

A Summary of the USDA's Prospective Planting and Grain Stocks Report March 29, 2018

On March 29, 2018, the USDA released the Prospective Plantings and Grain Stocks reports. The Prospective Plantings report provides projections for planted acreage for specified commodities. The projections provide an initial estimate of planted acreage (and potential production) for primary row crops. Below is a summary of the 2018 report projections and 2012-2017 March projections and final planted acreage estimates for corn, soybeans, cotton, and wheat, nationally and for Tennessee.

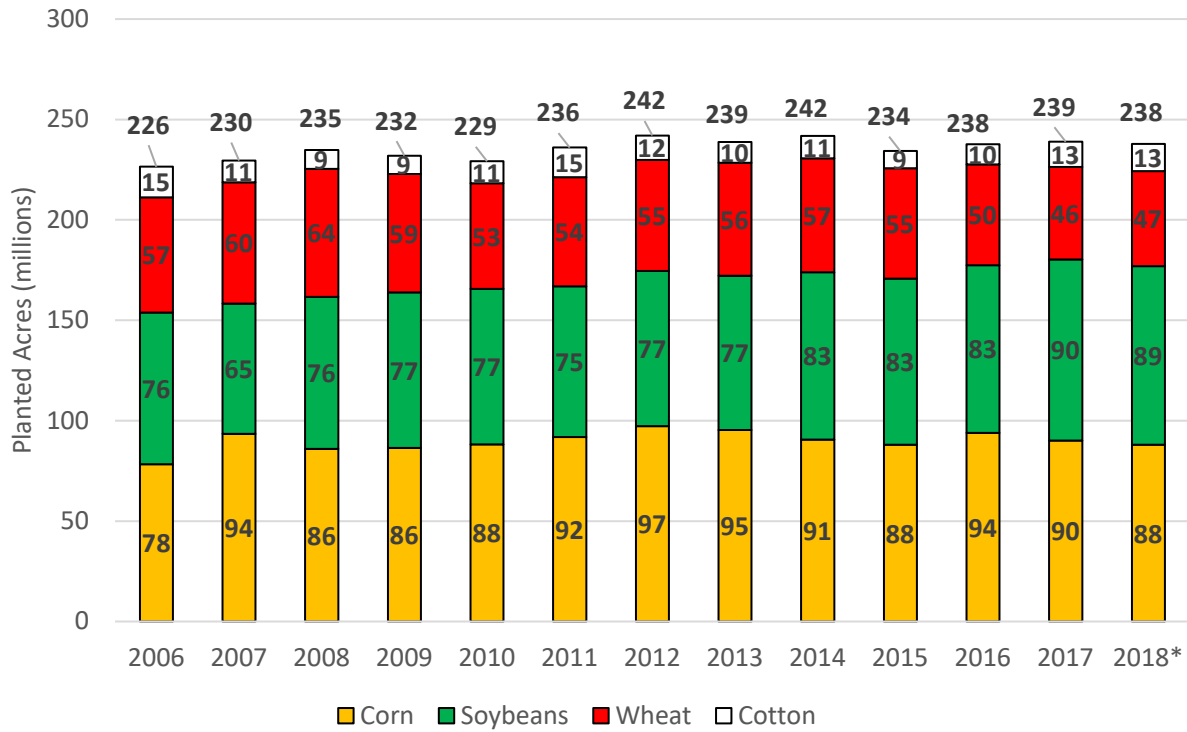
Table 1. U.S. Planted Acres – USDA March Projection and Final Estimate (millions of acres), 2012-2018

	<u>Corn</u>			<u>Cotton</u>		
	Mar	Final	Final-Mar	Mar	Final	Final-Mar
2012	95.864	97.291	1.427	13.155	12.264	(0.891)
2013	97.282	95.365	(1.917)	10.026	10.407	0.381
2014	91.691	90.597	(1.094)	11.101	11.037	(0.064)
2015	89.199	88.019	(1.180)	9.549	8.581	(0.969)
2016	93.601	94.004	0.403	9.562	10.073	0.511
2017	89.996	90.167	0.171	12.233	12.612	0.379
2018	88.026	-	-	13.469	-	-

