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ECONOMICS OF POST-CRP WHEAT AND SORGHUM PRODUCTION

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From 1986 to 1992 10.7 million acres were entered into the Conservation Reserve Program in the states of Colorado, Kansas, New Mexico, Oklahoma and Texas. (Table 1) Almost 60 percent, or 6.4 million acres, of this total was Class 1, 2, or 3 soils. As the CRP contracts expire, it would seem that the owners of these 6.4 million acres would be the first to consider converting these acres to crop production. For the last two or three years researchers in each of the above mentioned states have begun looking at alternative production practices to use in converting CRP grasslands back to crop production. Unfortunately, the weather, as is so often the case in this region, has not cooperated and yields have not been what was hoped for. Looking back at the reported ASCS yields for program crop acres that entered the CRP might serve as a 'target' yield for the conversion period. The 1.8 million of sorghum base acres that were enrolled from the five states had yields ranging from 22 bu. per acre in Colorado to 43 bu. per acre in Kansas. A weighted average for all the acres in the five states is 38 bu. or 2,128 lbs. per acre. Wheat base acre ASCS yields ranged from 17 bu. per acre in New Mexico to 30 bu. per acre in Kansas. The weighted average wheat yield was 25 bu. per acre across the five states.

The following budgets are based on preliminary observations of post-CRP plots in southwestern Oklahoma, the Oklahoma panhandle, and southwestern Kansas. The base yields are the weighted average ASCS yields for the region for base acres of wheat and sorghum that were placed in CRP during the first 12 signup periods. Additional production information was incorporated from the referenced articles.

The potential for increased grain production from CRP lands returning to production can only add to the market volatility that is expected from the FAIR farm bill. Anyone contemplating converting CRP grassland to crop production should plan the transition carefully and budget for the worst possible yields and prices during the initial years.

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**TABLE 1**  
**CRP SIGNUP PERIODS 1 - 12 : 1986 - 1992**  
**ACRES ENROLLED BY LAND CAPABILITY CLASS**

STATE	ALL CLASSES	ACRES ENROLLED IN --								
		CLASS 1	CLASS 2	CLASS 3	CLASS 4	CLASS 5	CLASS 6	CLASS 7	CLASS 8	CLASS NOT REPORTED
COLORADO	1,978,390	385	63,152	355,995	1,203,235	3,936	338,067	13,000	406	215
KANSAS	2,937,863	3,333	583,279	1,320,329	844,816	14,438	159,006	5,517	675	6,468
NEW MEXICO	483,181	1,590	18,475	13,159	370,210	438	73,209	6,101	0	0
OKLAHOMA	1,192,504	1,057	113,787	650,676	342,530	10,753	65,314	3,475	126	4,786
TEXAS	4,150,485	14,780	680,708	2,543,035	705,239	12,198	158,102	22,783	0	13,640
TOTALS	10,742,423	21,145	1,459,401	4,883,194	3,466,030	41,763	793,698	50,876	1,207	25,109
Total Classes	1, 2, & 3	====>	6,363,740							

Source: USDA, ERS Statistical Bulletin Number 925

**TABLE 2**  
**Post-CRP Conservation-Tillage Wheat**  
**Year 1**

Item	Price	Quantity	Unit	Cost
Burn	\$2.50	1.00	acre	\$2.50
Disc/1 (June-2;Oct.-1)	\$5.50	3.00	acre	\$16.50
Chemicals/2	\$22.15	1.00	acre	\$22.15
Spraying/1 -herb. & insect.	\$3.00	3.00	acre	\$9.00
Nitrogen(lbs.N:urea)	\$0.24	115.00	lbs	\$27.60
Phosphorus(lbs.P:18-46-0)	\$0.18	25.00	lbs	\$4.50
Fertilizer application/1	\$2.50	2.00	acre	\$5.00
Seed	\$6.50	1.17	bu	\$7.61
Drill/1	\$5.25	1.00	acre	\$5.25
Combining per acre	\$13.00	1.00	acre	\$13.00
Add.Custom Costs > 20 bu.	\$0.13	5.00	bu	\$0.65
Custom Hauling per Acre	\$0.13	25.00	bu	\$3.25
Labor	\$0.00	1.00	acre	\$0.00
Interest	10.0%	\$100.11	\$	\$7.51
<b>Total Variable Cost Per Acre</b>				<b>\$122.01</b>
Potential Grazing Income ??	\$0.30	115.00	lbs	\$34.50
Wheat Breakeven Price to	25	Bushels/Acre		\$3.50
Cover Variable Cost	35	Bushels/Acre		\$2.50
Return to Unpaid Resources		25 bu. @ \$3.25		(\$6.26)
		25 bu. @ \$4.25		\$18.74

/1 All equipment procedures charged at custom rates.

