Pasture, Rangeland, Forage Rainfall Index Plan of Insurance

This presentation does not replace or supersede any procedures or modify any provisions contained in the complete insurance policy.









Introduction and Program Overview

Introduction and Overview
Science Behind the Program
Program Basics
Detailed Example
Additional Tools and Information

Program Overview Purpose

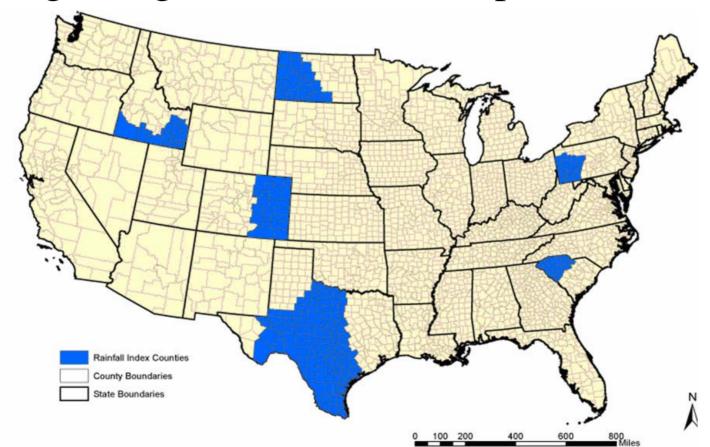
- □ The intent of this section:
 - Introduction to program and unique topics
 - Provide background and basic philosophy
- □ Details of the program provided in following sections

History

- □ History
 - The Agricultural Risk Protection Act of 2000 (ARPA) mandates programs to cover pasture and rangeland
 - Two new pilot programs approved for 2007 Crop Year
 - □ Pasture, Rangeland, Forage (PRF) Rainfall Index
 - Covered in this training
 - □ Pasture, Rangeland, Forage (PRF) Vegetation Index

Introduction

□ Beginning with the 2007 Crop Year



Program Potential

□ Estimated acres covered by pilot

State	Grazingland Acres	Hayland Acres
Colorado	14,734,538	506,260
Idaho	4,347,110	591,918
North Dakota	11,806,699	1,318,789
Pennsylvania	471,656	517,522
South Carolina	760,193	191,801
Texas	62,905,239	1,372,929
Total	95,025,435	4,499,219

Program Potential

□ Estimated program potential –

(assume participation 10%, Coverage Level 75% . . .)

State	Estimated Average Rate	Estimated Premium Volume
Colorado	14.0%	\$3,977,019
Idaho	14.4%	\$3,992,180
North Dakota	13.6%	\$3,296,159
Pennsylvania	4.4%	\$846,801
South Carolina	7.4%	\$507,825
Texas	18.4%	\$18,146,679
Total		\$30,766,663

Challenges

- Crop challenges
 - Various plant species
 - Timing of plant growth
 - Crop continuously harvested via livestock
 - Lack of individual/industry data
 - Vast range of management practices across the industry
 - Publicly announced prices not available

Crop Information

- □ Crop
 - (0088) Pasture, Rangeland, Forage

- □ Crop Types
 - (064) Grazingland
 - (063) Hayland

Crop Types

- Grazingland
 - Established acreage of perennial forage
 - Intended for grazing by livestock
 - Acreage must be suitable for grazing

Crop Types

- □ Hayland
 - Established acreage of perennial forage
 - Intended for haying
 - Acreage must be suitable for haying
 - □ Program covers all types of grazing and haying forage (i.e. not just for alfalfa)

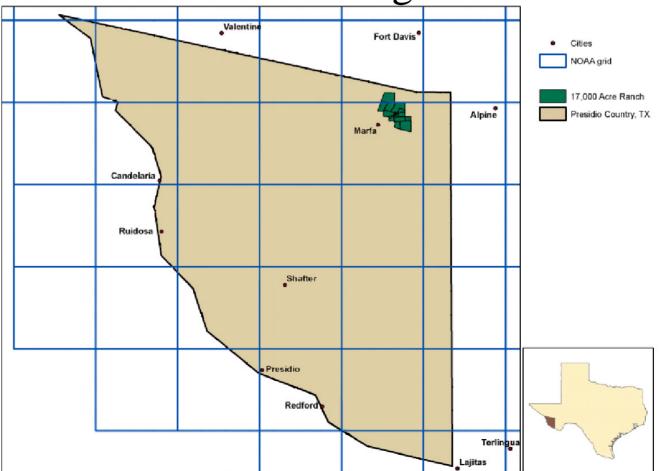
- □ GRP program
 - □ Goal utilize an existing policy type
 - Capitalize on current program familiarity
 - Increase marketability and effectiveness
 - □ The resulting design is based on the principals of the existing GRP program

Index background

- □ Lack of actual producer/industry production data
- No consistent and sound methodology for measuring production for the crop
- □ The <u>deviation from long-term normal precipitation</u> is used to establish the index
 - SINGLE PERIL COVERAGE
- Precipitation has a high degree of correlation to forage production

- □ Index driven NOAA data
 - Primary index difference
 - Based on NOAA data vs. NASS county yields
 - Reports precipitation data
 - □ Widely used source of precipitation information
 - Dependable source
 - □ Long data history since 1948
 - □ Consistent and universal coverage through a grid system
 - Grid boundaries vs. county boundaries

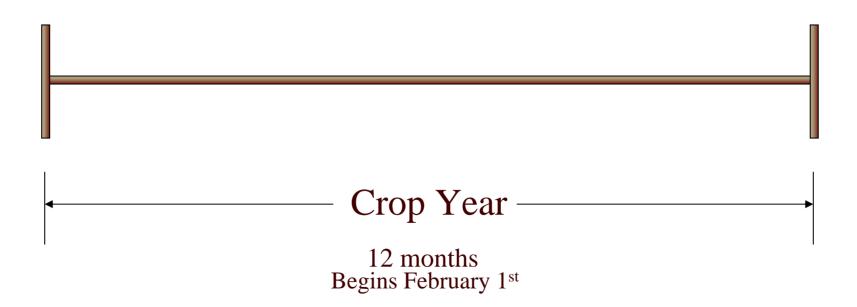
 \square Area of insurance = 0.25° grids



- \square Area of insurance = 0.25° grids
 - □ Grids vs. County
 - □ Grids are approximately 12 x 12 miles in size
 - Provides for a consistent program across the United States
 - □ Counties vary in size, but the grids do not
 - ☐ Grid size reduces basis risk vs. county size
 - Allows for closer correlation to individual experience
 - ☐ Grids will cross county and state lines

- □ Index Intervals
 - □ Multiple intervals offered 6
 - □ Crop year divided into 6, 2-month intervals for each grid
 - □ Similar to Crop Practices
 - □ Ability for producers to manage appropriate timing risks
 - Correlate to individual growth patterns and production seasons
 - ☐ The 2-month intervals provide for greater reaction to precipitation events vs. a yearly average

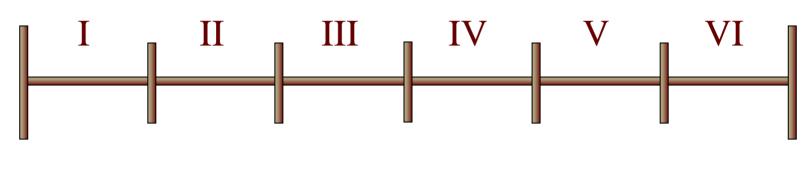
□ Index Intervals



■ Index Intervals

Intervals

6, 2 month



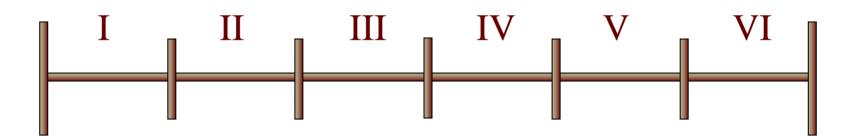


12 months Begins February 1st

Index Intervals

Intervals

6, 2 month



- These Intervals act as 'mini-insurance periods'
 - □ For example, indemnities payable on one Interval are not dependent on results from other Intervals 20

- □ Index Intervals
 - Minimizes dependency on subjective pre-determined forage growing seasons
 - □ Maintains consistency across the country
 - Allows for regional and local variances
 - Allows individual freedom to select appropriate intervals
 - □ Index intervals are mutually exclusive
 - One index does not effect the others
 - All rated separately

- □ Index Intervals
 - Producers must select at least 2 intervals
 - ☐ The purpose of the program is to insure annual forage production
 - Total annual forage production is influenced by precipitation in more than one 2-month interval; therefore, producers are required to insure in more than one interval

Maximum percentages are region specific

■ Based on growing season (50 - 70%)

- □ Coverage Levels
 - □ Percentages available: 90, 85, 80, 75, and 70
 - Consistent with other GRP programs
 - □ Higher coverage levels reduce basis risk
 - Correlates closer to individual experience
- Catastrophic Risk Protection (CAT)
 - □ Not currently available
 - □ Producers are still eligible for NAP coverage

□ Rating

- Each grid, index interval, and coverage level is individually rated
 - □ Minimizes adverse selection
 - No economic advantage of insuring in one scenario vs. another
 - Encourages producers to select a scenario that best mitigates their operation/production risks
 - Adequate data permits the individual rating
 - Allowing the rates to accurately reflect the risks of each scenario

- □ Not required to insure 100% of acreage
 - □ Forage utilized in the annual grazing or hay cycle can be insured without insuring all acreage
 - □ All acres within a property may not be productive, e.g., rocky areas, submerged areas
 - □ Provides additional flexibility for the insured to design the coverage to his specific needs
 - Because the program is a group program and other programs are not available, there is no opportunity to 'move' production

- Sales Closing Date: November 30
 - Only one Sales Closing per year
 - □ Consistent with other programs' SCD
 - □ Minimizes possible forecasting and program abuse
 - 60 day lag to the crop year
 - □ Note: This is a change from earlier versions of the policy sent to the companies (originally set in October)
 - but was changed due to company feedback