	<u>Soybeans</u>			<u>Wheat</u>		
	Mar	Final	Final-Mar	Mar	Final	Final-Mar
2012	73.902	77.198	3.296	55.908	55.294	(0.614)
2013	77.126	76.840	(0.286)	56.440	56.236	(0.204)
2014	81.493	83.276	1.783	55.815	56.841	1.026
2015	84.635	82.650	(1.985)	55.367	54.999	(0.368)
2016	82.236	83.433	1.197	49.559	50.119	0.560
2017	89.482	90.142	0.660	46.059	46.012	(0.047)
2018	88.982	-	-	47.339	-	-

Corn planted acreage was projected at 88 million acres, down 2% compared to last year; soybean planted acreage was projected at 89 million acres, down 1% compared to last year, wheat planted acreage was projected at 47.3 million acres, up 3% compared to last year; and cotton planted acreage was projected at 13.5 million acres, up 4% compared to last year. Overall, net planted acreage for the four commodities was projected down 1.115 million acres. This almost makes up all of USDA's projected decrease in principle crop area planted (16 commodities) of 1.158 million acres (317.989 in 2018 compared to 319.147 in 2017). For comparison, the decrease in principle crop acreage planted between 2016 and 2017 was 91,000 acres (319.238 to 319.147). Having projected corn and soybean acres planted simultaneously decrease was a surprise as typically acreage decreases for corn are partially offset by increases in soybeans and vice versa. It remains to be seen, but adding some additional acreage back to corn and soybeans seems probable.

Figure 1. U.S. Planted Acres of Corn, Soybeans, Cotton, and Wheat, 2012-2018



* March 29, 2018 Prospective Planting Projection

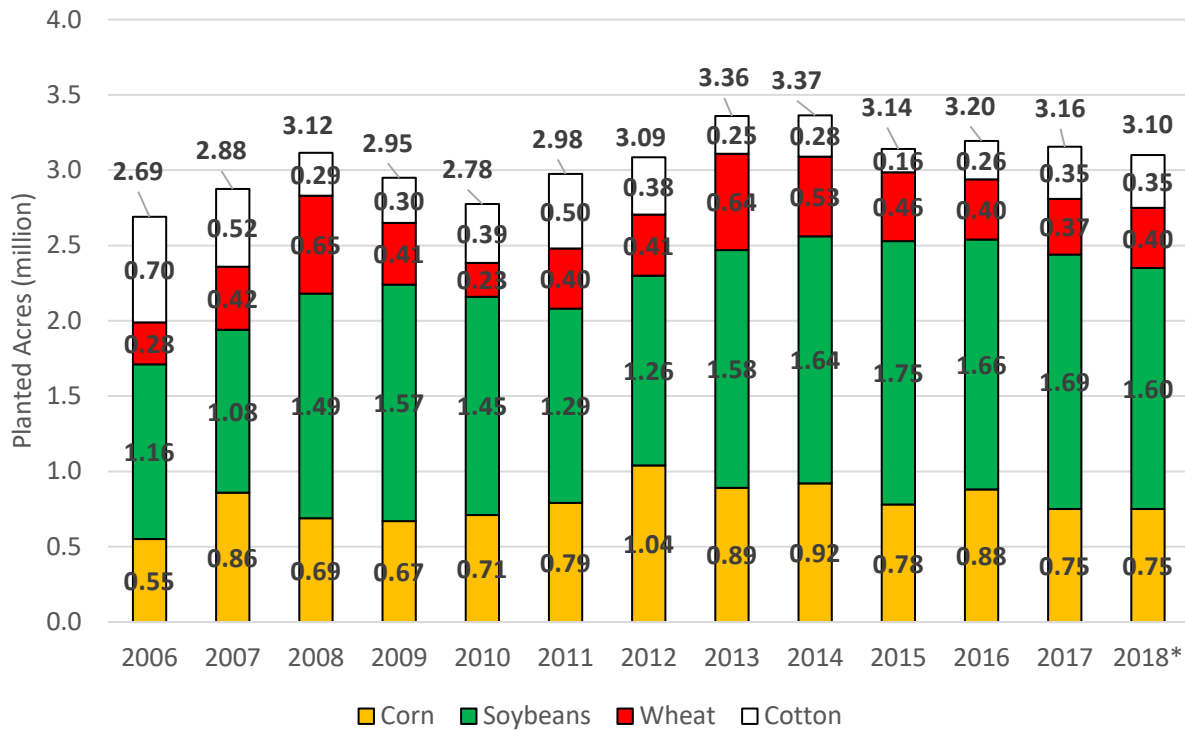
Table 2. Tennessee Planted Acres – USDA March Projection and Final Estimate, 2012-2018

