x 40 percent of value x 1.00 share)
Total policy protection			$10,692

E. Protection and Premium (continued)

Total premium amount due is $1,114.00. However, FCIC pays 51 percent subsidy at the 90 percent coverage level; therefore, Producer A's total premium amount due is $546 ($1114 - $568). The total premium amount due is the sum of the premium amount due for each unit. The premium amount per unit equals county base value per acre multiplied by the premium rate for the coverage level and index interval selected multiplied by the number of acres multiplied by the percent of value selected multiplied by the producer's share.

The following table provides the premium amount for each unit.

Grid ID	Index Interval	Unit	Premium Amount Due
1	628	xxxxx	$130.00 ($21.60 x 0.1000 x 100.0 acres x 60 percent of value x 1.00 share)
	631	xxxxx	$95.00 ($21.60 x 0.1100 x 100.0 acres x 40 percent of value x 1.00 share)
2	628	xxxxx	$65.00 ($21.60 x 0.1000 x 50.0 acres x 60 percent of value x 1.00 share)
	631	xxxxx	$48.00 ($21.60 x 0.1100 x 50.0 acres x 40 percent of value x 1.00 share)
3	628	xxxxx	$130.00 ($21.60 x 0.1000 x 100.0 acres x 60 percent of value x 1.00 share)
	631	xxxxx	$95.00 ($21.60 x 0.1100 x 100.0 acres x 40 percent of value x 1.00 share)
4	628	xxxxx	$318.00 ($21.60 x 0.1000 x 245.0 acres x 60 percent of value x 1.00 share)
	631	xxxxx	$233.00 ($21.60 x 0.1100 x 245.0 acres x 40 percent of value x 1.00 share)
Total Premium Amount			$1,114

F. Indemnity Scenarios

The indemnity for the unit will be equal to the payment calculation factor multiplied by the policy protection per unit. The indemnity payment calculation factor for the Rainfall Index plan of insurance is determined by dividing the result of the insured's trigger grid index minus the final grid index by the insured's trigger grid index [(insured's trigger grid index – final grid index) ÷ insured's trigger grid index].

The Vegetation Index plan of insurance indemnity payment calculation is different because of the total loss factor. See the Rainfall and Vegetation Index Plan Common Policy for more information about the indemnity payment calculation factor.

The following scenarios provide examples of different final grid indexes and the resulting indemnities for Insured A, if any. Insured A's trigger grid index is 90 (100 expected grid index x 90 percent coverage level).

Scenarios for index interval 628:

Scenario 1: FCIC publishes a final grid index of 120 for index interval 628 for all four grids.

Result: The final grid index is above Insured A's trigger grid index. Therefore, no indemnity payment is due.

F. Indemnity Scenarios (continued)

Scenario 2: For index interval 628, FCIC publishes a final grid index of 80 for grid ID 1 and grid ID 2, and a final grid index of 95 for grid ID 3 and grid ID 4.

Result: The final grid index is below Insured A's trigger grid index for grid ID 1 and grid ID 2; therefore, Insured A is eligible for an indemnity payment for those units. The payment calculation factor is 0.111 ((90 - 80)/90).

Insured A's indemnity amount is $144 (0.111 x $1,296) for the 100.0 acres in grid ID 1, and $72 (0.111 x $648) for the 50.0 acres in grid ID 2.

The final grid index is above Insured A's trigger grid index for grid ID 3 and grid ID 4; therefore, no indemnity is due for those units.

Scenario 3: For index interval 628, FCIC publishes a final grid index of 80 for grid ID 1 and grid ID 2, and a final grid index of 60 for grid ID 3 and grid ID 4.

Result: The final grid index is below Insured A's trigger grid index for all four grids; therefore, Insured A is eligible for an indemnity payment for units. The payment calculation factor is 0.111 ((90 - 80)/90) for grid ID 1 and grid ID 2. The payment calculation factor is 0.333 ((90 - 60)/90) for grid ID 3 and grid ID 4.