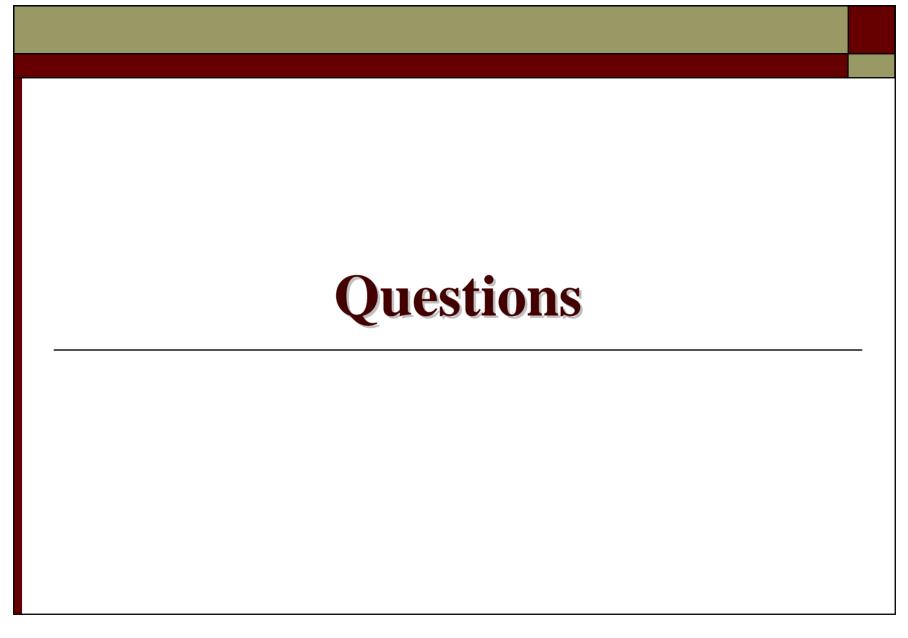
- □ Program supported via internet
 - □ Provides the most efficient and effective way to deliver the program
 - □ Allows access to the mapping tools
 - Locate grazing areas and associated Grid ID numbers
 - Provides access to the historical rainfall indices
 - Allows access to all relevant data, materials, and tools associated with the program

Advantages

- □ Flexibility
- Covers predominant peril
- Provides for timely indemnities
- □ Index intervals are mutually exclusive
- □ Individual loss adjustments not needed
- □ Easily understood Index
- Production records not required
- Moral hazard and adverse selection minimized

Disadvantages

- □ Individual losses/experiences not covered
- □ Slight terminology differences from other GRP programs



Science and Technology Behind the Program

Crop Biology

- □ The program addresses forage-based production systems on land areas producing primarily perennial vegetation
- □ Comprised of diverse plant communities and mixtures:
 - Perennial and annual
 - Warm season and cool season
 - Different growth habits over extended time periods

Crop Biology

- □ Forage may be harvested directly by grazing animals, harvested for hay, or a combination of both:
 - □ Continual harvest and/or single haying
- Capacity to live and reproduce from year to year

■ Because of the nature of forage-based systems, the program is designed to insure annual production

Program Technology

- Precipitation is highly correlated with forage production, but does not directly predict actual forage production
- □ Index starts accumulating on the first day of the specified interval through the last day of the same interval
 - Influence of extreme precipitation events is effectively reduced
 - At the end of each 2-month interval the percent of normal is calculated

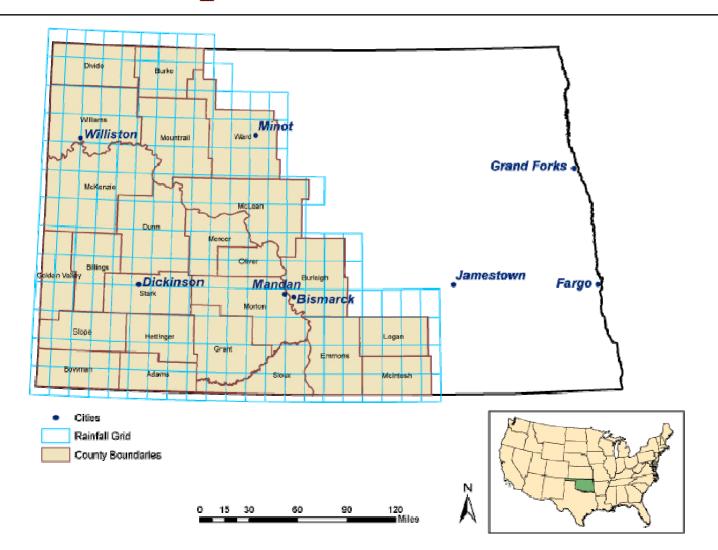
Program Technology

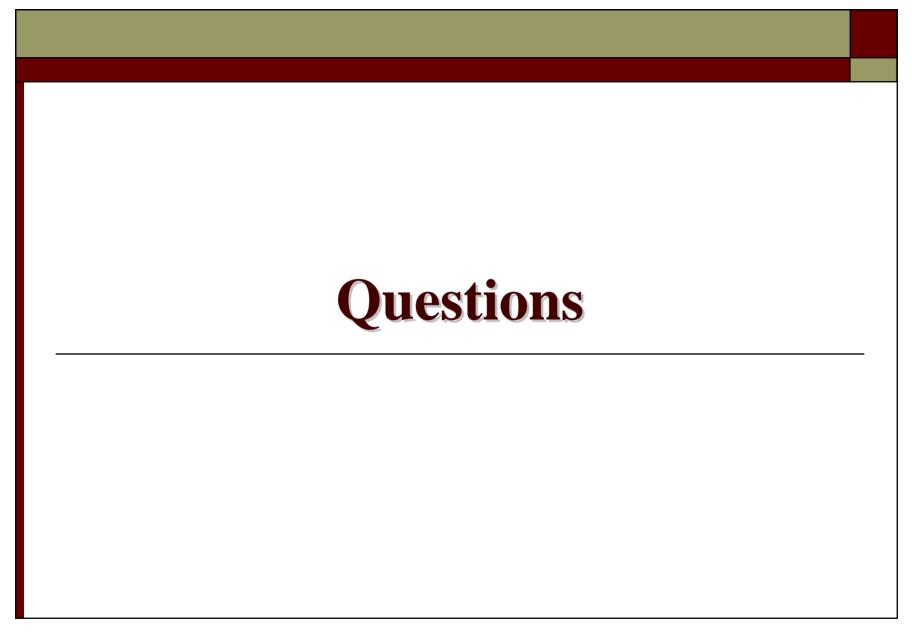
Daily historical data since 1948

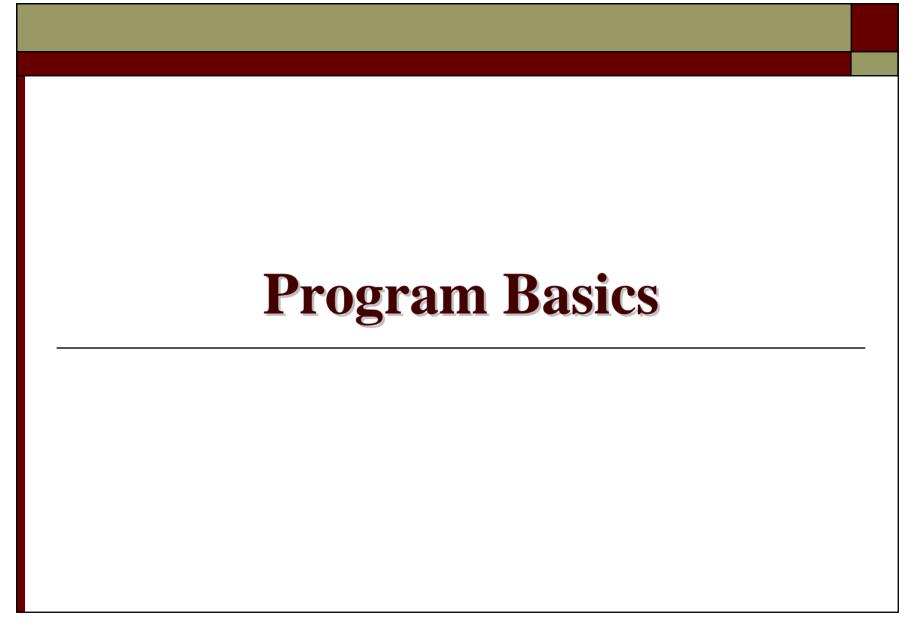
Data updated daily

- □ Data is interpolated by NOAA into weather grids nationwide
 - ~ 12 x 12 miles in size (0.25° data), and used in many other national programs

Grid Example for North Dakota



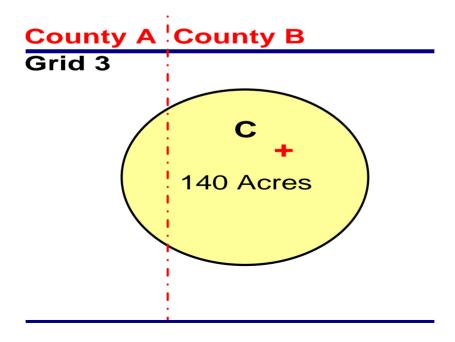




Terminology and Other Differences

- □ Grid and Grid ID in addition to County
- □ Insurable and Insured acres versus Planted acres
- □ Index versus Yields
- □ Web based
- No current CAT coverage
- □ Not required to insure 100% of acres
- Must select two Index Intervals
- ☐ Grid IDs, crop types, acreage, and Index Intervals will be determined prior to the Sales Closing Date

□ **County:** may also include any acreage within a grid ID that crosses an adjoining county or state line where the acreage is contiguous



- □ *Insurable Acreage*: Hayland and grazingland that is not planted annually
 - Overseeding into acreage of existing forage crops is acceptable
 - Annually planted crops currently not insurable
 - Insurable acres will consist of the total number of acres suitable for insurance under these crop provisions
 - ☐ Includes both insured acres and uninsured acres

- Insured Acres: The number of insurable acres selected to be insured by a producer
 - May choose to insure either Grazingland, Hayland, or both
 - Not required to insure 100% of the crop type(s)
 - ☐ If the insured chooses to insure the crop types under this policy they cannot insure the same crop under any other FCIC subsidized program

- □ *Unit*: The insured acres within or assigned to a grid ID for each crop type, and index interval
 - If there are multiple Grid IDs on a policy the index values are not added together, each unit and crop stands on its own
 - Basic Units only no basic unit discount

- □ *County Base Value*: established production value of grazingland and hayland forage
 - Only one value per county for each crop type
 - Does not include GRP 1.5 multiplier
- □ **Productivity Factor:** A percentage multiplier allowing the insured to individualize coverage based on their individual crop productivity
 - Insured selects between 60 and 150%
 - □ Concept is the same as 'price election' in other GRP policies
 - Only one productivity factor may be selected per county and crop type

□ **Dollar Amount of Protection per Acre:** The county base value (CBV) per acre, multiplied by the productivity factor (PF) (60% - 150%), multiplied by the coverage level (CL) (70% - 90%)

EXAMPLE:

\$17.65 (CBV) x 1.20 (PF) x 0.85 (CL) = **\$18.00** per Acre

 Only one dollar amount of protection per acre <u>for each</u> county and crop type