	<u>Corn</u>		<u>Cotton</u>			
	Mar	Final	Mar	Final		
2012	950,000	1,040,000	90,000	420,000	380,000	(40,000)
2013	970,000	890,000	(80,000)	280,000	250,000	(30,000)
2014	830,000	920,000	90,000	280,000	275,000	(5,000)
2015	840,000	780,000	(60,000)	170,000	155,000	(15,000)
2016	840,000	880,000	40,000	235,000	255,000	20,000
2017	840,000	750,000	(90,000)	300,000	345,000	45,000
2018	750,000	-	-	350,000	-	-

	<u>Soybeans</u>		<u>Wheat</u>			
	Mar	Final	Mar	Final		
2012	1,240,000	1,260,000	20,000	440,000	405,000	(35,000)
2013	1,360,000	1,580,000	220,000	550,000	640,000	90,000
2014	1,600,000	1,640,000	40,000	560,000	530,000	(30,000)
2015	1,800,000	1,750,000	(50,000)	470,000	455,000	(15,000)
2016	1,650,000	1,660,000	10,000	440,000	400,000	(40,000)
2017	1,750,000	1,690,000	(60,000)	390,000	370,000	(20,000)
2018	1,600,000	-	-	400,000	-	-

In Tennessee, planted acres were projected at: corn - 750,000 acres, unchanged compared to last year; soybeans – 1.6 million, down 90,000 compared to last year; cotton – 350,000, up 5,000 compared to last year; and wheat 400,000, up 30,000 compared to last year. It was a little surprising that cotton acres weren't projected up more than 5,000, as harvest prices above 77 cents have been readily available in the futures market. However, this may highlight the concern over investing long term in harvest equipment and/or ginning capacity.

Figure 2. U.S. Planted Acres of Corn, Soybeans, Cotton, and Wheat, 2012-2018



* March 29, 2018 Prospective Planting Projection

Grain Stocks Report

The USDA Grain Stocks report is released quarterly (as of the 1st of March, June, September, and December). The report provides an estimate of the stocks of corn, soybeans, and wheat in the U.S. Corn stocks were 266 million bushels greater than the previous marketing year, up 3%. Soybean stocks were 368 million bushels greater than the previous year, up 21%. Wheat stocks were 164 million bushels lower compared to the previous year, down 10%.

