SUMMARY OF CHANGES FOR THE GRAIN SORGHUM PRICING METHODOLOGY (23-CEPP-M0051)
(Released June 2022)

The following changes to the Grain Sorghum Pricing Methodology were made. Please refer to the Grain Sorghum Pricing Methodology document below for complete information.

- A statement is added in italics at the beginning of the Grain Sorghum Pricing Methodology document that states the methodology is applicable for the 2019-2022 crop years. The pricing methodology is not applicable for the 2023 and succeeding crop years. For the 2023 and succeeding crop years, RMA will release the sorghum factor in a bulletin prior to the contract change date.
- The document was reformatted to be more consistent with other policy documents.

23-CEPP-M0051
(Released June 2022)

UNITED STATES DEPARTMENT OF AGRICULTURE
Federal Crop Insurance Corporation

Grain Sorghum Pricing Methodology

In accordance with the Common Crop Insurance Policy Basic Provisions and the Commodity Exchange Price Provisions: Section II – Grain Sorghum (CEPP), grain sorghum prices are derived using a factor "determined by RMA." The method used to determine this factor is explained in this document.

The pricing methodology described below is only applicable for the 2019-2022 crop years.

The pricing methodology for grain sorghum uses a factor applied to corn prices. The factor is derived from historical regional-weighted grain sorghum prices and corn prices from the futures market.

The methodology uses: 1) price series from six different major sorghum growing regions to produce a weighted average price series for grain sorghum, and 2) Chicago Board of Trade (CBOT) prices for corn. Price series for the sorghum growing regions are weighted based on the proportion of grain sorghum production in each region in each year. Four price series correspond to regions in New Mexico, Oklahoma, and Texas. These regions are defined as Houston/Galveston Port, North of the Canadian River, South of Line, and Triangle Area. The two other price series are for Kansas City and New Orleans. Kansas City prices correspond to all of Kansas and Nebraska. New Orleans prices correspond to all of Arkansas, Louisiana, and Mississippi. Annual grain sorghum production data for the states of Arkansas, Kansas, Louisiana, Mississippi, and Nebraska, and county-level production data for New Mexico, Oklahoma, and Texas are collected from the National Agricultural Statistics Service (NASS)/USDA.

For grain sorghum, weekly price data for locations in New Mexico, Oklahoma, and Texas are provided by Texas AgriLife Extension Service (agecoext.tamu.edu/resources/basis-project/basis-data). The simple average of all September observations (corresponding to typical harvest time) in each year is calculated for each location. Monthly Kansas City and New Orleans price series are from the Economic Research Service (ERS)/USDA, and the October and September observations, respectively, are used for each year.

The corn price for each year is the average settlement price of December CBOT corn futures during the month of October.

A ratio for each year is computed by dividing annual weighted average grain sorghum prices across all six regions by the corresponding price of corn for each year, noted as:

$$P_{GS_t}^{W} = \frac{\sum_{i=1}^{6} \left(P_{GS_t}^{R_i} * Q_{GS_t}^{R_i}\right)}{P_{C_t}^{CBOT}}$$

Where $P_{GS_t}^{W}$ is the weighted price of grain sorghum in year *t,* $P_{GS_t}^{R_i}$ is the price in region *i* in year *t,* $Q_{GS_t}^{R_i}$ is the proportion of production in region *i* in year *t*, and $P_{C_t}^{CBOT}$ is the price of corn as derived from futures markets in year *t*. The most recent 10 year average of the ratios is then computed to produce the price factor as follows:

$$\frac{\sum_{t=y-9}^{y} \left(P_{GS_t}^{W}\right)}{10}$$

The year *y* is defined as the most recent year in the price data series. The factor will be applied to relevant futures prices with the price discovery periods using the current methodology. The discovery periods will be differentiated by a projected price discovery period and a harvest price discovery period, as well as sales closing date; however, each combination will utilize the same price factor.

On occasion, certain values in the price series may not be reported. In the event that the data is incomplete in a given year, available information will be used to estimate missing values. If missing values are not able to be estimated, then both corresponding prices in that year would be removed from the series. The resulting price factor would then still encompass exactly 10 data points; however, the applicable time series would be longer than 10 years.