□ Policy Protection per Unit: Dollar amount of protection per acre, multiplied by the insured acres, multiplied by the producer's share of the unit for each grid

EXAMPLE:

\$ Amount of Protection/ac = \$18.00, Insured Acres = 1,000, Share = 100%, 50% Interval II, 50% Interval III

For:

Index Interval II: $$18.00 \times 500 \text{ ac } \times 100\% \text{ (share)} = $9,000$

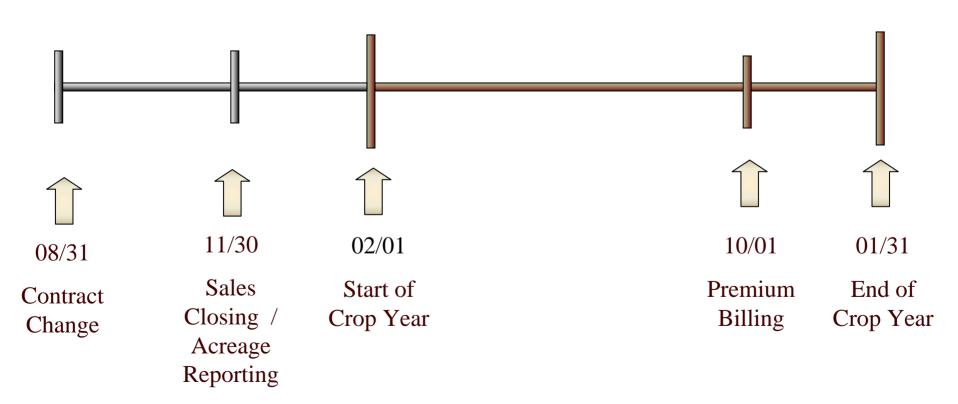
Index Interval III: $$18.00 \times 500 \text{ ac } \times 100\% \text{ (share)} = \$9,000$

Policy Protection: The sum of the policy protection per units (\$18,000)

Program Dates

- □ *Crop Year*: February 01 January 31
- □ Sales Closing Date: November 30 (crop type, dollar amount of protection per acre, coverage, Grid ID, index intervals, and items relevant to acreage report)
- □ Acreage Reporting Date: November 30
- □ Contract Change Date: August 31
- Premium Billing Date: October 01

Program Dates



Coverage

- \Box CAT
 - Coverage currently not available
- □ Coverage Levels
 - **70**, 75, 80, 85, or 90%
 - only one coverage level for each of the insured crop types in the county
 - Consistent with other GRP RBUP

Index Intervals

- □ *Index Interval:* a specified period of time in which precipitation data is collected resulting in a grid index
 - Producer can insure in any interval
 - □ Can insure in 2, 3, 4, 5, or all 6 intervals or any combination
 - Minimum insurance = 10% in any chosen interval
 - Maximum insurance
 - □ Producer must insure in at least 2 intervals
 - □ Maximum percentage allowed located in SPOI (ranges 50-70%)
 - ☐ Maximum percentage determined primarily by number of frost free dates/growing season

Index Intervals

INDEX INTERVALS

- (221) Index Interval I
- (222) Index Interval II
- (223) Index Interval III
- (224) Index Interval IV
- (225) Index Interval V
- (226) Index Interval VI

START DATE

February 1

April 1

June 1

August 1

October 1

December 1

END DATE

March 31

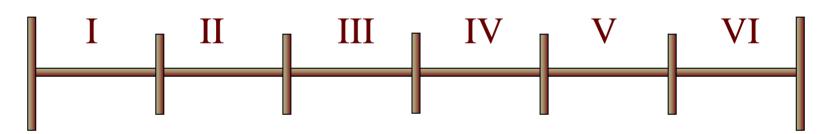
May 31

July 31

September 30

November 30

January 31



Index Definitions

- **Expected Grid Index:** Based on the historical mean accumulated precipitation by Index Interval, expressed as a percentage; EGI = 100
- □ *Trigger Grid Index:* The selected coverage level multiplied by the Expected Grid Index
 - *i.e.* Coverage Level = 85; then Trigger Grid Index = 85
 - If the final grid index falls below the trigger grid index, the insured may be due an indemnity
- □ *Final Grid Index:* Based on the current accumulated precipitation data for each Index Interval
 - If current data represents a 40% reduction, then $FGI = 60^{52}$

Rates and Premiums

- □ Premium Rate is applied to each Unit
 - All units independently rated
 - □ Each Grid ID, Crop Type, Coverage Level, and Index Interval
 - Minimizes adverse selection
 - Premium/unit (Index Interval) = \$ amount of protection/acre x number of insured acres/unit x premium rate x adjustment factor of 0.01 x share

Rates and Premiums

□ Premium subsidy per unit =

Premium per unit x subsidy rate

□ Producer premium per unit =

Premium per unit – Premium subsidy per unit

Rates and Premiums

- □ Total Policy Premium:
 - The sum of all "premium per unit" values for the policy
- □ Total Subsidy:
 - The sum of all "premium subsidy per unit" values for the policy
- □ Total Producer Premium:
 - The sum of all "producer premium per unit" values for the policy

Trigger and Indemnity

□ Payment Calculation Factor:

- Consistent with other GRP Programs
- (Trigger Grid Index Final Grid Index)/Trigger Grid Index)for each Unit
- An indemnity may be made only if the Final Grid Index is less than the Trigger Grid Index
- If indemnity is due, it will be issued not later than 60 days following the determination of the Final Grid Index
- Indemnity =
 - □ Payment Calculation Factor *x* Policy Protection/Unit

Trigger and Indemnity Example

EXAMPLE:

Trigger Grid Index (Coverage Level) = 85

Final Grid Index: Interval II = 90, Interval III = 60

Payment Calculation Factor =

Index Interval II: (85 - 90)/85 = No indemnity due (90 > TGI)

Index Interval III: (85 - 60)/85 = 0.294

Total Indemnity = \$2,646

Index Interval II = \$0

Index Interval III = $($9,000 \times 0.294) = $2,646$

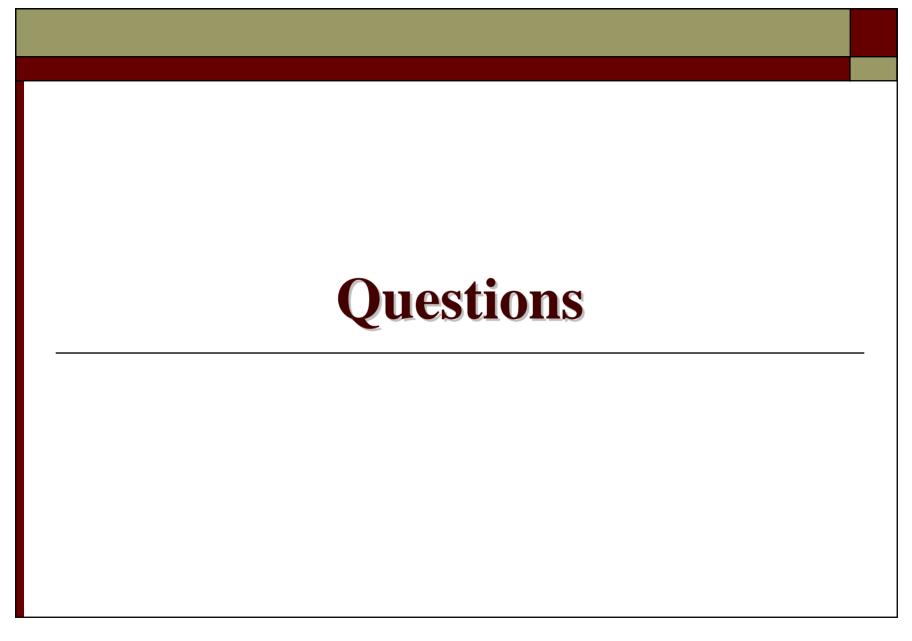
 $\{\$18.00 \ x \ 500 \ (acres \ in \ III) \ x \ 1.0 \ (share)\} \ x \ 0.294 = \$2,646$

Program Basics, Quick Review

- □ County contiguous acreage can cross county/state lines
- □ Insurable and Insured acres
- □ Basic Units only
- □ Sales Closing Date: November 30th
- Productivity Factor
- □ Dollar Amount of Protection per Acre:
 - CBV x PF (60% 150%) x CL (70% 90%)

Program Basics, Quick Review

- □ 6 available Index Intervals, must select at least two
- □ Policy Protection per Unit:
 - \$ Amount of Protection per Ac x Insured Acres x share
- □ Premium per Unit
 - \$ amount of protection/acre
 - x number of insured acres/unit
 - x premium rate
 - x adjustment factor of 0.01
 - x share
- □ Payment Calculation Factor:
 - (Trigger Grid Index Final Grid Index)/Trigger Grid Index)
- □ Indemnity:
 - Payment Calculation Factor x Policy Protection per Unit



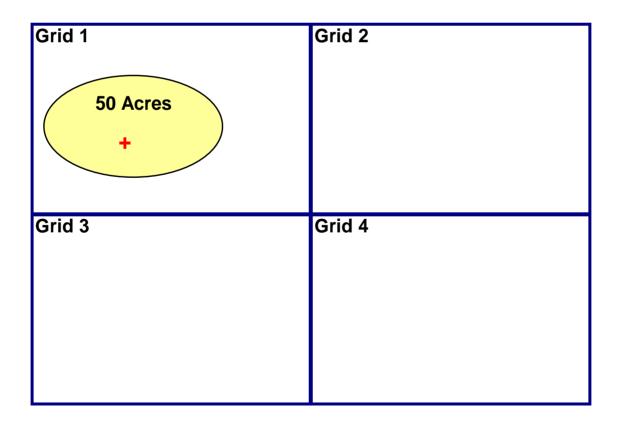
Grid ID Selection

- □ Grid ID: A specific code associated with each grid
 - Number = typically 5 digits
- □ **Point of Reference:** A designated point, identifiable by longitude and latitude
 - Selected by the insured
 - Point that best represents the insured acreage
 - This determines the Grid ID for insurance

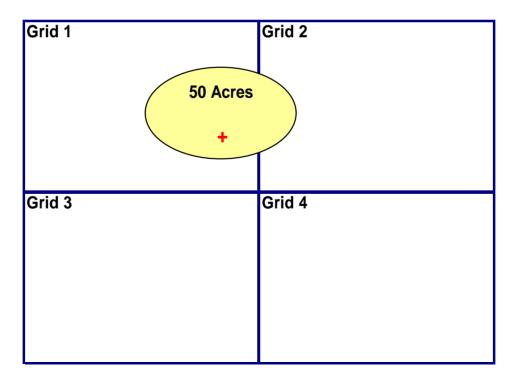
Grid ID Selection

- □ Certify the points of reference are representative of the acreage assigned to each Grid ID and the amount of acreage in each Grid ID (s)
 - **Example:** if the contiguous acreage is located in four grids the acreage can be separated into two, three, or four grids or left all in one grid
 - The same acres cannot be insured in more than one Grid ID or county
- □ Determine the point of reference and corresponding Grid ID by Sales Closing Date