Insured A's indemnity amount is:

(1) $144 (0.111 x $1,296) for the 100.0 acres in grid ID 1;
(2) $72 (0.111 x $648) for the 50.0 acres in grid ID 2;
(3) $432 (0.333 x 1,296) for the 100.0 acres in grid ID 3; and
(4) $1,057 (0.333 x 3,175) for the 245.0 acres in grid ID 4.

Scenarios for index interval 631:

Scenario 1: For index interval 631, FCIC publishes a final grid index of 90 for grid ID 1 and grid ID 2, and a final grid index of 85 for grid ID 3 and grid ID 4.

Result: The final grid index is equal to Insured A's trigger grid index for grid ID 1 and grid ID 2; therefore, no indemnity is due for those units.

The final grid index is below Insured A's trigger grid index for grid ID 3 and grid ID 4; therefore, Insured A is eligible for an indemnity payment for those units. The payment calculation factor is 0.056 ((90 - 85)/90).

Insured A's indemnity amount is $48 (0.056 x $864) for the 100.0 acres in grid ID 3, and $119 (0.056 x $2,117) for the 245.0 acres in grid ID 4.

F. Indemnity Scenarios (continued)

Scenario 2: For index interval 631, FCIC publishes a final grid index of 70 for grid ID 1 and grid ID 2, and a final grid index of 65 for grid ID 3 and grid ID 4.

Result: The final grid index is below Insured A's trigger grid index for all four grids; therefore, Insured A is eligible for an indemnity payment for units. The payment calculation factor is 0.222 ((90 - 70)/90) for grid ID 1 and grid ID 2. The payment calculation factor is 0.278 ((90 - 65)/90) for grid ID 3 and grid ID 4.

Insured A's indemnity amount is:

(1) $192 (0.222 x $864) for the 100.0 acres in grid ID 1;
(2) $96 (0.222 x $432) for the 50.0 acres in grid ID 2;
(3) $240 (0.278 x 864) for the 100.0 acres in grid ID 3; and
(4) $588 (0.278 x 2,117) for the 245.0 acres in grid ID 4.

Scenario 3: FCIC publishes a final grid index of 120 for index interval 631 for all four grids.

Result: The final grid index is above Insured A's trigger grid index. Therefore, no indemnity payment is due.

The following are the total indemnities for Insured A based on the scenarios for both index intervals.

Insured A received a total of:

(1) $167 [($0 for index interval 628) + ($48 + $119 for index interval 631)] in indemnities under scenario 1;

(2) $1,332 [($144 + 72 for index interval 628) + ($192 + $96 + $240 + $588 for index interval 631)] in indemnities under scenario 2; and

(3) $1,705 [($144 + $72 + $432 + $1,057 for index interval 628) + ($0 for index interval 631)] in indemnities under scenario 3.

Insurable Interest for Pasture, Rangeland, Forage with Intended Use of Grazing

A. Insurable Interest

Insurable interest is the insured's percentage of the insured crop that is at financial risk. When the insured crop is the pasture, rangeland, forage **with an intended use of grazing**, the insured's percentage of the insured crop that is at financial risk will be based on the insured's percentage:

(1) interest in the livestock to be grazed on the insured acres, if the acres are cash leased; or

(2) of the value gained of the livestock being grazed on the insured acres if the acres are share leased.

Lessors under a cash lease are not considered to have a share in the insured crop.

B. Share and Cash Grazing Leases

A grazing lease is considered a cash lease if the lease provides for only a guaranteed sum certain cash payment, or fixed quantity of in-kind payment, such as:

(1) a set sum of money per head or per month;
(2) a specific quantity of in-kind payment, such as specific number of calves;
(3) an specific amount per weight gain, such as 12 cents per pound of weight gained during the lease period; or
(4) other forms of compensation where the lessor does not obtain a percentage interest of the value of gain of the livestock being grazed.

See subparagraph C for examples of cash grazing leases.