Figure 3. U.S. Corn, Soybean, and Wheat Stocks as of March 1st, 2006-2018

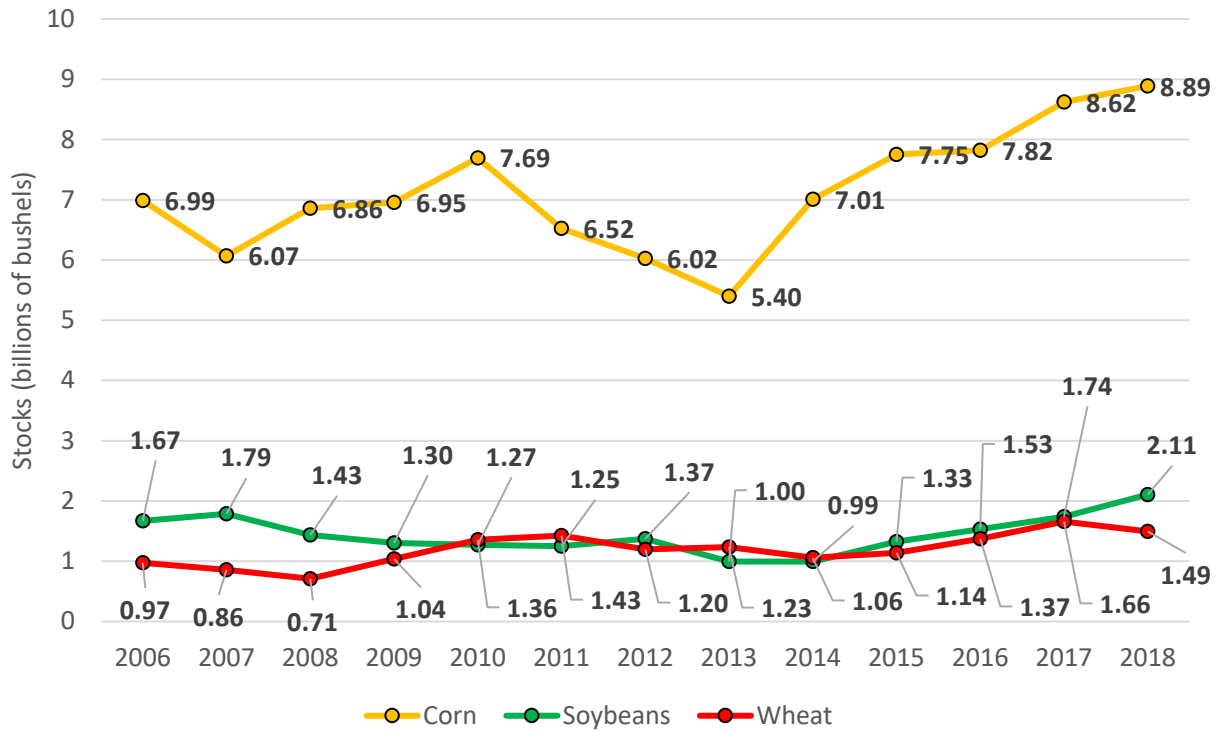
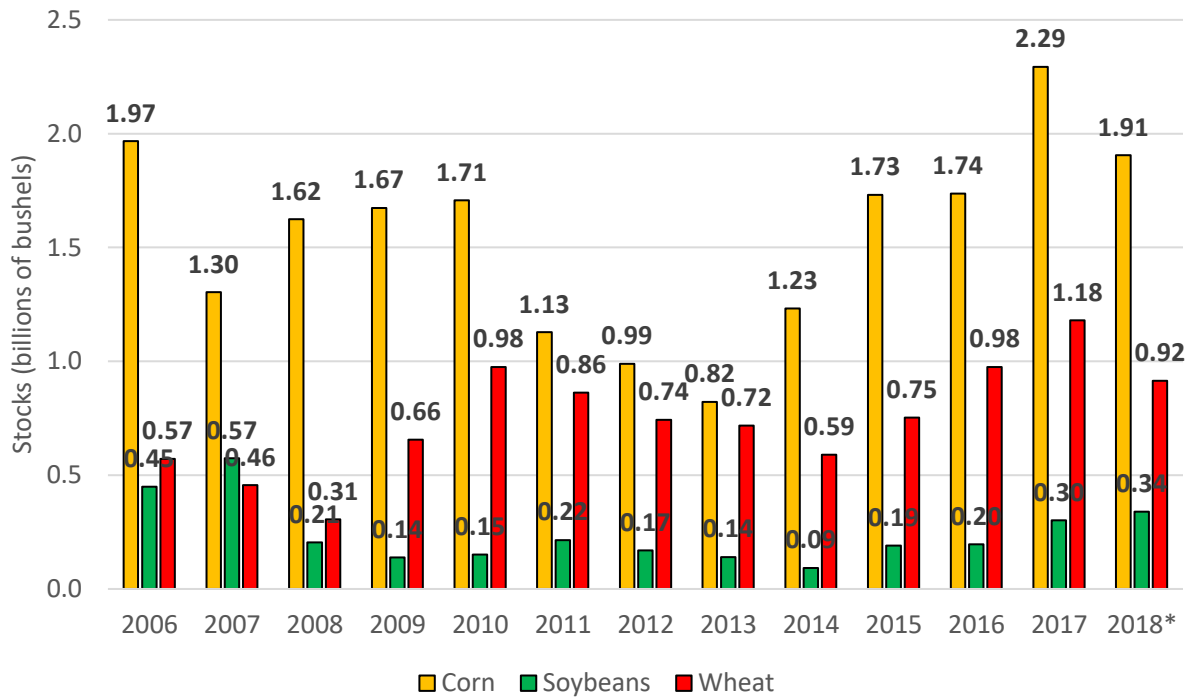


Figure 4. U.S. Corn, Soybean, and Wheat Marketing Year Ending Stocks, 2006-2018



* March 1, 2018 Grain Stocks Adjusted for Average Use to the Marketing Year End.