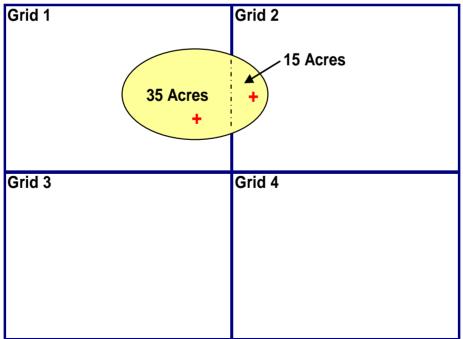
- □ Contiguous Acreage One Grid
- □ The insured picks **one** point of reference on the property



- □ Contiguous Acreage Multiple Grids, Counties, and/or States (Combined)
- □ The insured picks **one** point of reference in the contiguous acreage (**could pick Grid 1 or Grid 2**)

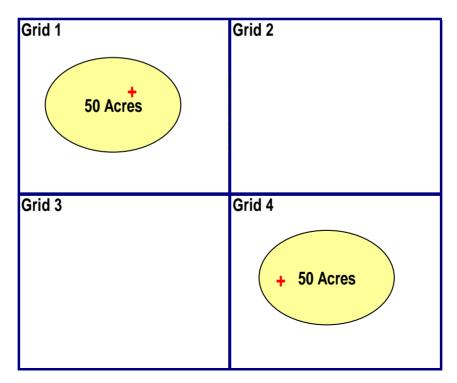


- □ Contiguous Acreage Multiple Grids, Counties, and/or States (Separated)
- □ The insured selects **one** point of reference in each Grid and assigns the number of acres

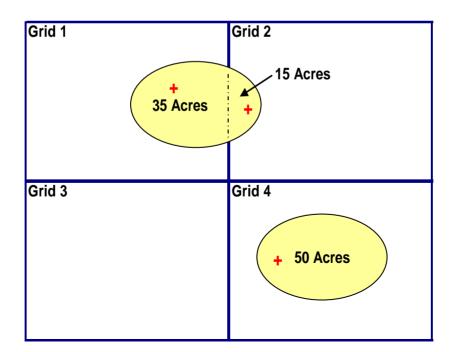


- □ Determining the Grid ID (s) for Non-Contiguous Acreage (multiple properties)
 - A point of reference must be selected for each separate, non-contiguous acreage
 - The steps in determining the point of reference are similar to the steps outlined for contiguous acreage, simply repeated for each non-contiguous acreage to be insured

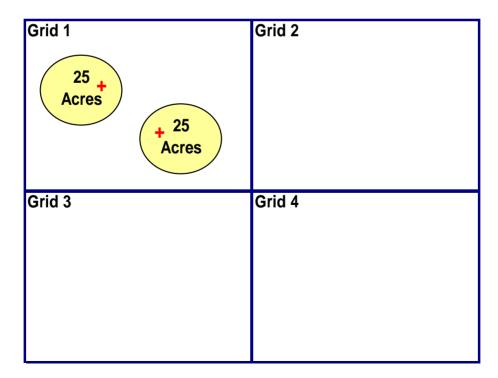
- □ The insured has two separate acreage locations in two grids
- □ The insured picks a point of reference in Grid 1 and a point of reference in Grid 4 and insures the two properties under two separate Grid ID's



- □ The insured has two separate acreage locations in three grids
- □ First, the insured would pick a point of reference in Grid 4
- □ The insured then has the option of combining his acreage in Grid 1 and Grid 2, or insuring them separately by grid



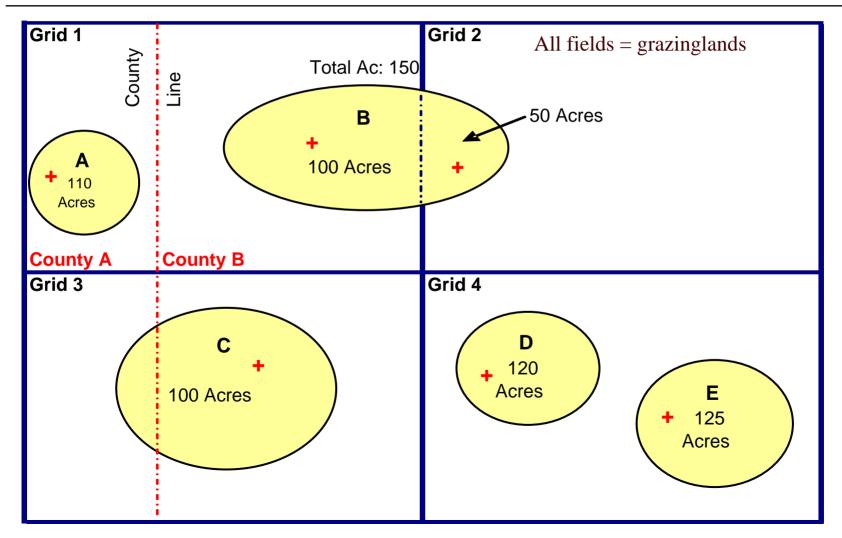
- □ If the non-contiguous acreage is located in the same grid
- ☐ The non-contiguous acreage will be combined and given a single Grid ID



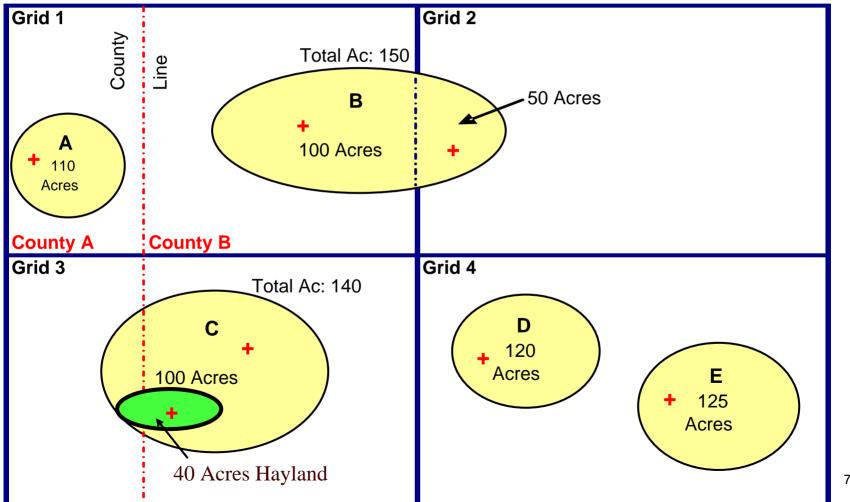
Review of Determining Grid ID(s)

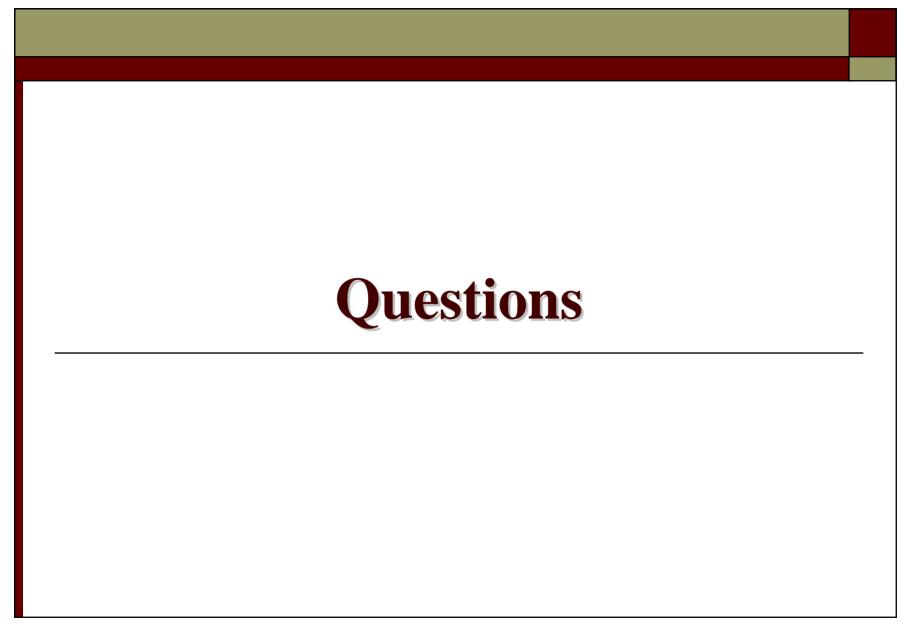
Type of Acreage	Grid Information	Guideline
Contiguous Acreage	Single Grid	Choose one point of reference
Contiguous Acreage	Multiple Grids – Combined	Choose one point of reference
Contiguous Acreage	Multiple Grids – Separated	Choose one point of reference for each Grid
Non-Contiguous Acreage (multiple properties)		Choose one point of reference for each, separate, non-contiguous acreage in the county

Grid ID Selection Test



Grid ID Selection Test





Use of the Website and Information Needed

Determining Grid ID(s)

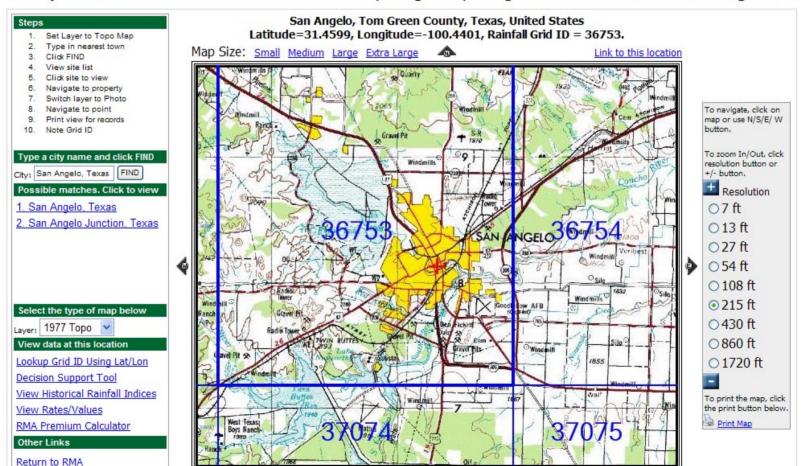
- □ Primary step:
 - Accurately identify the Grid ID(s)

