

# AGRICULTURAL SUPPLY & DEMAND ESTIMATES



Approved by the World Food and Agricultural Outlook and Situation Board • USDA

#79

December 11, 1978

## HIGHLIGHTS

### Cotton Yields Decline Further, Grain Reserve Reaches 34 Million Metric Tons

Estimated cotton yields were reduced further during November. With yields 20 percent below 1977/78, carryover stocks next August will drop significantly but remain near the average of the past 5 years.

While grains changed only slightly from the November assessment, carryover stocks for soybeans next September were projected to edge slightly lower.

The farmer-owned feed grain reserve was closed to 1978 crop entry on November 30. As of December 6, the farmer-owned grain reserve had reached a total of 30 million metric tons, including 11 million tons of wheat and 19 million tons of feed grains. Total reserves, including CCC inventories, were at 34 million metric tons and are now projected to reach around 38 million metric tons by the end of the 1978/79 marketing year.

### Favorable November Weather Patterns Prevail

November precipitation over most of the major grain producing areas was well above normal. Excellent fieldwork progress combined with good rainfall during the last half of the month helped to rebuild soil moisture profiles for next year. The outlook for the spring planting season continues bright.

In the Great Plains, rainfall in most areas occurred in time to permit considerable growth and root development before bitter cold temperatures moved into the area on December 6. Sub-zero temperatures penetrated as far south as the Kansas-Nebraska border which also corresponded to the southern extent of significant snow cover. Temperatures dropped into the teens over much of Kansas and Oklahoma. Early reports indicate little or no damage.

### 1978 Cotton Production Estimate Lowered

Based on December 1 conditions, the 1978/79 U.S. cotton crop is forecast at 10.7 million bales, 3 percent below the November forecast and 26 percent below last season. Average yield is forecast at 418 pounds per harvested acre, 102 pounds below last year's relatively high yield.

The cotton harvest moves toward completion; however, Oklahoma and Texas are only at 28 and 42 percent complete respectively, compared to normals of 44 and 73 percent. Recent cold weather should provide needed defoliation and harvest should pick up in the coming weeks.

Domestic cotton mill use is forecast at 6.3 million bales in 1978/79, down from 6.5 million last season. Exports are expected to be 5.8 million bales this season, up from 5.5 million last season.

Carryover next August 1 is likely to be around 4.1 million bales, 1.2 million below the relatively high beginning 1978/79 level but near the average of the past 5 years.

Cotton prices have strengthened throughout 1978 in response to prospects of tighter cotton supplies worldwide. World production is expected to be down 6 percent from last year while consumption could increase 2 percent. The average U.S. farm price this November was 61 cents a pound, 13 cents higher than the January 1978 average.

### Wheat Production, Use Revised Upward

Production of 1978-crop wheat is estimated at 1.8 billion bushels, down 12 percent from 2 billion bushels for 1977. Total wheat supplies for 1978/79 are now estimated around 3 billion bushels, down 6 percent from last year.

Use of wheat for domestic food purposes was revised upward from 565 to 585 million bushels. This change reflects significant data revisions from the Bureau of the Census suggesting that mill use has been underestimated for the past several years, with the feed residual being correspondingly overstated.

Ending stocks for 1978/79 are now estimated at just over 1 billion bushels, virtually unchanged from the November estimate. Season-average farm prices are forecast to be between \$2.80 and \$3.00 per bushel, unchanged from last month.

### Barley and Oat Crop Estimates Raised Slightly

The final 1978 barley crop estimate of 447 million bushels is up slightly from October 1 and 6 percent above 1977. Oat production, estimated at 601 million bushels, was also up slightly from October, but a fifth below the 1977 crop. No changes were made in the feed grain demand and price estimates since our last report. Final estimates of the 1978 corn and sorghum crops will be released in January.

Through December 8, the farmer-owned reserve program held 19.3 million tons of feed grains which included 16.0 tons of corn (631 million bushels). Since 1977 crop feed grains under CCC loan are eligible for the reserve, the amount of grain in the reserve is expected to grow until early next year.

### Rice

The December 1 crop estimate indicates little change in the record 1978 rice crop. The estimated range of the 1978 farm price has been increased by 25 cents to \$7.25-\$7.75 per cwt, reflecting stronger-than-expected early-season rice prices.

