

Year 2001 Enterprise Analysis Data for Selected Crops Kentucky Farm Business Management Program¹

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Before the calendar year 2001 began, farmers knew that input costs would be higher. Energy costs were exploding upward. Any input costs related to energy sources would be higher. Fortunately, farmers realized another year with above average production returns. Although market prices were relatively low, physical production was above average for most producers.

As expected, producers shifted acreage to single crop soybeans. Low wheat prices and higher nitrogen prices caused the shift. However, as the year ended, single crop soybeans resulted in the lowest returns. Table 1 provides the comparison of the three major crops grown by Kentucky grain producers. Detailed information for these crops and others are provided at the end of this paper.

Returns over variable costs for 2001 increased \$28.36 per acre for yellow corn and \$69.99 per acre for the wheat - double crop soybean activities over 2000. Returns fell for single crop soybeans by \$27.79 per acre. The 2001 yellow corn yield was 31.5 bushels per acre over the previous five-year average of 125.5. Thus, even with the \$0.29 cent lower per bushel revenue and \$13.70 per acre higher variable costs, yellow corn returns over variable costs increased from 2000 levels.

Producers also realized superior wheat and double crop soybean yields. Wheat yields were 16.4 bushels per acre higher than the five-year average of 61.6 bushels. Double crop soybeans were 8.7 bushels per acreage higher than the five-year average of 26.3 bushels. An added bonus for the double cropping activity was lower variable costs. Weather considerations allowed lower pesticide treatments of wheat.

Single crop soybeans yields were 7.6 bushels per acre greater than the five-year average, but were one bushels per acre lower than in 2000. Variable costs were only \$1.60 per acre higher in 2001 than in 2000. Input costs for soybeans are not as sensitive to energy costs as corn or wheat. However, revenue fell \$0.47 cents per bushel, even with larger loan deficiency payments (LDPs). It is interesting that the per bushel revenue was the same as the 2001 Kentucky loan rate of \$5.46 per bushel.

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This article presents information on the economic situation and outlook for Kentucky agriculture and is intended to assist farmers, agribusiness professionals, Extension field staff, and others with interest in agriculture and agribusiness. Information presented here is based on the most recent information and research available. However, the rapidly changing economic and policy conditions for agriculture limit the usefulness and life span of conclusions and recommendations cited here. Decision makers should keep these facts in mind. Feel free to use the information included in this publication for other uses, but please provide professional citation about the source. This paper is published without formal review and the views expressed are those of the authors and do not necessarily reflect the views of the University of Kentucky, the Agricultural Experiment Station, or the Cooperative Extension Service.

If you need additional information or if you would like to provide comments or suggestions about this paper, please contact Craig Gibson at cgibson@uky.edu.

Table 1. A Comparison of Selected Crops in 2000 and 2001.

| Crops | Yellow Corn | | Single Crop Soybeans | | Wheat \ Double Crop Soybeans | |
|-----------------------------|-------------|------------|----------------------|------------|------------------------------|---------------------|
| | 2000 | 2001 | 2000 | 2001 | 2000 | 2001 |
| Production Year | 2000 | 2001 | 2000 | 2001 | 2000 | 2001 |
| Percent Land Use | 47.2% | 46.8% | 22.0% | 25.7% | 22.4% | 19.2% |
| Yields | 123 | 157 | 44 | 43 | 64 \ 30 | 78 \ 35 |
| Total Returns | \$ 320.36 | \$ 362.40 | \$ 260.80 | \$ 234.61 | \$ 366.66 | \$ 421.31 |
| (Total Returns per Unit) | (\$ 2.60) | (\$ 2.31) | (\$ 5.93) | (\$ 5.46) | (\$ 2.89 \ \$ 6.05) | (\$ 3.02 \ \$ 5.30) |
| Variable Costs | \$ 155.18 | \$ 168.88 | \$ 104.89 | \$ 106.49 | \$ 192.37 | \$ 177.03 |
| Returns Over Variable Costs | \$ 165.16 | \$ 193.52 | \$ 155.91 | \$ 128.12 | \$ 174.29 | \$ 244.28 |
| Other Non land Costs | \$ 112.38 | \$ 118.78 | \$ 91.50 | \$ 89.71 | \$ 163.69 | \$ 151.02 |
| Returns Over Non land Costs | \$ 52.79 | \$ 74.74 | \$ 64.41 | \$ 38.41 | \$ 10.61 | \$ 93.26 |
| Land Costs | \$ 92.65 | \$ 101.34 | \$ 82.91 | \$ 89.99 | \$ 86.79 | \$ 92.23 |
| Total - All Costs | \$ 360.21 | \$ 389.00 | \$ 279.30 | \$ 286.18 | \$ 442.84 | \$ 420.28 |
| Management Returns | \$ - 39.86 | \$ - 26.60 | \$ - 18.50 | \$ - 51.57 | \$ - 76.18 | \$ 1.03 |
| Non land Cost per Bu. | \$ 2.18 | \$ 1.83 | \$ 4.46 | \$ 4.56 | \$ 2.97 \ \$ 5.54 | \$ 2.21 \ \$ 4.46 |
| All Costs per Bu. | \$ 2.93 | \$ 2.48 | \$ 6.35 | \$ 6.66 | \$ 3.66 \ \$ 6.96 | \$ 4.46 \ \$ 5.77 |