2018 Estimated Returns – Non-Irrigated

The profitability outlook has been updated after the release of the March 29, 2018 USDA Prospective Plantings and Grain Stocks reports. Yields used for non-irrigated estimates are a 5 year Tennessee state average year plugging in the 2017 state average projection of 171 bushels per acre for corn, 51 bushels per acre for soybeans, 1031 pounds per acre cotton, and 71 bushels per acre wheat. Prices used for 2018 are current forward prices for 2018 harvest. Although prices have been volatile the last 3 weeks for the grains, cash forward prices for corn and soybeans are at the same level they were on March 8. Cotton prices are also the same as three weeks ago while wheat cash forward prices have dropped 47 cents causing wheat/soybean net returns to drop \$25 per acre. Based on these yields and prices, corn and soybeans, are projected to have positive net returns over variable, land, and fixed costs. Cotton and wheat/soybeans are projected to have positive returns over variable and land costs and to be breakeven considering estimated fixed costs. Costs are based on the 2018 UT Extension Row Crop budgets with adjustments made where warranted. Milo prices are an estimate as very few quotes are available. It depends on a producer's situation on what is showing to be the most profitable crop. Producers with cash rent or owned ground will want to look at Returns Over Variable Expenses as their land cost will be fixed and if their machinery cost are truly fixed and no equipment changes will be made. Producers with share rent will want to plug in their appropriate share rent if their equipment cost are fixed. Producers who may be making some equipment changes may want to look at Net Returns. Visit with your supplier on input cost expectations. Please contact your local County Extension office or Area Specialist – Farm Management for assistance in developing your own budget or farm financial plan. This table below should be used as a guide as yields, prices, and expenses will vary among producers and locations. Expenses will vary among producers and production systems. I would like to point out the cotton price of 76 cents that is being used in the profitability outlook. The price of 74 cents is made up of a cash price of 72 cents and gin rebates (seed & hauling) of 4 cents. Gin rebates for seed and hauling are an estimate as those are generally not known until harvest time and could be in the range of 0 -5 cents. Producers should look at these returns as what could be if no adjustments are made in their operation and consider it a warning sign that adjustments will need to be made in 2018 to be sustainable. These estimates do not consider any USDA or crop insurance payments from the new farm bill. Please contact your local County Extension office or Area Specialist – Farm Management for assistance in developing your own budget or farm financial plan. This table below should be used as a guide as yields, prices, and expenses will vary among producers and locations. Expenses will vary among producers and production systems. Cotton prices include revenue for cottonseed and hauling. For reference, in variable expenses below, fertilizer expense per acre is estimated as follows: Cotton - \$ 94, Soybeans - \$35, Corn - \$128 (includes 170 units of N), Milo - \$86, and Wheat/Soybeans - \$94. Cost of production will continue to be adjusted as information becomes available. Weed control costs with resistant weeds have also been difficult to estimate. These costs will vary greatly among producers and individual fields. Production costs are estimates based on the 2018 University of Tennessee Crop Budgets with adjustments made where needed. Please visit with your farm supplier on estimated cost in your area. Producers with owned land and or cash rent can use Returns Over Variable as a guide in decision making. Producers with share rent ground should use Returns Over Variable and Land Costs as a guide with their appropriate share rent calculated. A land cost of 25% of revenue minus 25% of crop insurance cost is used in the table as a guide or method of comparison and should not be construed as the appropriate rent for a particular area. Producers who are not making major equipment changes can use UT budgets

and this table as a guide in developing their own cropping decision budgets. If equipment changes are being made, then a whole farm financial plan would be better suited as a decision aid.

2018 Estimated Returns – Non-Irrigated					
	Cotton	Soybeans	Corn	Milo	Wheat/Soybeans
Yield	982 lbs.	47 bu.	161 bu.	90 bu.	70 bu./35 bu.
Price (as of 3/29/18)	\$0.76 lb.	\$10.38 bu.	\$3.93 bu.	\$3.63 bu.	\$4.79 bu./\$10.38 bu.
Revenue	\$746	\$488	\$633	\$327	\$699
Variable Expenses	\$428	\$224	\$347	\$239	\$417
Returns Over Variable	\$318	\$264	\$286	\$88	\$282
Land Costs (25% of Revenue-25% crop insurance)	\$184	\$120	\$155	\$81	\$171
Returns Over Variable and Land Costs	\$134	\$144	\$131	\$17	\$111
Fixed Costs Depreciation & interest on machinery	\$134	\$64	\$57	\$64	\$111
Returns Over Specified Costs	\$0	\$81	\$74	-\$56	\$0
Breakeven Price at Average Yield and Specified Cost	\$0.76	\$8.66	\$3.47	\$4.26	\$5.26/\$9.49