### Slightly Larger Soybean and Product Exports In Prospect

Based on rapid early-season export movement reflecting strong protein demand, U.S. soybean exports are forecast at 750 million bushels--up 10 million from the November forecast and 50 million above 1977/78. U.S. meal exports may total nearly 5.7 million metric tons, slightly above the previous forecast and the year-ago level. Also, prospects for soybean oil exports have strengthened in recent weeks, partly reflecting the probability that the United States will supply a major share of the "optional origin" soybean oil recently purchased by the People's Republic of China.

U.S. soybean stocks next September 1 are forecast at 10 million bushels below the November forecast and slightly below carryin stocks of 159 million bushels. Estimated farm prices and the soybean crush are unchanged from a month ago.

12

Q112

COTTON: UPLAND AND EXTRA LONG STAPLE 1/

\*\*\*\*\*  
 Commodity : 1976/77 : 1977/78 : 1978/79  
 : : : Proj.: Prob. Variab. 2/  
 \*\*\*\*\*

	:	DOMESTIC MEASURE			
Area	:	Million acres			
Planted	:	11.7	13.7	13.0	
Harvested	:	10.9	13.3	12.3	
Yield per harv.	:	Pounds			
acre	:	465	520	418	
	:	Million 480-lb. bales			
Beginning stocks <sup>3/</sup>	:	3.7	2.9	5.3	
Production	:	10.6	14.4	10.7	+0.2 to -0.2
Supply, total <sup>4/</sup>	:	14.3	17.3	16.1	+0.2 to -0.2
Mill use	:	6.7	6.5	6.3	+0.3 to -0.3
Exports	:	4.8	5.5	5.8	+0.6 to -0.6
Use, total	:	11.5	12.0	12.1	+0.6 to -0.6
Dif. unactd. <sup>5/</sup>	:	0.1	6/	0.1	
Ending stocks	:	2.9 <sup>3/</sup>	5.3 <sup>3/</sup>	4.1	+0.6 to -0.6
Avg. farm price <sup>7/</sup>	:	64.1	51.7 <sup>8/</sup>	9/	
	:	METRIC MEASURE			
Area	:	Million hectares			
Planted	:	4.7	5.5	5.3	
Harvested	:	4.4	5.4	5.0	
Yield per harv.	:	Metric tons			
hectare	:	0.52	0.58	0.47	
	:	Million metric tons			
Beginning stocks <sup>3/</sup>	:	0.8	0.6	1.2	
Production	:	2.3	3.1	2.3	6/
Supply, total <sup>4/</sup>	:	3.1	3.8	3.5	6/
Mill use	:	1.5	1.4	1.4	+0.1 to -0.1
Exports	:	1.0	1.2	1.3	+0.1 to -0.1
Use, total	:	2.5	2.6	2.7	+0.1 to -0.1
Dif. unactd. <sup>5/</sup>	:	6/	6/	6/	6/
Ending stocks	:	0.6 <sup>3/</sup>	1.2 <sup>3/</sup>	0.9	+0.1 to -0.1
Avg. farm price <sup>7/</sup>	:	1.41	1.14 <sup>8/</sup>	9/	

\*\*\*\*\*  
 1/ Marketing year beginning Aug. 1. 2/ The "probable variability" reflects the "root mean square error" and/or "standard error of estimate" from trend and judgment. Chances are about 2 out of 3 that the outcome will fall within the indicated ranges.  
 3/ Based on Bureau of Census data. 4/ Includes imports.  
 5/ Difference between ending stocks based on Bureau of Census data and preceding season's supply less distribution. 6/ Less than 0.05. 7/ Season average farm price, domestic measure, cents per pound; metric measure, dollars per kilogram. 8/ Average to April 1, 1978. 9/ USDA is prohibited from projecting cotton prices.

WHEAT AND RICE 1/

\*\*\*\*\*  
 Commodity : 1976/77 : 1977/78 : 1978/79  
 : : : Proj. Prob. Variab.2/  
 \*\*\*\*\*