Other non land costs were higher in 2001 than in 2000 for yellow corn and lower for single crop soybeans and the double cropping activity. Other non land costs include utilities, labor, storage, depreciation, insurance, non land interest, and miscellaneous expenses. We can cite no notable reasons for this. Land costs increased for each cropping activity, but were varied. Land costs are not constant across the activities as they are influenced by the mix of owned land, cash rented land, and crop shared land. Land costs were calculated by charging 4.5% of the land value for owned land (i.e., \$103.84), the average cash rent paid (i.e., \$83.16), and a "leasing cost" for the crop shared land based upon costs incurred by the tenant for whom no revenue is realized. In 2001, the average percentages of owned, crop shared, and cash rented land were 22.3%, 33.7%, and 44.0%, respectively.

Management returns for Kentucky grain farms with no livestock enterprises averaged \$24.41 per tillable acre. How did this occur with primary cropping activities showing negative returns? The answer is other revenue sources. Government subsidy payments in the form of production flexibility payments, market loss assistance payments, oilseed payments, and tobacco payments are not reflected in the data presented, but contribute a substantial amount of income toward generating positive management returns for the entire business. This was also the case in 2000. Total government program payments averaged \$77.61 per tillable acre. Loan deficiency payments accounted for \$44.56 per tillable acre. The difference, \$33.05, resulted from all other program payments. Other income items; including custom work (\$5.69), miscellaneous income (\$14.82), and tobacco, also contributed to making management returns positive.

Based on these data, it is well known that 2002 returns will not look very good. Although market prices are higher, limited yields and reduced government payments vis-a-vis limited loan deficiency payments, will hinder returns for Kentucky producers

Table 2. A Detailed Look at Selected Kentucky Cropping Enterprises.