2018 Estimated Returns - Irrigation

Considering irrigation, profitability is positive for corn and soybeans over variable, land and fixed cost. Returns Over Variable and Land Costs are positive for cotton, and wheat/soybeans, but not enough to cover fixed costs. An individual producer's machinery and equipment costs will have a strong influence on profitability. Since the March 8th report, wheat/soybeans net returns have dropped \$25 per acre, while corn, soybeans, and cotton have stayed the same. Producers should look at these returns as what could be if no adjustments are made in their operation and consider that adjustments may need to be made in 2018 to be sustainable. The table below is an estimate of returns for crops under irrigation. Since irrigated yields are not as of yet kept separate in Tennessee, yields below are an estimate of irrigated yields. Note that due to an increase in dryland cotton and corn 5 year state average yields, irrigated yields have been increased in this projection. Irrigation fixed costs and energy costs will vary greatly among producers and systems. These projections include in variable expenses energy costs for irrigation of \$30 per acre for corn, \$26 per acre for cotton, and \$20 per acre for soybeans. Irrigation repairs and maintenance are estimated at \$16 per acre for corn, \$14 per acre for cotton and milo, and \$10 per acre for soybeans. Fixed costs of \$86 per acre for irrigation equipment are used. Please contact your local County Extension office or Area Specialist – Farm Management for assistance in developing your own budget or farm financial plan. This table below should be used as a guide as yields, prices, and expenses will vary among producers and locations. Expenses will vary among producers and production systems. For reference, in variable expenses below, fertilizer expense per acre is estimated as follows: Cotton - \$101, Soybeans - \$37, Corn - \$159 (includes 240 units of N), Milo - \$103, and Wheat/Soybeans - \$93. Cost of production will continue to be adjusted as information becomes available. Hopefully, we will see costs reduced or possibly suitable generic products available. Weed control costs with resistant weeds have also been difficult to estimate. These costs will vary greatly among producers and individual fields. Production costs are estimates based on the 2018 University of Tennessee Crop Budgets with adjustments made where needed. Please visit with your farm supplier on estimated cost in your area. Producers with owned land and or cash rent can use Returns Over Variable and Fixed IR Costs as a guide in decision making. Producers with share rent ground should use Returns Over Variable, Fixed IR Costs and Land Costs as a guide with their appropriate share rent calculated. A land cost of 25% of revenue minus 25% of crop insurance cost minus 25% of the irrigation equipment fixed cost is used in the table as a guide or method of comparison and should not be construed as the appropriate rent for a particular area. A management cost of \$30 per acre is included in Fixed Costs – management labor, depreciation & interest on machinery. This is an additional \$15 above the dryland crop management labor. Producers who are not making major equipment changes can use UT budgets and this table as a guide in developing their own cropping decision budgets. If equipment changes are being made, then a whole farm financial plan would be better suited as a decision aid.

2018 Estimated Returns – Irrigation

	Cotton	Soybeans	Corn	Milo	Wheat/Soybeans
Yield	1200 lbs.	60 bu.	210 bu.	130 bu.	70 bu./45 bu.
Price (as of 3/29/18)	\$0.76 lb.	\$10.38 bu.	\$3.93 bu.	\$3.63 bu.	\$4.79 bu./\$10.38 bu.
Revenue	\$912	\$623	\$825	\$472	\$802
Variable Expenses(include energy cost)	\$477	\$255	\$445	\$298	\$447
Fixed Irrigation Costs per Acre	\$86	\$86	\$86	\$86	\$86
Returns Over Variable & Fixed IR Costs	\$349	\$282	\$294	\$88	\$269
Land Costs (25% of Revenue-25% crop insurance-25% fixed irrigation costs)	\$204	\$132	\$182	\$95	\$175
Returns Over Variable, IR Fixed Cost and Land Costs	\$145	\$150	\$112	-\$7	\$94
Fixed Costs- management labor, depreciation & interest on machinery	\$149	\$79	\$72	\$79	\$126
Returns Over Specified Costs	-\$4	\$72	\$40	-\$86	-\$32
Breakeven Price at Average Yield and Specified Cost	\$0.76	\$9.19	\$3.74	\$4.29	\$5.26/\$10.58