A list of counties in each region follows:

Houston/Galveston Port

Oklahoma

Adair, Atoka, Bryan, Carter, Cherokee, Cleveland, Choctaw, Coal, Craig, Creek, Delaware, Garvin, Haskell, Hughes, Johnston, Latimer, Le Flore, Lincoln, Love, Logan, Marshall, Mayes, McClain, McCurtain, McIntosh, Murray, Muskogee, Nowata, Okfuskee, Oklahoma, Okmulgee, Osage, Ottawa, Pawnee, Payne, Pittsburg, Pontotoc, Pottawatomie, Rogers, Seminole, Sequoyah, Tulsa, Wagoner, Washington

Texas

Anderson, Angelina, Aransas, Atascosa, Austin, Bandera, Bastrop, Bee, Bell, Bexar, Blanco, Bosque, Bowie, Brazoria, Brazos, Brooks, Brown, Burleson, Burnet, Caldwell, Calhoun, Callahan, Cameron, Camp, Cass, Chambers, Cherokee, Coleman, Collin, Colorado, Comal, Comanche, Concho, Cooke, Coryell, Dallas, Delta, Denton, DeWitt, Dimmit, Duval, Eastland, Edwards, Ellis, Erath, Falls, Fannin, Fayette, Fort Bend, Franklin, Freestone, Frio, Galveston, Gillespie, Goliad, Gonzales, Grayson, Gregg, Grimes, Guadalupe, Hamilton, Hardin, Harris, Harrison, Hays, Henderson, Hidalgo, Hill, Hood, Hopkins, Houston, Hunt, Jackson, Jasper, Jefferson, Jim Hogg, Jim Wells,

Johnson, Karnes, Kaufman, Kendall, Kenedy, Kerr, Kimble, Kinney, Kleberg, Lamar, Lampasas, La Salle, Lavaca, Lee, Leon, Liberty, Limestone, Live Oak, Llano, McCulloch, McLennan, McMullen, Madison, Marion, Mason, Matagorda, Maverick, Medina, Menard, Milam, Mills, Montgomery, Morris, Nacogdoches, Navarro, Newton, Nueces, Orange, Panola, Polk, Rains, Real, Red River, Refugio, Robertson, Rockwall, Rusk, Sabine, San Augustine, San Jacinto, San Patricio, San Saba, Shelby, Smith, Somervell, Starr, Tarrant, Titus, Travis, Trinity, Tyler, Upshur, Uvalde, Van Zandt, Victoria, Walker, Waller, Washington, Webb, Wharton, Willacy, Williamson, Wilson, Wood, Zapata, Zavala

Kansas City Terminal
All Kansas; All Nebraska

New Orleans Port
All Arkansas; All Louisiana; All Mississippi

North of the Canadian River
New Mexico
Colfax, Harding, Los Alamos, McKinley, Mora, Rio Arriba, San Juan, Sandoval, Santa Fe, Taos, Union
Oklahoma
Alfalfa, Beaver, Blaine, Canadian, Cimarron, Custer, Dewey, Ellis, Garfield, Grant, Harper, Kay, Kingfisher, Major, Noble, Roger Mills, Texas, Woods, Woodward
Texas
Carson, Dallam, Gray, Hansford, Hartley, Hemphill, Hutchinson, Lipscomb, Moore, Ochiltree, Potter, Roberts, Sherman

South of Line
New Mexico
Catron, Chaves, De Baca, Dona Ana, Eddy, Grant, Hidalgo, Lea, Lincoln, Luna, Otero, Roosevelt, Sierra, Socorro
Oklahoma
Comanche, Cotton, Jefferson, Stephens
Texas
Andrews, Archer, Bailey, Baylor, Borden, Brewster, Clay, Cochran, Coke, Cottle, Crane, Crockett, Crosby, Culberson, Dawson, Dickens, Ector, El Paso, Fisher, Floyd, Foard, Gaines, Garza, Glasscock, Hale, Haskell, Hockley, Howard, Hudspeth, Irion, Jack, Jeff Davis, Jones, Kent, King, Knox, Lamb, Loving, Lubbock, Lynn, Martin, Midland, Mitchell, Montague, Motley, Nolan, Palo Pinto, Parker, Pecos, Presidio, Reagan, Reeves, Runnels, Schleicher, Scurry, Shackelford, Stephens, Sterling, Stonewall, Sutton, Taylor, Terrell, Terry, Throckmorton, Tom Green, Upton, Val Verde, Ward, Wichita, Winkler, Wise, Yoakum, Young

Triangle Area
New Mexico
Bernalillo, Cibola, Curry, Guadalupe, Quay, San Miguel, Torrance, Valencia
Oklahoma
Beckham, Caddo, Grady, Greer, Harmon, Jackson, Kiowa, Tillman, Washita

Texas
Armstrong, Briscoe, Castro, Childress, Collingsworth, Deaf Smith, Donley, Hall, Hardeman, Oldham, Parmer, Randall, Swisher, Wheeler, Wilbarger