2001 KFBM ENTERPRISE ANALYSIS DATA

| | Yellow Corn | White Corn | Single Crop Soybeans | Wheat | Double Crop Soybeans | Grain Sorghum | Popcorn |
|----------------------------------|------------------------|-----------------------|-------------------------------------|-----------------|-------------------------------------|--------------------------|------------------|
| % Land in Crop | 46.8% | 2.8% | 25.7% | 19.2% | 20.9% | 0.3% | 0.8% |
| GROSS RETURNS (Per Acre) | | | | | | | |
| Production Returns | \$331.00 | \$316.00 | \$180.00 | \$207.00 | \$141.00 | \$236.00 | \$263.00 |
| Loan Deficiency Payments | <u>31.40</u> | <u>28.80</u> | <u>54.61</u> | <u>28.86</u> | <u>44.45</u> | <u>4.92</u> | <u>0.00</u> |
| TOTAL RETURNS | \$362.40 | \$344.80 | \$234.61 | \$235.86 | \$185.45 | \$240.92 | \$263.00 |
| (Per Unit) | 2.31 | 2.39 | 5.46 | 3.02 | 5.30 | 1.96 | 0.07 |
| NON LAND COSTS (Per Acre) | | | | | | | |
| Variable Costs | | | | | | | |
| Fertilizer | \$64.63 | \$65.47 | \$23.30 | \$35.95 | \$13.84 | \$56.34 | \$64.65 |
| Pesticides | 31.92 | 32.81 | 26.83 | 9.56 | 26.53 | 22.59 | 26.64 |
| Seed | 29.52 | 31.22 | 23.79 | 18.10 | 18.82 | 9.69 | 27.86 |
| Drying | 2.83 | 2.86 | 1.06 | 0.72 | 0.92 | 2.08 | 0.54 |
| Machinery Repair | 20.60 | 21.52 | 16.76 | 14.08 | 12.17 | 17.82 | 16.03 |
| Fuel & Oil | 9.93 | 9.33 | 7.55 | 7.03 | 6.10 | 7.91 | 7.12 |
| Machine Hire | <u>9.45</u> | <u>8.97</u> | <u>7.20</u> | <u>7.08</u> | <u>6.12</u> | <u>5.39</u> | <u>4.85</u> |
| Total Variable | \$168.88 | \$172.17 | \$106.49 | \$92.53 | \$84.50 | \$121.82 | \$147.68 |
| Other Non land Costs | | | | | | | |
| Utilities | \$4.94 | \$4.29 | \$3.57 | \$3.66 | \$3.18 | \$3.23 | \$2.90 |
| Labor - Paid | 16.46 | 14.42 | 14.28 | 12.54 | 12.40 | 12.74 | 13.59 |
| - Unpaid | 14.22 | 15.05 | 13.99 | 9.78 | 9.56 | 16.49 | 17.59 |
| Storage | 2.79 | 1.06 | 0.44 | 0.45 | 0.39 | 0.21 | 0.32 |
| Building Repairs | 3.84 | 3.06 | 2.91 | 1.56 | 1.39 | 2.23 | 1.34 |
| Building Depreciation | 4.94 | 3.40 | 2.33 | 2.81 | 2.75 | 2.79 | 1.88 |
| Light Vehicle Expense | 0.25 | 0.31 | 0.22 | 0.13 | 0.11 | 0.39 | 0.35 |
| Machinery Depreciation | 20.53 | 21.14 | 16.56 | 14.06 | 12.15 | 17.89 | 16.09 |
| Insurance | 10.04 | 8.49 | 8.36 | 7.00 | 7.36 | 7.32 | 6.41 |
| Miscellaneous | 4.10 | 3.85 | 4.19 | 4.13 | 3.04 | 3.41 | 8.75 |
| Non land Interest | <u>36.68</u> | <u>33.60</u> | <u>22.85</u> | <u>23.47</u> | <u>19.08</u> | <u>26.16</u> | <u>26.80</u> |
| Total Other | \$118.78 | \$108.67 | \$89.71 | \$79.60 | \$71.43 | \$92.85 | \$96.02 |
| Total Non land Costs | \$287.66 | \$280.85 | \$196.20 | \$172.13 | \$155.93 | \$214.68 | \$243.70 |
| LAND COSTS (Per Acre) | | | | | | | |
| Taxes | \$5.64 | \$6.52 | \$6.58 | \$2.58 | \$2.55 | \$7.54 | \$7.54 |
| Adjusted Net Rent | <u>95.70</u> | <u>91.79</u> | <u>83.40</u> | <u>43.72</u> | <u>43.37</u> | <u>83.95</u> | <u>89.14</u> |
| Total Land Costs | \$101.34 | \$98.31 | \$89.99 | \$46.30 | \$45.93 | \$91.49 | \$99.68 |
| TOTAL - ALL COSTS | \$389.00 | \$379.16 | \$286.18 | \$218.43 | \$201.85 | \$306.17 | \$340.38 |
| MANAGEMENT RETURNS | (\$26.60) | (\$34.36) | (\$51.57) | \$17.43 | (\$16.40) | (\$65.25) | (\$77.38) |
| Yield per Acre | 157 | 144 | 43 | 78 | 35 | 123 | 3,973 |
| Non land Costs per Bushel | \$1.83 | \$1.95 | \$4.56 | \$2.21 | \$4.46 | \$1.75 | \$0.06 |
| All Costs per Bushel | \$2.48 | \$2.63 | \$6.66 | \$2.80 | \$5.77 | \$2.49 | \$0.09 |
| ----- | | | | | | | |
| Average 5-Year Yield | 128.9 | 117.5 | 35.9 | 65.6 | 26.9 | 90.3 | 3,287.1 |
| All Costs per Bushel | \$3.02 | \$3.23 | \$7.96 | \$3.33 | \$7.51 | \$3.39 | \$0.10 |

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