WHEAT: :  
 Area : Million acres  
 Planted : 80.2 74.8 66.3  
 Harvested : 70.8 66.5 56.8  
 Yield per harv. : Bushels  
 unit : 30.3 30.6 31.6  
 : Million bushels  
 Beginning stocks : 665 1,112 1,176  
 Production : 2,142 2,036 1,799  
 Imports : 3 2 2  
 Supply, total : 2,810 3,150 2,977  
 Domestic :  
 Food : 588 586 585 +10 to -10  
 Seed : 92 80 80 +5 to -5  
 Feed : 68 184 125 +50 to -50  
 Domestic, total : 748 850 790 +60 to -60  
 Exports : 950 1,124 1,150 +100 to -100  
 Use, total : 1,698 1,974 1,940 +150 to -150  
 Ending stocks : 1,112 1,176 1,037 +150 to -150  
 Avg. farm price 3/: 2.73 2.31 2.80-3.00  
 RICE (rough): :  
 Area : Million acres  
 Allotment : 1.80 1.80 1.80  
 Planted : 2.49 2.26 3.08  
 Harvested : 2.48 2.25 3.06  
 Yield per harv. : Pounds  
 unit : 4,663 4,412 4,505  
 : Million cwt.  
 Beginning stocks : 36.9 40.5 27.4  
 Production : 115.6 99.2 137.8  
 Imports : .1 .1  
 Supply, total : 152.6 139.8 165.2  
 Domestic : 42.7 37.6 44.0 +2.0 to -2.0  
 Exports : 65.6 72.8 67.0 +5.0 to -5.0  
 Use, total : 108.3 110.4 111.0 +6.0 to -6.0  
 Ending stocks : 40.5 27.4 54.2 +6.0 to -6.0  
 Dif. unactd. : +3.8 +2.0  
 Avg. farm price 3/: 7.02 9.43 7.25-7.75

\*\*\*\*\*  
 1/ Marketing year beginning June 1 for wheat, August 1  
 for rice. 2/ The "probable variability" reflects the "root mean  
 square error" and/or "standard error of estimate" from trend and  
 judgment. Chances are about 2 out of 3 that the outcome will  
 fall within the indicated ranges. 3/ Season average farm price  
 for wheat, dollars per bushel; for rice, dollars per hundredweight.

FEED GRAINS AND CORN 1/

\*\*\*\*\*  
 Commodity : 1976/77 : 1977/78 : 1978/79  
 : : Estimated: Proj. : Prob. Variab. 2/  
 \*\*\*\*\*

FEED GRAINS:	:			
Area	:		Million acres	
Planted	:	128.7	128.1 121.4	
Harvested	:	106.3	107.2 102.2	
Yield per harv.	:		Metric tons	
acre	:	1.82	1.88 2.07	
	:		Million metric tons	
Beginning stocks	:	17.2	29.9 40.1	
Production	:	193.4	202.0 211.4	+3 to -3
Imports	:	0.4	0.3 0.3	
Supply, total	:	211.0	232.2 251.8	
Feed	:	112.6	117.0 124.6	+7 to -7
Food, seed, &	:			
indust.	:	17.9	18.8 19.4	
Domestic, total	:	130.5	135.8 144.0	+7 to -7
Exports	:	50.6	56.3 54.9	+5 to -5
Use, total	:	181.1	192.1 198.9	+10 to -10
Ending stocks	:	29.9	40.1 52.9	+7 to -7

CORN:	:			
Area	:		Million acres	
Planted	:	84.4	82.7 78.5	
Harvested	:	71.3	70.0 68.1	
Yield per harv.	:		Bushels	
unit	:	87.9	91.0 101.2	
	:		Million bushels	
Beginning stocks	:	399	884 1,064	
Production	:	6,266	6,371 6,890	+150 to -150
Imports	:	3	3 1	
Supply, total	:	6,668	7,258 7,955	
Feed	:	3,587	3,698 3,950	+200 to -200
Food, seed, &	:			
indust.	:	513	548 570	
Domestic, total	:	4,100	4,246 4,520	+200 to -200
Exports	:	1,684	1,948 1,900	+150 to -150
Use, total	:	5,784	6,194 6,420	+300 to -300
Ending stocks	:	884	1,064 1,535	+200 to -200
Avg. farm price 3/:	:	2.15	2.03 2.00-2.15	

\*\*\*\*\*

1/ Marketing year beginning October 1 for corn and sorghum; June 1 for barley and oats. 2/ The "probable variability" reflects the "root mean square error" and/or "standard error of estimate" from trend and judgment. Chances are about 2 out of 3 that the outcome will fall within the indicated ranges. 3/ Season average farm price, dollars per bushel.