Web address for determining Rainfall Index Grid ID(s):

http://prfri-rma-map.tamu.edu/

Topographical Map

Map Driven Weather Grid Id Locator for Pasture, Rangeland, Forage Rainfall Index Insurance Program



Determining Grid ID(s) – Basic Steps

- □ Type in the city and/or county name where the property is located
- Select the city or county from the possible matches, a topo map for the area will be displayed
- □ Narrow the search by selecting an area near the actual location of the insured's property
- Once the applicant has located the general area, it is recommended they continue to refine the search by switching to the photo maps
- Using the topo map, photo map, or combination of both, choose an appropriate resolution for proper identification of the property boundaries and corresponding Grid ID(s)

Photo Map

Map Driven Weather Grid Id Locator for Pasture, Rangeland, Forage Rainfall Index Insurance Program

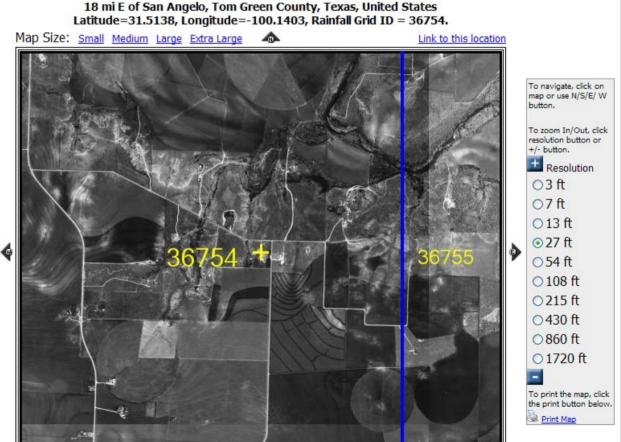
Steps Set Laver to Topo Map Type in nearest town 3. Click FIND 4. View site list 5. Click site to view 6. Navigate to property Switch layer to Photo 8. Navigate to point 9. Print view for records 10. Note Grid ID Type a city name and click FIND City: San Angelo, Texas FIND Possible matches. Click to view 1. San Angelo, Texas 2. San Angelo Junction, Texas



Select the type of map below

Other Links

Return to RMA

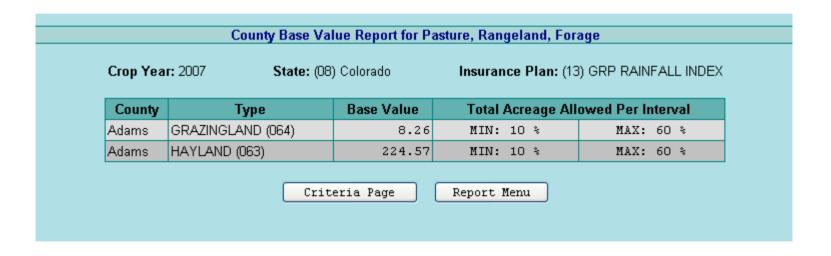


Determining Grid ID(s) – Additional Steps

- □ The insured then selects **one** point of reference on the property by moving the cross marker ('+') to that location
 - Grid ID is listed at the top of the screen (and on the map itself)
- □ A Print Icon is in the lower right hand corner of the screen
 - This printed map can be used as a record to verify the Grid ID
 - Once printed, the property boundary can also be outlined and initialed by the insured for verification purposes
- □ The insured must certify the point of reference

Rate Tables

□ County Base Values – Assessable at RMA website



Coverage, Rate, and Index Reports

□ Rates - Accessible at RMA website

Crop Yea	r: 2007	State: (Ut	3) Colorado		Insu	rance Plan:	(13) GRP R	ainfall Index		
Coverage Level 70% 75% 80% 85% 90% Subsidy Factor .64 .64 .59 .55 .55										
		3	ubsidy Factor .64 .64 .59	.59 .55						
Unsubsidized Rates										
Grid ID	County	Interval	Туре	70%	75%	80%	85%	90%		
24539	Weld	221 INDEX INTERVAL I	063 HAYLAND	14.86%	17.03%	18.86%	20.68%	22.49%		
	Weld	221 INDEX INTERVAL I	064 GRAZINGLAND	14.86%	17.03%	18.86%	20.68%	22.49%		
	Weld	222 INDEX INTERVAL II	063 HAYLAND	7.08%	8.45%	10.25%	11.85%	13.55%		
	Weld	222 INDEX INTERVAL II	064 GRAZINGLAND	7.08%	8.45%	10.25%	11.85%	13.55%		
	Weld	223 INDEX INTERVAL III	063 HAYLAND	7.07%	8.47%	10.02%	11.51%	12.82%		
	Weld	223 INDEX INTERVAL III	064 GRAZINGLAND	7.07%	8.47%	10.02%	11.51%	12.82%		
	Weld	224 INDEX INTERVAL IV	063 HAYLAND	6.46%	8.02%	9.87%	11.96%	14.13%		
	Weld	224 INDEX INTERVAL IV	064 GRAZINGLAND	6.46%	8.02%	9.87%	11.96%	14.13%		
	Weld	225 INDEX INTERVAL V	063 HAYLAND	12.78%	14.87%	16.99%	18.69%	20.30%		
	Weld	225 INDEX INTERVAL V	064 GRAZINGLAND	12.78%	14.87%	16.99%	18.69%	20.30%		
	Weld	226 INDEX INTERVAL VI	063 HAYLAND	12.07%	14.02%	15.94%	17.84%	19.58%		
	Weld	226 INDEX INTERVAL VI	064 GRAZINGLAND	12.07%	14.02%	15.94%	17.84%	19.58%		

Coverage, Rate, and Index Reports

□ Final Index, Payment Calculation Factors

		Crop Ye	ear: State: (08) Colorado	Insurance Plan: (13) GRP	Rainfall Index				
						Pay	ment Fac	tors	
Grid ID	County	Interval	Туре	Final Grid Index	70%	75%	80%	85%	90%
24537	Weld	(221) INDEX INTERVAL I	063 HAYLAND	Final grid indices and payme	nt factors	not yet av	ailable for t	his interva	l.
	Weld	(221) INDEX INTERVAL I	064 GRAZINGLAND	Final grid indices and payme	nt factors	not yet av	ailable for t	his interva	l.
	Weld	(222) INDEX INTERVAL II	063 HAYLAND	Final grid indices and payme	nt factors	not yet av	ailable for t	his interva	l.
	Weld	(222) INDEX INTERVAL II	064 GRAZINGLAND	Final grid indices and payme	nt factors	not yet av	ailable for t	his interva	l.
	Weld	(223) INDEX INTERVAL III	063 HAYLAND	Final grid indices and payme	nt factors	not yet av	ailable for t	his interva	l.
	Weld	(223) INDEX INTERVAL III	064 GRAZINGLAND	Final grid indices and payme	nt factors	not yet av	ailable for t	his interva	l.
	Weld	(224) INDEX INTERVAL IV	063 HAYLAND	Final grid indices and payme	nt factors	not yet av	ailable for t	his interva	l.
	Weld	(224) INDEX INTERVAL IV	064 GRAZINGLAND	Final grid indices and payme	nt factors	not yet av	ailable for t	his interva	l.
	Weld	(225) INDEX INTERVAL V	063 HAYLAND	Final grid indices and payme	nt factors	not yet av	ailable for t	his interva	l.
	Weld	(225) INDEX INTERVAL V	064 GRAZINGLAND	Final grid indices and payme	nt factors	not yet av	ailable for t	his interva	l.
	Weld	(226) INDEX INTERVAL VI	063 HAYLAND	Final grid indices and payme	nt factors	not yet av	ailable for t	his interva	l.
	Weld	(226) INDEX INTERVAL VI	064 GRAZINGLAND	Final grid indices and payme	nt factors	not yet av	ailable for t	his interva	l.

Information Agents Need to Collect

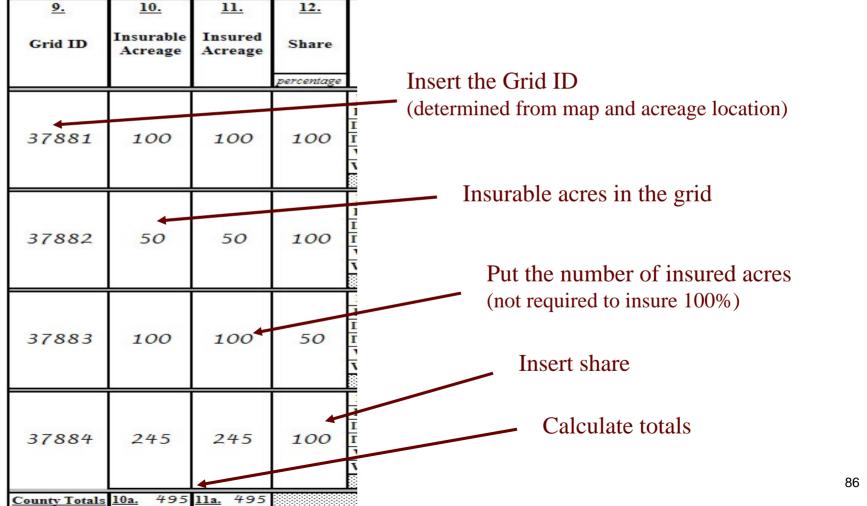
- □ Insurable Acres
- □ Share
- □ Producer Selections (for each County/State combination):
 - Crop Type
 - Grid IDs
 - Coverage Level
 - Productivity Factor
 - Index Intervals
 - Insured Acres
 - Amount of Insurance per Index Interval

PASTURE, RANGELAND, FORAGE RAINFALL INDEX WORKSHEET

1. Insured's	Name:			56	2. Date: _	_/_/_	3. Sta	te:	<u>4.</u> (County:		()
5. Crop Type	:	6.	Coverage	Level/Trigge	er Index: _		7. Product	ivity Factor:	%	8. \$ Amt.	of Prot/Ac:	<u></u>
<u>9.</u>	<u>10.</u>	11.	<u>12.</u>	<u>13.</u>	<u>14.</u>	<u>15.</u>	<u>16.</u>	<u>17.</u>	18.	<u>19.</u>	<u>20.</u>	<u>21.</u>
Grid ID	Insurable Acreage	Insured Acreage	Share	Index Interval	Unit Number	% Insured acreage/ Unit	Insured acreage/ Unit	Policy Protection/ Unit	Premium Rate/\$100	Premium/ Unit	Premium Subsidy Amt	Premium Due From Grower
			percentage			percentage	acres	dollars	dollars	dollars	dollars	dollars
				I II III IV								
				V VI	Total							
				I II								
				IV V VI								
				ere .	Total			1			ı	ı
			9	II III IV								
				V VI	Total							
				II III								
				IV V VI	Total							
County Totals	10a.	lla.			10101		16a.	17a.		19a.	20a.	21a.
Duenaued but	A- A-		• • • • • • • • • • • • • • • • • • • •			/A	Cianatum					

