

# THE 2002 COUNTY LOAN RATE CALCULATION PROCEDURE

## Wheat

**Goal:** Increase market orientation and reduce loan program distortions

- Objectives:**
- (1) Update county loan rates (CLR's) for wheat and feed grains so that they more closely track price relationships among counties
  - (2) Ensure that county loan rates "weight" to statutorily-established National Loan Rate (NLR)

- Computational Principles:**
- (1) Use recent historical posted county prices (PCP's) as a proxy for county-to-county price relationships  
Simple 2-year average PCP's
    - (a) June 1, 1999-May 31, 2001: wheat, barley, oats, flaxseed, canola, rapeseed
    - (b) September 1, 1999-August 31, 2001: corn, grain sorghum, soybeans, oil- and other-type sunflower seed, safflower, and mustard seed
  - (2) Use recent historical production by county for "weighting" but remove outliers (i.e., exclude high- and low-production years  
Olympic average production, 1996-2000 (OAP)

Example for one hypothetical county					
Year	1996	1997	1998	1999	2000
Production	1,300	<del>800</del>	700	1,000	<del>1,400</del>
Drop years with high and low production, and average the production in the remaining years, i.e., drop 1997 and 2000 with the result being 1,000 units [= (1,300+700+1,000) / 3 years]					

- (3) Disaggregate all-wheat production to the class level to get class-based weights for each county relative to the national total

- Steps:**
- (1) Obtain National Loan Rate (NLR)
  - (2) Calculate 2-year Avg PCP for each class in each county
  - (3a) Calculate olympic average production by county (all-wheat)
  - (3b) Allocate all-wheat production among the 5 classes
  - (4) Sum olympic average production for all counties and all classes
  - (5) Calculate production weights for each county and class--(3b) / (4)
  - (6) "Weight" each county's class-based 2-year Avg PCP by its respective production weight--(2) \* (5)
  - (7) Calculate the National Average PCP (NAPCP) by summing weighted 2-year average PCP's for all counties and classes
  - (8) Calculate the difference between the NLR and NAPCP--(1) - (6)
  - (9) Calculate class-based County Loan Rates by adding the difference, NLR - NAPCP, to 2-year Avg PCP--(2) + (8)
  - (10) Check calculations to ensure County Loan Rates "weight" to NLR--Does sum of (9) \* (5) = NLR?

### Simple 2-county, 2-class example for wheat (NLR=\$2.80/bushel)

	County A		County B		Total
	Class 1	Class 2	Class 1	Class 2	
<b>2-yr Avg PCP</b>	\$3.50	\$2.50	\$2.80	\$2.00	(see NAPCP)
<b>Production (OAP, All-wheat)</b>	1,000	+	1,000	=	2,000
<b>Class Share for County</b>	0.2	0.8	0.0	1.0	n/a
<b>Production (Class)</b>	200	+	800	+	1,000 = 2,000
<b>Class Share for Nation</b> or	= 200 / 2,000	+	800 / 2,000	+	0 / 2,000 + 1,000 / 2,000 = 1.0
	= 0.1	+	0.4	+	0.0 + 0.5 = 1.0
<b>NLR</b>					\$2.80
<b>NAPCP</b>	\$0.35	+	\$1.00	+	\$0.00 + \$1.00 = \$2.35
<b>NLR - NAPCP</b>					\$0.45
<b>CLR's by Class</b>	<b>\$3.95</b>	<b>\$2.95</b>	<b>\$3.25</b>	<b>\$2.45</b>	
<b>Check</b> or	= 0.1 * \$3.95	+	0.4 * \$2.95	+	0.0 * \$3.25 + 0.5 * \$2.45 = \$2.80
	= \$0.395	+	\$1.180	+	\$0.000 + \$1.225 = \$2.80