GRAINS--UNITED STATES

\*\*\*\*\*

Item	: Wheat	: Rice	: Corn	: Feed	: Total
	:	:(Rough):		:Grains4/:	:Grains
	: (Million metric tons)				
1976/77	:	:	:	:	:
Beginning stocks	: 18.1	1.7	10.0	17.2	37.0
Production	: 58.3	5.2	159.2	193.4	256.9
Supply, Total 1/	: 76.5	6.9	169.4	211.0	294.4
	:	:	:	:	:
Feed use	: 1.8	---	91.1	112.6	114.4
Food & other use	: 18.6	1.9	13.0	17.9	38.4
Exports	: 25.8	3.0	42.8	50.6	79.4
Use, Total	: 46.2	4.9	146.9	181.1	232.2
Ending stocks	: 30.3	1.8	22.5	29.9	62.0
Average farm price 2/	: 100	155	85	---	---
	:	:	:	:	:
1977/78 (preliminary)	:	:	:	:	:
Beginning stocks	: 30.3	1.8	22.5	29.9	62.0
Production	: 55.4	4.5	161.8	202.0	261.9
Supply, Total 1/	: 85.7	6.3	184.3	232.2	324.2
	:	:	:	:	:
Feed use	: 5.0	---	93.9	117.0	122.0
Food & other use	: 18.1	1.7	13.9	18.8	38.6
Exports	: 30.6	3.3	49.5	56.3	90.2
Use, Total	: 53.7	5.0	157.3	192.1	250.8
Ending stocks	: 32.0	1.2	27.0	40.1	73.3
Average farm price 2/	: 85	208	80	---	---
	:	:	:	:	:
1978/79 (projected) 3/	:	:	:	:	:
Beginning stocks	: 32.0	1.2	27.0	40.1	73.3
Production	: 49.0	6.3	175.0	211.4	266.7
Supply, Total 1/	: 81.0	7.5	202.1	251.8	340.3
Feed use	: 3.4	---	100.3	124.6	128.0
Food & other use	: 18.1	2.0	14.5	19.4	39.5
Exports	: 31.3	3.0	48.3	54.9	89.2
Use, Total	: 52.8	5.0	163.1	198.9	256.7
Ending stocks	: 28.2	2.5	39.0	52.9	83.6
Average farm price 2/	: 103-110	160-171	79-85	---	---

\*\*\*\*\*

1/ Including imports. 2/ Dollars per metric ton. 3/ Probable variability of supply-use projections are shown on the individual grains tables. 4/ Including corn.

T-6

GRAIN CARRYOVER STOCKS, FARMER-OWNED CCC RESERVES AND PRICES

\*\*\*\*\*  
 : Preliminary Projected  
 Crop : 1976/77 1977/78 1/ 1978/79  
 \*\*\*\*\*

	: Million metric tons		
WHEAT	:		
Ending stocks, total	:	30.3	32.0 28.2
Farmer-owned reserve	:	---	9.3 11.3
CCC reserve	:	---	1.3 1.4
Average farm price 2/	:	100	85 103-110
	:		
CORN	:		
Ending stocks, total	:	22.5	27.0 39.0
Farmer-owned reserve	:	---	8.0 18.0
CCC reserve	:	---	.3 1.7
Average farm price 2/	:	85	80 79-85
	:		
TOTAL FEED GRAINS	:		
Ending stocks, total	:	29.9	40.1 52.9
Farmer-owned reserve	:	---	10.5 21.4
CCC reserve	:	---	.7 2.6
	:		
RICE	:		
Ending stocks, total	:	1.8	1.2 2.5
Farmer-owned reserve	:	---	--- .4
CCC reserve	:	.8	.5 1.0
Average farm price 2/	:	155	208 160-171
	:		
TOTAL GRAINS	:		
Ending stocks, total	:	62.0	73.3 83.6
Farmer-owned reserve	:	---	19.8 33.1
CCC reserve	:	.8	2.5 5.0

\*\*\*\*\*  
 1/ Farmer-owned reserves and CCC inventory are as of June 1 for wheat, Oct. 1 for feed grains, and August 1 for rice. 2/ Dollars per metric ton.



SORGHUM, BARLEY, AND OATS 1/

\*\*\*\*\*  
 Commodity : 1976/77 : 1977/78 : 1978/79  
 : : Prelim. : Proj. : Prob. Variab.2/  
 \*\*\*\*\*

SORGHUM: : Bushels  
 Yield/harv. unit : 48.9 56.2 52.4  
 : Million bushels  
 Beginning stocks : 51 91 191  
 Production : 720 791 704 +25 to -25  
 Imports :  
 Supply, total : 771 882 895  
 Feed : 428 471 505 +30 to -30  
 Food, seed, & indt.: 6 7 6  
 Domestic, total : 434 478 511 +30 to -30  
 Exports : 246 213 220 +30 to -30  
 Use, total : 680 691 731 +45 to -45  
 Ending stocks : 91 191 164 +40 to -40  
 Avg. farm price 3/: 2.03 1.73 1.90-2.05