General p	oolicy information		PASTURE FRANÇELAND, FORAGE FRANÇALI INDEX WORKSHEET Limited France Limited França Limited Li	
1. Insured's Name: 5. Crop Type:	2. Date:/_ 6. Coverage Level/Trigger Index:	/ <u>3.</u> State:	() <u>4.</u> County: r: % <u>8.</u> \$ Amt. of Prot/Ac:	_(_)
Finish v	with name and grower	· initials —	PASTURE PANGELAND FORAGE PANFALL INCEL	X WORKSHEET TO A 1 to the other to the othe
Prepared by:		(Agent's Signature)	Grower's Initials:	Designed's handles







Insert 1	Index	Interval
code		

Insert unit number —

Insert the percentage of acreage selected for each Index Interval

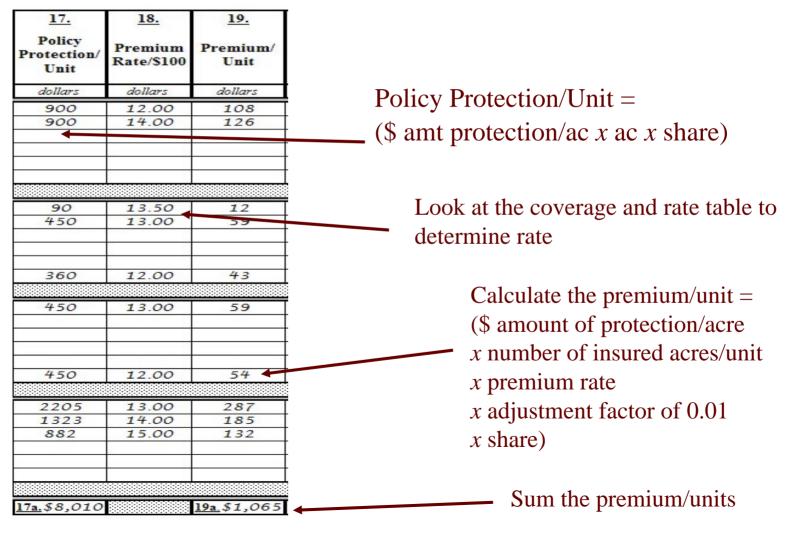
1	13. Index nterval	14. Unit Number	15. % Insured acreage/ Unit	16. Insured acreage/ Unit
			percentage	acres
I	221	00100	50	50
п	222	00200	50	50
111	-	00200		
\mathbf{IV}				
v				
VI				
		Total	100	100
I	221	00100	10	5
п	222	00200	50	25
Ш		→		
PV	9	0		
v	-			
VI	226	00300	40	20
		Total	100	50
I	221	00100	50	50
п				
Ш				
IV				
v	226	00200		50
VI	226	00200	50 100	50 100
****		Total		
I	221	00100	50	122.5
п	222	00200	30	73.5
III	223	00300	20	49
v				
VI		1.5		
		Total	100	245
90000			200	-
				16a. 495

Calculate the number of insured acres per Index Interval (Insured acres *x* percentage in #13)

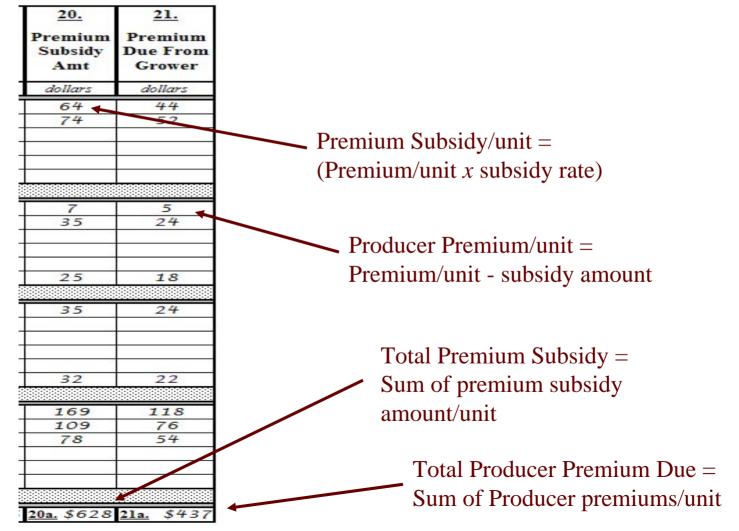
Total acres (should equal total insured acres for the Grid ID)

Total in 14a should equal total insured acres









Worksheet Information - Completed

PASTURE, RANGELAND, FORAGE RAINFALL INDEX WORKSHEET

1. Insured's	Name:			5.0	2. Date: _	_//_	3. Sta	te:	() <u>4.</u>	County:		()
5. Crop Type	:	6.	Coverage	Level/Trigg	er Index: _		7. Producti	vity Factor:	%	8. \$ Amt. 6	of Prot/Ac:	
<u>9.</u>	<u>10.</u>	<u>11.</u>	<u>12.</u>	<u>13.</u>	14.	<u>15.</u>	<u>16.</u>	<u>17.</u>	<u>18.</u>	19.	<u>20.</u>	<u>21.</u>
Grid ID	Insurable Acreage	Insured Acreage	Share	Index Interval	Unit Number	% Insured acreage/ Unit	Insured acreage/ Unit	Policy Protection/ Unit	Premium Rate/\$100	Premium/ Unit	Premium Subsidy Amt	Premium Due From Grower
			percentage			percentage	acres	dollars	dollars	dollars	dollars	dollars
				I 221	00100	50	50	900	12.00	108	64	44
				II 222	00200	50	50	900	14.00	126	74	52
27001	100	100	100	Ш					2			
37881	100	100	100	IV V			A		S			
				VI					22			
					Total	100	100					
				I 221	00100	10	5	90	13.50	12	7	5
				II 222	00200	50	25	450	13.00	59	35	24
27002	50	50	100	Ш								
37882	50	50	100	IV							-	
				VI 226	00300	40	20	360	12.00	43	25	18
					Total	100	50					
				I 221	00100	50	50	450	13.00	59	35	24
				П								
	173,535,17	10.00.00.00.00		Ш								
37883	100	100	50	IV								
				VI 226	00200	50	50	450	12.00	54	32	22
				VI 220	Total	100	100	730	12.00		32	
				I 221	00100	50	122.5	2205	13.00	287	169	118
			1	II 222	00200	30	73.5	1323	14.00	185	109	76
504044070750000				III 223	00300	20	49	882	15.00	132	78	54
37884	245	245	100	IV					<u>, </u>			101
- Land 18 18 18		400.00	1111111	V								
				VI	Total	100	245		<u> </u>	<u> </u>	<u> </u>	<u> </u>
County Totals	10a 495	11a 495	300000000000000000000000000000000000000		******			17a.\$8,010		<u>19a</u> .\$1,065	20a \$628	21a \$427
Prepared by:	77	-181 10J	poccessionici		000000000000000000000000000000000000000	(Agent'	s Signatur		0.0	ured's Initial		<u>-14.</u> 9137

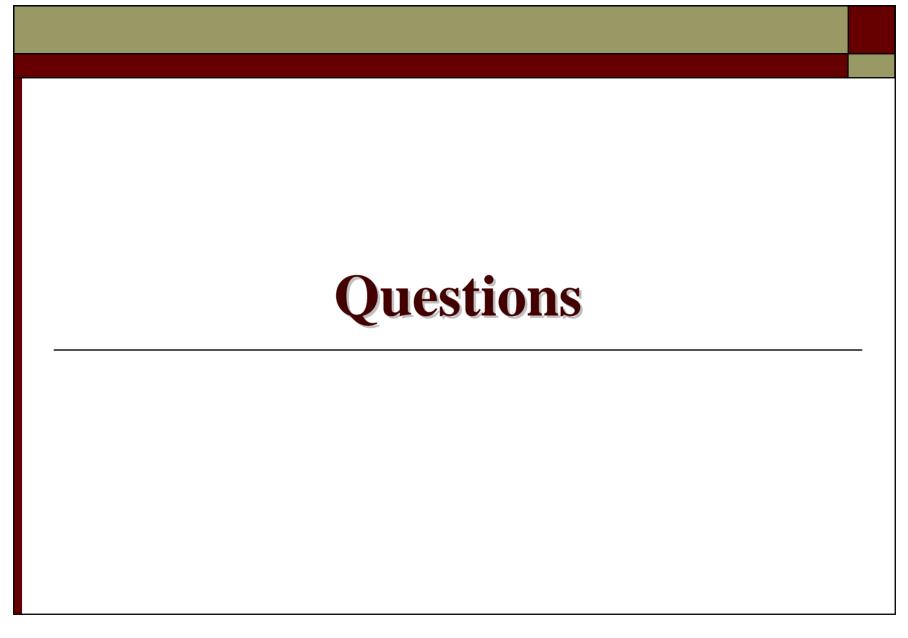
Worksheet Information - Completed

PASTURE, RANGELAND, FORAGE RAINFALL INDEX WORKSHEET

1. Insured's	Name:				2. Date: _	_//_	3. Sta	te:	() <u>4.</u> (County:		()
5. Crop Type	:	6.	Coverage	Level/Trigg	er Index: _		7. Producti	ivity Factor:	%	8. \$ Amt. o	f Prot/Ac:	
<u>9.</u>	<u>10.</u>	<u>11.</u>	12.	<u>13.</u>	14.	<u>15.</u>	<u>16.</u>	<u>17.</u>	18.	<u>19.</u>	20.	21.
Grid ID	Insurable Acreage	Insured Acreage	Share	Index Interval	Unit Number	% Insured acreage/ Unit	Insured acreage/ Unit	Policy Protection/ Unit	Premium Rate/\$100	Premium/ Unit	Premium Subsidy Amt	Premium Due From Grower
			percentage			percentage	acres	dollars	dollars	dollars	dollars	dollars
				I 221 II 222	00100	50 50	50 50	900	12.00 14.00	108 126	64 74	44 52
27004	400	400	400	Ш	00200	30	- 50	300	17.00	120		- 52
37881	100	100	100	IV V								
				VI								
		<i>e</i> :			<u>Total</u>	100	100					
				I 221 II 222 III	00100	10 50	5 25	90 450	13.50 13.00	12 59	7 35	5 24
37882	50	50	100	IV					2			
				VI 226	00300	40	20	360	12.00	43	25	18
					Total	100	50					
				I 221 II	00100	50	50	450	13.00	59	35	24
37883	100	100	50	III IV					2 S			
3/003	100	100	30	V	/							
				VI 226	00200	50	50	450	12.00	54	32	22
					Total	100	100					
				I 221	00100	50	122.5	2205	13.00	287	169	118
				II 222	00200	30 20	73.5	1323	14.00	185	109	76
37884	245	245	100	III 223 IV	00300	20	49	882	15.00	132	78	54
3,00.				V								
				VI	Total	100	245				l	L
County Totals	10a. 495	11a. 495					16a. 495	17a.\$8,010		19a.\$1,065	20a. \$628	21a. \$437
Prepared by:						(Agent'	s Signature			red's Initial		