A grazing lease is considered a share lease if the lessor obtains:

(1) a percentage interest of the value of the gain of the livestock being grazed. Value of the gain includes, but is not limited to:

    (a) offspring from the livestock being grazed;
    (b) proceeds derived from the weight of gain of the livestock being grazed; or
    (c) proceeds from the value of the milk produced from the livestock; or

(2) a combination of a guaranteed sum certain cash payment or fixed quantity of in-kind payment, and a percentage interest of the value of the gain of the livestock being grazed.

See subparagraph D for examples of share grazing leases.

C. Examples of Cash Grazing Leases

The following are examples of leases that are considered cash grazing leases. The lessee has owns 100 percent of the livestock being grazed in each example.

C. Examples of Cash Grazing Leases (continued)

Example 1: Lessor A leases 150.0 pasture, rangeland, forage acres for grazing to Lessee B in return for $21.00 per acre. In this example, Lessor A has no insurable interest and is not eligible to insure the 150.0 acres under the Rainfall or Vegetation Index plan of insurance. Lessee B has 100 percent insurable interest in the insured pasture, rangeland, forage crop.

Example 2: Lessor C leases 200.0 pasture, rangeland, forage acres for grazing to Lessee D in return for 5 calves. Lessor C receives a specific quantity of in-kind payment, regardless of the number of calves born during the lease period from the cows grazing the leased acres. In this example, Lessor C has no insurable interest and is not eligible to insure the 200.0 acres under the Rainfall or Vegetation Index plan of insurance. Lessee D has 100 percent insurable interest in the insured pasture, rangeland, forage crop.

Example 3: Lessor E leases 250.0 pasture, rangeland, forage acres for grazing to Lessee F in return for 12 cents per pound of weight gained by the livestock grazing the leased acreage during the lease period. If the total weighted gained by the livestock during the lease period is 2,000 pounds, Lessor E receives $240.00. If the total weight gained by the livestock during the lease period is 2,500 pounds, Lessor E receives $300.00. While the amount Lessor E receives depends on the total weight gained, the amount per pound is a specific amount per pound gained, not a percentage of the value of the weight gained.

In this example, Lessor E has no insurable interest and is not eligible to insure the 250.0 acres under the Rainfall or Vegetation Index plan of insurance. Lessee F has 100 percent insurable interest in the insured pasture, rangeland, forage crop.

D. Examples of Share Grazing Leases

The following are examples of leases that are considered share grazing leases. The lessee has owns 100 percent of the livestock being grazed in each example.

Example 1: Lessor G leases 500.0 pasture, rangeland, forage acres for grazing to Lessee H in return for five percent of the calves born during the lease period from the cows grazing the leased acres. If 100 calves are born by the cows grazing the leased acreage during the lease period, Lessor G receives five calves. If 150 calves are born by the cows grazing the leased acreage during the lease period, Lessor G receives eight calves. In this example, Lessor G's insurable interest in the insured pasture, rangeland, forage crop is five percent and Lessee H's insurable interest is 95 percent.

D. Examples of Share Grazing Leases (continued)

Example 2: Lessor I leases 100.0 pasture, rangeland, forage acres for grazing to Lessee J in return for 25 percent of the value of the weight the livestock gained during the lease period. If the value of the total weight gained of all livestock grazing the leased acreage during the lease period is $1,200.00, Lessor I receives $300.00. In this example, Lessor I's insurable interest in the insured pasture, rangeland, forage crop is 25 percent and Lessee J's insurable interest is 75 percent.

Example 3: Lessor K leases 300.00 pasture, rangeland, forage acres for grazing to Lessee L in return for $5.00 per acres plus 12 percent of the value of the weight the livestock gained during the lease period. If the value of the total weight gained of all livestock grazing the leased acreage during the lease period is $1,200.00, Lessor K receives $144.00. In this example, Lessor K's insurable interest in the insured pasture, rangeland, forage crop is 12 percent and Lessee L's insurable interest is 88 percent.