/2 Herbicide and pesticide applications as follows:

Glyphosate at 1 lb./acre - one application, summer or fall for OWB and/or bindweed suppression.

Chlorsulfuron at 1/6 oz./acre - one application, spring for broadleaf weeds.

Chlorpyrifos at 1/2 lb./acre - one application, spring or fall as needed for greenbugs.

**TABLE 3**  
**Post-CRP No-Till Wheat**  
**Year 1**

Item	Price	Quantity	Unit	Cost
Burn	\$2.50	1.00	acre	\$2.50
Chemicals/1	\$39.19	1.00	acre	\$39.19
Spraying/2 -herb. & insect.	\$3.00	4.00	acre	\$12.00
Nitrogen(lbs.N:urea)	\$0.24	135.00	lb.	\$32.40
Phosphorus(lbs.P:18-46-0)	\$0.18	25.00	lb.	\$4.50
Fertilizer application/2	\$2.50	2.00	acre	\$5.00
Seed	\$6.50	1.17	bu	\$7.61
Drill/2	\$5.25	1.00	acre	\$5.25
Combining per acre	\$13.00	1.00	acre	\$13.00
Add.Custom Costs > 20 bu	\$0.13	5.00	bu	\$0.65
Custom Hauling per Acre	\$0.13	25.00	bu	\$3.25
Labor	\$0.00	1.00	acre	\$0.00
Interest	10.0%	\$108.45	\$	\$8.13
<b>Total Variable Cost Per Acre</b>				<b>\$130.98</b>
Potential Grazing Income ??	\$0.30	115.00	lbs	\$34.50
Wheat Break-even Price to	25	Bushels/Acre		\$3.86
Cover Variable Cost	35	Bushels/Acre		\$2.76
Return to Unpaid Resources		25 bu. @ \$3.25		(\$15.23)
		25 bu. @ \$4.25		\$9.77

- /1 Herbicide and pesticide applications as follows:  
 Glyphosate at 1 lb./acre plus metsulfuron at 1/6 oz./acre-  
 summer for OWB and weed suppression.  
 Glyphosate at 1 lb./acre - fall for OWB and weeds.  
 Chlorsulfuron at 1/6 oz./acre - one application,  
 spring for broadleaf weeds.  
 Chlorpyrifos at 1/2 lb./acre - one application,  
 spring or fall as needed for greenbugs.
- /2 All equipment procedures charged at custom rates.

TABLE 4  
Post-CRP Conservation-Tillage Sorghum  
Year 1

Item	Price	Quantity	Unit	Cost
Burn	\$2.50	1.00	acre	\$2.50
Disc/1	\$5.50	1.00	acre	\$5.50
Chemicals/2	\$31.75	1.00	acre	\$31.75
Spraying/2 -herb. & insect.	\$3.00	3.00	acre	\$9.00
Nitrogen(lbs.N:urea)	\$0.24	70.00	lb.	\$16.80
Phosphorus(lbs.P:18-46-0)	\$0.18	25.00	lb.	\$4.50
Fertilizer application/2	\$2.50	1.00	acre	\$2.50
Seed	\$1.15	3.00	lb.	\$3.45
Plant/2	\$5.50	1.00	acre	\$5.50
Combining per acre	\$13.00	1.00	acre	\$13.00
Add.Custom Costs > 31 bu	\$0.13	7.00	bu	\$0.91
Custom Hauling per Acre	\$0.13	38.00	bu	\$4.94
Labor	\$0.00	1.00	acre	\$0.00
Interest	10.0%	\$81.50	\$	\$6.11
Total Variable Cost Per Acre				\$106.46
Sorghum Break-even Price to	38	Bushels/Acre		\$2.80
Cover Variable Cost	48	Bushels/Acre		\$2.22
Return to Unpaid Resources	38 bu. @ \$2.10			(\$26.66)
	38 bu. @ \$2.66			(\$5.38)

/1 All equipment procedures charged at custom rates.

/2 Herbicide and pesticide applications as follows:

Glyphosate at 1 lb./acre-late spring for OWB and weed suppression.

Metolachlor at 1.5 pt./acre and atrazine at 1 lb./acre-preemergence for weeds and grass.

Insecticide as needed for greenbugs and/or midge.