How the Index is Reported

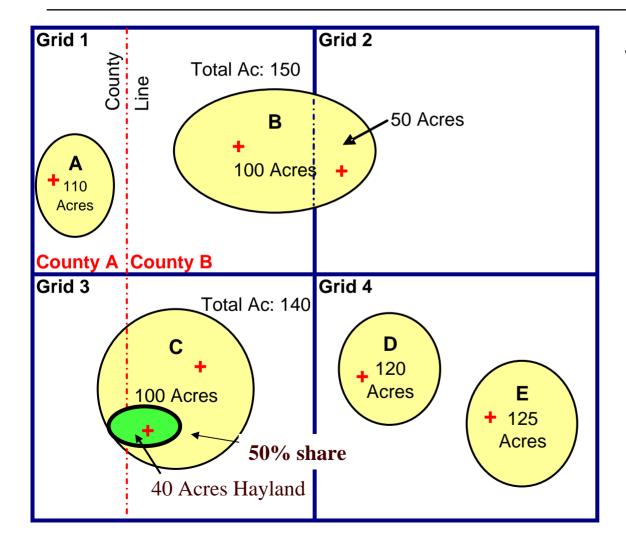
□ The Final Grid Index will be available on the RMA website following the end date of each index interval



Joe Rancher Contacts His Agent

A step-by-step example

Determining Grid ID's

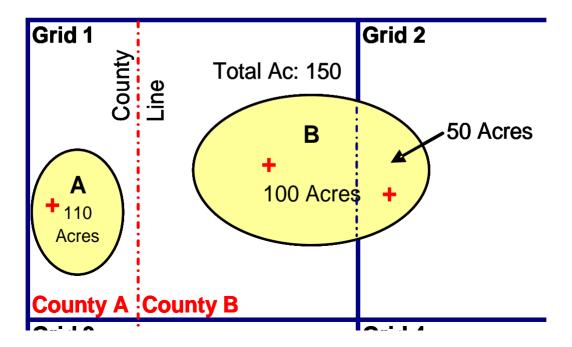


Joe Rancher has 645
acres of insurable
grazingland and
hayland in two
counties. His insurable
acreage is contained in
five non-contiguous
properties: A, B, C, D,
and E.

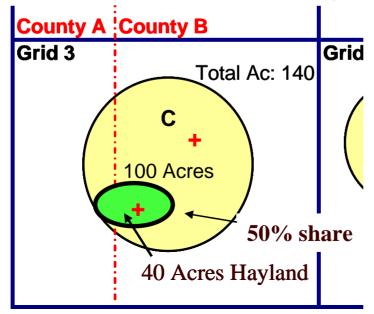
Note: Actual Grid IDs will have 5 digits.

- □ Joe Rancher decides to insure the four properties (535 insurable acres) located in County B and leave property A uninsured in County A
- □ Had he chosen to insure Property A in County A, he would have had to insure that acreage separately because Property A is non-contiguous from his other properties and located in a different county

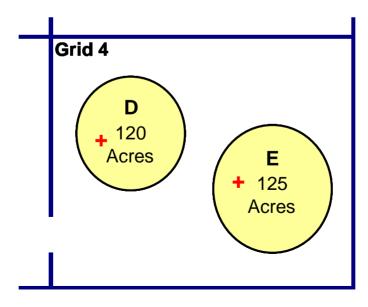
- □ Property B Contiguous acreage located in more than one grid
 - Decides to separate the property into two Grid IDs, with 100 insured acreage in Grid 1 and 50 insured acreage in Grid 2. He picks a reference point in each grid



- □ Property C Contiguous acreage spread into more than one county, which contains two crop types (both grazingland and hayland with 50% share)
 - Decides to pick a point of reference in County B and use that point of reference to represent all the contiguous insurable grazingland acreage (100 acres) in both County A and County B (decides not to insure haylands)



- □ Property D and E Non-Contiguous acreage located in a single grid (both grazingland with 100% share)
 - Joe Rancher combines Properties D and E and insures all 245 acres under Grid ID 4



Summary

Insured Acreage, Grid ID, Coverage Level, Productivity Factor, \$ of Protection/Ac

Grid ID	Property	Insured Acreage
Grid 1 (insert the actual Grid ID number for the insured, i.e. 37881)	В	100
Grid 2 (insert the actual Grid ID number for the insured, i.e. 37882)	В	50
Grid 3 (insert the actual Grid ID number for the insured, i.e. 38773)	С	100
Grid 4 (insert the actual Grid ID number for the insured, i.e. 38774)	D & E	245
Total		495

Joe Rancher selects for grazingland:

Coverage Level = 85%

Productivity Factor = 120%

County Base Value = \$17.65

Dollar Amount of Production per Acre

$$=$$
 \$17.65 x 0.85 x 1.20

= \$18.00 per Acre

Summary

Grid ID	Index Interval	Unit Num ber	% Protection	Number of acres
Grid 1	I	00100	50%	50 ac
	II	00200	50%	50 ac
Insured acreage =	III			
100	IV			
	V			
	VI			
	Total	Lacore a con-	100%	100 ac
Grid 2	I	00100	10%	5 ac
	II	00200	50%	25 ac
Insured acreage =	III			
50	IV			
	V	Charles and the		
	VI	00300	40%	20 ac
	Total		100%	50 ac
Grid 3	I	00100	50%	50 ac
	II			
Insured acreage =	III			
100	IV			
	V			
	VI	00200	50%	50 ac
	Total		100%	100 ac
Grid 4	I	00100	50%	122.5 ac
	II	00200	30%	73.5 ac
Insured acreage =	III	00300	20%	49 ac
245	IV		1 111 1	
	V			
	VI			
	Total		100%	245 ac

Designates specific

percentage of the
insured acreage to at
least two of the
index intervals for
each Grid ID

He finds that he can place no more than 50% of his insured acreage to any one index interval

Note: Interval selections do not have to be contiguous

Policy Protection per Unit (10 Units)

Grid ID	Index interval	Unit Number	Policy Protection/Unit
	I (\$18.00 X 50ac X 1.0)	00100	\$900
Grid 1	II (\$18.00 X 50ac X 1.0)	00200	\$900
	III		
Insured acreage = 100 100% share	IV		
100 % Share	V		
	VI		
	I (\$18.00 X 5ac X 1.0)	00100	\$90
Grid 2	II (\$18.00 X 25ac X 1.0)	00200	\$450
Insured acreage = 50	III		, , , , , , , , , , , , , , , , , , ,
100% share	IV		
100 70 Share	V	417777	14001
	VI (\$18.00 X 20ac X 1.0)	00300	\$360
	I (\$18.00 X 50ac X 0.50)	00100	\$450
Grid 3	II		
Insured acreage = 100	III		
50% share	IV		
50% Share	V		
	VI (\$18.00 X 50ac X 0.50)	00200	\$450
	I (\$18.00 X 122.5ac X 1.0)	00100	\$2,205
Grid 4	II (\$18.00 X 73.5ac X 1.0)	00200	\$1,323
	III (\$18.00 X 49ac X 1.0)	00300	\$882
Insured acreage = 245 100% share	IV		(M.C. w)
100 70 SHALE	V		
	VI		
Policy Protection		7	\$8,010

Premium

- □ Joe Rancher and his agent look up the applicable premium rates using the premium rate tables
- □ Premium/unit (Index Interval) =
 - \$ amount of protection/acre
 - x number of insured acres/unit
 - x premium rate
 - x adjustment factor of 0.01
 - x share

Summary of Premium

Grid ID	Insured Acreage & Share	Index Interval	Unit Number	Policy Protection/ unit	Premium Rate/\$100	Premium
		I	00100	(\$18.00 x 50 ac x 1.0 share)= \$900.00	\$12.00	\$108
	100ac	II	00200	(\$18.00 x 50 ac x 1.0 share)= \$900.00	\$14.00	\$126
Grid 1	100%	III				
	share	IV				
		V				
		VI				
		Total		\$1,800.00		\$234
		I	00100	(\$18.00 x 5 ac x 1.0 share)= \$90.00	\$13.50	\$12
	50ac	11	00200	(\$18.00 x 25 ac x 1.0 share)= \$450.00	\$13.00	\$59
Grid 2		III		The state of the s		
GIId 2	100%	IV				
	share	V		(0.10.00.00.00.00.00.00.00.00.00.00.00.00		
		VI	00300	(\$18.00 x 20 ac x 1.0 share)= \$360.00	\$12.00	\$43
		Total	İ	\$900.00		\$114
		I	00100	(\$18.00 x 50 ac x 0.50 share)= \$450.00	\$13.00	\$59
	100	II				
	100ac	III				
Grid 3	50%	IV				
	share	V				
		VI	00200	(\$18.00 x 50 ac x 0.50 share)= \$450.00	\$12.00	\$54
		Total		\$1,800.00		\$113
		I	00100	(\$18.00 X 122.5ac X 1.0 share)=\$2,205.00	\$13.00	\$287
	245ac	II	00200	(\$18.00 X 73.5ac X 1.0 share)= \$1,323.00	\$14.00	\$185
Grid 4	100%	III	00300	(\$18.00 X 49ac X 1.0 share)= \$882.00	\$15.00	\$132
	share	IV				
		V				
		VI	10			
		Total		\$4,410.00		\$604
Grand	totals			\$8,010		\$1,065

Premium Subsidy Amount

- □ Joe Rancher and his agent refer to the GRP subsidy tables
 - For the coverage level of 85%, the applicable subsidy percentage is 59%

- □ Premium Subsidy/Unit =
 - Premium/unit x subsidy percentage Example: $$108 \times 0.59 = 64

Premium Due from Producer

□ The Premium due from Producer is the result of the Premium/unit minus the Subsidy/unit