BARLEY: : Bushels  
 Yield/harv. unit : 44.9 43.9 48.4  
 : Million bushels  
 Beginning stocks : 128 126 171  
 Production : 372 420 447  
 Imports : 11 9 10  
 Supply, total : 511 555 628  
 Feed : 161 167 185 +25 to -25  
 Food, seed, & indt.: 158 160 162  
 Domestic, total : 319 327 347 +25 to -25  
 Exports : 66 57 40 +10 to -10  
 Use, total : 385 384 387 +30 to -30  
 Ending stocks : 126 171 241 +20 to -20  
 Avg. farm price 3/: 2.25 1.80 1.80-1.90

OATS: : Bushels  
 Yield/harv. unit : 45.7 55.8 52.2  
 : Million bushels  
 Beginning stocks : 205 165 310  
 Production : 546 751 601  
 Imports : 1 2 1  
 Supply, total : 752 918 912  
 Feed : 489 513 510 +30 to -30  
 Food, seed, & indt.: 88 84 85  
 Domestic total : 577 597 595 +30 to -30  
 Exports : 10 11 10 +2 to -2  
 Use, total : 587 608 605 +30 to -30  
 Ending stocks : 165 310 307 +30 to -30  
 Avg. farm price 3/: 1.56 1.14 1.05-1.15

\*\*\*\*\*

1/ Marketing year beginning October 1 for sorghum, June 1 for barley and oats. 2/ The "probable variability" reflects the "root mean square error" and/or "standard error of estimate" from trend and judgment. Chances are about 2 out of 3 that the outcome will fall within the indicated ranges. 3/ Season average farm price, dollars per bushel.

*Done*

SOYBEANS AND PRODUCTS (Domestic Measure) 1/

```

*****
Commodity      : 1976/77 : 1977/78 : 1978/79
                :         : Prelim. : Proj. : Prob. Variab.2/
*****
SOYBEANS:      :
Area           :         Million acres
  Planted      :   50.2   58.8   64.4
  Harvested    :   49.4   57.6   63.3
Yield per harv. :         Bushels/acre
  unit        :   26.1   30.6   28.6
                :         Million bushels
Beginning stocks :   245    103    159
Production      :  1,288  1,762  1,810   +50 to -50
  Supply, total :  1,533  1,865  1,969   +50 to -50
Crushings       :   790    927    980   +40 to -40
Exports         :   564    700    750   +40 to -40
Seed and feed   :    62     69     70
Residual        :    14     10     14
  Use, total    :  1,430  1,706  1,814   +60 to -60
Ending stocks   :    103    159    155   +50 to -50
Avg. farm price :    6.81   5.80   6.50  +.50 to -.50
SOYBEAN OIL:   :         Million pounds
Beginning stocks :  1,251    767    729
Production      :  8,578  10,288  10,631  +400 to -400
  Supply, total :  9,829  11,055  11,360  +400 to -400
  Domestic     :  7,515   8,269   8,600  +400 to -400
  Exports      :  1,547   2,057   1,800  +300 to -300
  Use, total    :  9,062  10,326  10,400  +400 to -400
Ending stocks   :    767    729    960  +200 to -200
Avg. price 3/   :    24    24.5    25    +3 to -3
SOYBEAN MEAL:  :         Thousand short tons
Beginning stocks :    355    228    243
Production      : 18,488  22,371  23,277 +1000 to -1000
  Supply, total : 18,843  22,599  23,520 +1000 to -1000
  Domestic     : 14,056  16,276  17,000 +800 to -800
  Exports      :  4,559   6,080   6,250 +400 to -400
  Use, total    : 18,615  22,356  23,250 +1000 to -1000
Ending stocks   :    228    243    270  +75 to -75
Avg. price 4/   : 199.80  164.20  180.00 +20 to -20
*****

```

1/ Marketing year beginning September 1 for soybeans, October 1 for soybean oil and meal. 2/ The "probable variability" reflects the "root mean square error" and/or "standard error of estimate" from trend and judgment. Chances are about 2 out of 3 that outcomes will fall within the indicated ranges. 3/ Simple season average of crude soybean oil, Decatur, cents per pound. 4/ Simple season average of 44% protein, Decatur, dollars per short ton.