□ Premium per unit – Premium subsidy per unit Example: \$108 - \$64 = \$44

☐ They sum the Subsidy and Producer Premiums to determine the Totals

Summary of Premium, Subsidy, and Producer Premium

Grid ID Index Interval		Unit Number	Premiums	Premium Subsidy	Producer Premium	
Grid 1	I	00100	\$108	\$64	\$44	
	II	00200	\$126	\$74	\$52	
	III					
	IV				24	
	V					
	VI				<i>y</i>	
	I	00100	\$12	\$7	\$5	
	II	00200	\$59	\$35	\$24	
Grid 2	III				1.0	
Grid 2	IV		3		0	
	V			22.0	No. ORDERON	
	VI	00300	\$43	\$25	\$18	
	I	00100	\$59	\$35	\$24	
	II					
0.440	III					
Grid 3	IV					
	V				7	
	VI	00200	\$54	\$32	\$22	
	I	00100	\$287	\$169	\$118	
	II	00200	\$185	\$109	\$76	
Cuid A	III	00300	\$132	\$78	\$54	
Grid 4	IV					
	V				100	
	VI			9707	200	
	Totals		\$1,065	\$628	\$437	

Worksheet with All Information

PASTURE, RANGELAND, FORAGE RAINFALL INDEX WORKSHEET

1. Insured's Name: <u>Joe B. Rancher</u> 2. Date: 10/15/2006 3. State: TX (48) 4. County: <u>Andrews</u> (003)

5. Crop Type: <u>Grazingland</u> 6. Coverage Level/Trigger Index: <u>85</u> 7. Productivity Factor: <u>120</u> % 8. \$ Amt. of Prot/Ac: <u>18.00</u>

9.	10.	<u>11.</u>	<u>12.</u>	13.	14.	<u>15.</u>	<u>16.</u>	<u>17.</u>	<u>18.</u>	<u>19.</u>	20.	21.
Grid ID	Insurable Acreage	Insured Acreage	Share	Index Interval	Unit Number	% Insured acreage/ Unit	Insured acreage/ Unit	Policy Protection/ Unit	Premium Rate/\$100	Premium/ Unit	Premium Subsidy Amt	Premium Due From Grower
			percentage			percentage	acres	dollars	dollars	dollars	dollars	dollars
				I 221	00100	50	50	900	12.00	108	64	44
				II 222	00200	50	50	900	14.00	126	74	52
27004	400	100		III					Ĭ. D.)
37881	100	100		IV								
				V	5						-	-
					Total	100	100		 		 	
		50		I 221	00100	10	5	90	13.50	12	7	5
				II 222	00200	50	25	450	13.00	59	35	24
				Ш			9			7.3000002		
37882	50			IV					i ii			
				V	*	0.707.00000000			in the second			
				VI 226	00300	40	20	360	12.00	43	25	18
					Total	100	50					
		100	00 50	I 221	00100	50	50	450	13.00	59	35	24
				П					ng.			
27002	100			Ш					e			-
37883	100			IV			B					
				VI 226	00200	50	50	450	12.00	54	32	22
			11 220	Total	100	100	130	12.00		32	~~	
				I 221	00100	50	122.5	2205	13.00	287	169	118
37884 245		245	45 100	II 222	00200	30	73.5	1323	14.00	185	109	76
				III 223	00300	20	49	882	15.00	132	78	54
	245			IV								
				V								
				VI					45			
					<u>Total</u>	100	245					
County Totals	10a. 495	11a. 495					16a. 495	17a.\$8,010		19a.\$1,065	20a. \$628	21a. \$437

Prepared by:	Big Bey Agent	(Agent's Signature)	Insured's Initials:	JB R	

Final Grid Index and Indemnities

Final and Trigger Grid Index

Grid ID	rid ID Index Unit Interval Number		Final Grid Index	Trigger (Above or Below)		
Grid 1	I	00100	120	Above		
	II	00200	100	Above		
	III					
	IV					
	V					
	VI					
	I	00100	110	Above		
Grid 2	II	00200	90	Above		
	III					
Grid 2	IV					
	V		100	11.000		
	VI	00300	70	Below		
	I	00100	110	Above		
	II					
Grid 3	III					
Gilus	IV					
	V					
	VI	00200	60	Below		
	I	00100	120	Above		
	II	00200	70	Below		
G-114	III	00300	60	Below		
Grid 4	IV					
	V					
	VI					

Trigger Grid Index is 85 for all grids and Index Intervals

Calculating Indemnities

□ Payment calculation factor =

(trigger grid index – final grid index) trigger grid index

□ Indemnity payment =

payment calculation factor x Policy protection per unit

Example Calculations

- □ Grid 4 245 Acres
- □ Index Interval I: The final grid index of 120 is above the trigger grid index of 85. No indemnity is due
- □ **Index Interval II**: The final grid index of 70 is below the trigger grid index of 85

Payment calculation factor =
$$(85 - 70) / 85$$

= 0.176
Indemnity payment = $0.176 \times 1,323$
= $\$233$

□ Index Interval III: The final grid index of 60 is below the trigger grid index of 85

= \$259

Payment calculation factor =
$$(85 - 60) / 85$$

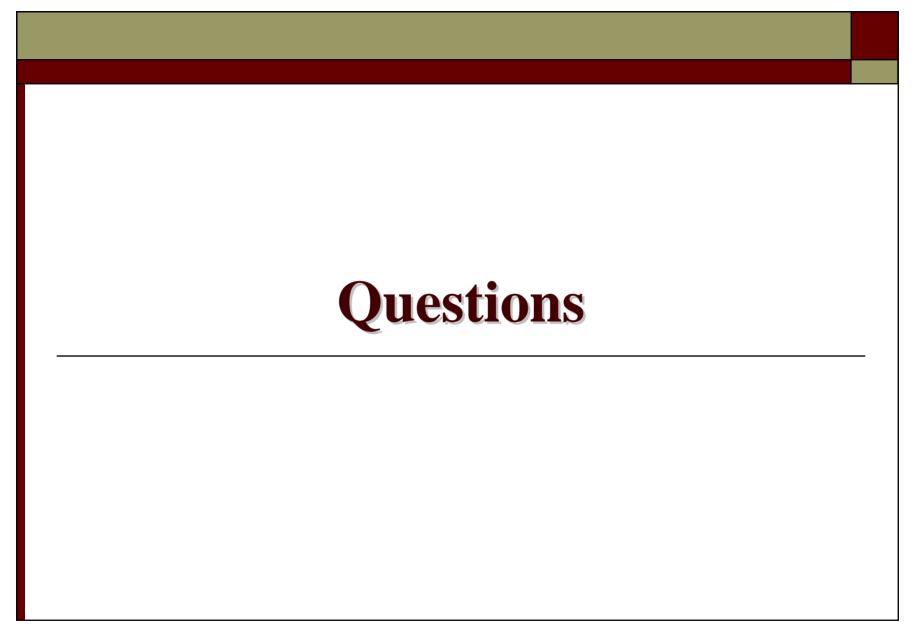
= 0.294
Indemnity payment = 0.294×882

Summary of Yearly Policy in Example

□ Joe Rancher insured 495 acres of grazingland in Four separate Grid ID's

□ Joe Rancher paid \$437 in premium for \$8,010 in protection

□ A total indemnity of \$687 will be due to Joe
 Rancher for this County and Crop Year

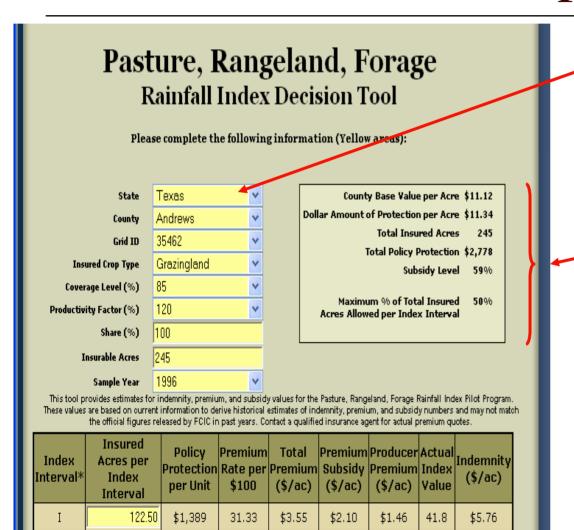


Additional Program Tools and Information

PRF - Rainfall Index Decision Tool

- □ The calculator is not part of the program
 - Not required to buy insurance
 - Provides estimates
 - Values are based on current information to derive historical estimates of indemnity, premium, and subsidy numbers
 - May not match the official figures released by FCIC in past years
 - Contact a qualified insurance agent for actual premium quotes

Decision Tool: Example



Input information in all the yellow fields

Base information provided

Decision Tool: Example

Insurable Acres 245
Sample Year 1996

This tool provides estimates for indemnity, premium, and subsidy values for the Pasture, Rangeland, Forage Rainfall Index Pilot Program. These values are based on current information to derive historical estimates of indemnity, premium, and subsidy numbers and may not match the official figures released by FCIC in past years. Contact a qualified insurance agent for actual premium quotes.

Index Interval*	Insured Acres per Index Interval	Policy Protection per Unit	Premium Rate per \$100		Premium Subsidy (\$/ac)			Indemnity (\$/ac)	
I	122.50	\$1,389	31.33	\$3.55	\$2.10	\$1.46	41.8	\$5.76	
II	73.50	\$833	31.56	\$3.58	\$2.11	\$1.47	43.1	\$5.59	
III	49	\$556	31.90	\$3.62	\$2.14	\$1.48	37.6	\$6.33	
ΙV	0	\$0	31.24	\$0.00	\$0.00	\$0.00	38.1	\$0.00	
٧	0	\$0	30.72	\$0.00	\$0.00	\$0.00	39.6	\$0.00	
VI	0	\$0	31.06	\$0.00	\$0.00	\$0.00	39.5	\$0.00	
Per Acre	N/A	N/A	N/A	\$3.57	\$2.11	\$1.46	N/A	\$5.82	
Policy Total	245	\$2,778	N/A	\$875	\$516	\$359	N/A	\$1,427	

*Intervals: I-Feb-Mar, II-Apr-May, III-June-July, IV-Aug-Sep, V-Oct-Nov, VI-Dec-Jan

Submit Query





Insert the number of acres for each Index Interval (percentages allowed specified in the Special Provisions)

Results

Once information is entered, click Submit Query

(if any information is changed must resubmit query)

Additional Information

- □ Historical Index
 - Lookup values since 1948
- Lookup Grid ID using Longitude/Latitude
 - Must be submitted in the correct data format
- □ RMA premium calculator

Summary

- □ A new program for a commodity with little or no history of crop insurance
- □ GRP based program
- Losses determined by index (not individual production)
- □ Terminology differences
- Producer is allowed or required to make choices
- □ Can tailor the program to producer risk management needs