12/11/78

SOYBEANS AND PRODUCTS (Metric Measure) 1/

```

*****
Commodity      : 1976/77 : 1977/78 : 1978/79
                :          : Prelim. : Proj. : Prob. Variab. 2/
*****
SOYBEANS:
Area           :          : Million hectares
  Planted      :    20.3   23.8     26.1
  Harvested    :    20.0   23.3     25.6
Yield per harv. :          : Metric tons/hectare
  unit         :    1.76   2.06     1.92
                :          : Million metric tons
Beginning stocks :    6.7    2.8      4.3
Production     :    35.1   48.0     49.3   +1.4 to -1.4
  Supply, total :    41.7   50.8     53.6   +1.4 to -1.4
Crushings      :    21.5   25.2     26.7   +1.1 to -1.1
Exports        :    15.3   19.1     20.4   +1.1 to -1.1
Seed and feed  :    1.7    1.9      1.9
Residual       :    0.4    .3        .4
  Use, total   :    38.9   46.4     49.4   +1.6 to -1.6
Ending stocks  :    2.8    4.3      4.2   +1.4 to -1.4
Avg. farm price :    250    213      239   +18 to -18
SOYBEAN OIL:
                :          : Thousand metric tons
Beginning stocks :    567    348      331
Production     :   3,891   4,667    4,822   +180 to -180
  Supply, total :   4,458   5,015    5,153   +180 to -180
  Domestic     :   3,409   3,751    3,901   +180 to -180
  Exports      :    702    933      816   +140 to -140
  Use, total   :   4,111   4,684    4,717   +180 to -180
Ending stocks  :    348    331      435   +90 to -90
Avg. price 3/  :    529    540      551   +65 to -65
SOYBEAN MEAL:
                :          : Thousand metric tons
Beginning stocks :    322    207      220   +45 to -45
Production     :  16,772  20,295   21,117   +900 to -900
  Supply, total :  17,094  20,501   21,337   +900 to -900
  Domestic     :  12,751  14,765   15,422   +725 to -725
  Exports      :   4,136   5,516    5,670   +365 to -365
  Use, total   :  16,887  20,281   21,092   +900 to -900
Ending stocks  :    207    220      245   +70 to -70
Avg. price 4/  :    220    181      198   +20 to -20
*****

```

1/ Marketing year beginning September 1 for soybeans, October 1 for soybean oil and meal. 2/ The "probable variability" reflects the "root mean square error" and/or "standard error of estimate" from trend and judgment. Chances are about 2 out of 3 that outcomes will fall within the indicated ranges. 3/ Simple season average of crude soybean oil, Decatur, dollars per metric ton. 4/ Simple season average of 44% protein, Decatur, dollars per metric ton.

\*\*\*\*\*  
The Agricultural Supply and Demand Estimates Tables were prepared by the  
Interagency Commodity Estimates Committee for:

WHEAT: Paul Meyers, Chairman; Frank Gomme, OGSM; Randell Weber, ASCS;  
Tom Elam, ESCS; Donald J. Novotny, FAS; David Spalding, AMS.

FEED GRAINS: Paul Meyers, Chairman; Frank Gomme, OGSM; Orville I.  
Overboe, ASCS; Tom Elam, ESCS; Donald J. Novotny, FAS; Ralph Tapp,  
AMS.

SOYBEANS, COTTONSEED AND OILS: James R. Donald, Acting Chairman, WFAOSB;  
Harry Sullivan, ASCS; George W. Kromer, ESCS; Alan E. Holz, FAS; Clarence  
Goldsborough, OGSM; David Spalding, AMS.

COTTON: Russell G. Barlowe, Chairman, WFAOSB; Charles V. Cunningham,  
ASCs; R. Samuel Evans, ESCS; Gordon H. Lloyd, FAS; Geron E. Rathell, OGSM;  
Donald Bratton, AMS.

RICE: Paul Meyers, Chairman; Frank Gomme, OGSM; George Schaefer, ASCS;  
Donald J. Novotny, FAS; Charles Hunley, AMS; Tom Elam, ESCS.

\*\*\*\*\*

#### Conversion Factors

Bushels to metric tons	Area
Wheat & soybeans = bushels x .027216	1 acre = .404694 hectares
Barley = bushels x .021772	
Corn, sorghum,	1 hectare = 2.4710 acres
rye = bushels x .025400	
Oats = bushels x .014515	
480 lb. bales to metric tons	
Cotton = bales x .217700	
Cwt. to metric tons	
Rice = cwt. x .453597	
Kilograms to pounds	
Kilogram = 2.2046 pounds	