

## 2017 Wheat, Conventional Tillage, Non-Irrigated Budget

|   | <u>Unit</u> | <u>Quantity</u> | <u>Price</u>                               | <u>Total</u> | <u>Your Farm</u> |
|---|-------------|-----------------|--|--------------|------------------|
| <b>Revenue</b>                              |             |                 |  |              |                  |
| Wheat <sup>1</sup>                          | Bu          | 65              | \$4.25                                     | \$276.25     | _____            |
|   |             |                 | <b>Gross Revenue (\$/Acre)</b>             |              |                  |
|   |             |                 | <b>Total Revenue</b>                       |              | _____            |
|   |             |                 | <b>\$276.25</b>                            |              | _____            |
| <b>Variable Expenses</b>                    |             |                 |  |              |                  |
| Seed <sup>2</sup>                           | Bu          | 2               | \$17.50                                    | \$35.00      | _____            |
| Fertilizer & Lime (Table 1)                 | Acre        | 1               | \$75.54                                    | \$75.54      | _____            |
| Chemical (Table 2) <sup>2,3</sup>           | Acre        | 1               | \$70.41                                    | \$70.41      | _____            |
| Crop Scout                                  | Acre        | 1               | \$6.00                                     | \$6.00       | _____            |
| Repair & Maintenance (Table 3) <sup>4</sup> | Acre        | 1               | \$28.82                                    | \$28.82      | _____            |
| Fuel, Oil & Filter (Table 3) <sup>4</sup>   | Acre        | 1               | \$13.31                                    | \$13.31      | _____            |
| Operator Labor (Table 3) <sup>4</sup>       | Acre        | 1               | \$8.68                                     | \$8.68       | _____            |
| Machinery Rental                            | Acre        | 0               | \$0.00                                     | \$0.00       | _____            |
| Custom Work                                 | Acre        | 0               | \$0.00                                     | \$0.00       | _____            |
| Drying (Fuel/Electric)                      | Bu          | 65              | \$0.00                                     | \$0.00       | _____            |
| Cash Rent <sup>5</sup>                      | Acre        | 1               | \$94.00                                    | \$94.00      | _____            |
| Crop Insurance <sup>6</sup>                 | Acre        | 1               | \$6.84                                     | \$6.84       | _____            |
| Operating Interest <sup>7</sup>             | %           | \$338.60        | 6.00%                                      | \$10.16      | _____            |
| Other Variable Costs                        | Acre        | 1               | \$0.00                                     | \$0.00       | _____            |
|   |             |                 | <b>Total Variable Expenses</b>             |              | _____            |
|   |             |                 | <b>\$348.76</b>                            |              | _____            |
|   |             |                 | <b>Return Above Variable Expenses</b>      |              | _____            |
|   |             |                 | <b>-\$72.51</b>                            |              | _____            |
| <b>Fixed Expenses</b>                       |             |                 |  |              |                  |
| Machinery <sup>4</sup>                      |             |                 |  |              |                  |
| Capital Recovery (Table 3)                  | Acre        | 1               | \$50.17                                    | \$50.17      | _____            |
| Other Fixed Machinery Costs                 | Acre        | 1               | \$0.00                                     | \$0.00       | _____            |
| Property Taxes                              | Acre        | 1               | \$0.00                                     | \$0.00       | _____            |
| Insurance (Non-Machinery)                   | Acre        | 1               | \$0.00                                     | \$0.00       | _____            |
| Management Labor                            | Acre        | 1               | \$15.00                                    | \$15.00      | _____            |
| Other Fixed Costs                           | Acre        | 1               | \$0.00                                     | \$0.00       | _____            |
|   |             |                 | <b>Total Fixed Expenses</b>                |              | _____            |
|   |             |                 | <b>\$65.17</b>                             |              | _____            |
|   |             |                 | <b>Return Above All Specified Expenses</b> |              | _____            |
|   |             |                 | <b>-\$137.68</b>                           |              | _____            |

### Breakeven Price For Selected Yield

| Yield<br>(bu) | Variable Cost<br>(\$/bu) | Total Specified Cost<br>(\$/bu) |
|---------------|--------------------------|---------------------------------|
| 45            | \$7.75                   | \$9.20                          |
| 50            | \$6.98                   | \$8.28                          |
| 55            | \$6.34                   | \$7.53                          |
| 60            | \$5.81                   | \$6.90                          |
| <b>65</b>     | <b>\$5.37</b>            | <b>\$6.37</b>                   |
| 70            | \$4.98                   | \$5.91                          |
| 75            | \$4.65                   | \$5.52                          |
| 80            | \$4.36                   | \$5.17                          |
| 85            | \$4.10                   | \$4.87                          |

### Breakeven Yield for Selected Price

| Price<br>(\$/bu) | Variable Cost (bu) | Total Specified Cost<br>(bu) |
|------------------|--------------------|------------------------------|
| \$3.25           | 107                | 127                          |
| \$3.50           | 100                | 118                          |
| \$3.75           | 93                 | 110                          |
| \$4.00           | 87                 | 103                          |
| <b>\$4.25</b>    | <b>82</b>          | <b>97</b>                    |
| \$4.50           | 78                 | 92                           |
| \$4.75           | 73                 | 87                           |
| \$5.00           | 70                 | 83                           |
| \$5.25           | 66                 | 79                           |

**Table 1. Fertilizer & Lime**

| Fertilizer   | Description                   | Quantity (lbs) | Price (\$) | Total (\$/Acre) | Your Farm (\$/Acre) |
|--------------|-------------------------------|----------------|------------|-----------------|---------------------|
| Nitrogen     | Ammonium Nitrate              | 80             | \$0.48     | \$38.40         | _____               |
| Phosphorous  | P <sub>2</sub> O <sub>5</sub> | 40             | \$0.34     | \$13.63         | _____               |
| Potassium    | K <sub>2</sub> O              | 20             | \$0.26     | \$5.27          | _____               |
| Lime         | Limestone                     | 1,000          | \$36.500   | \$18.25         | _____               |
| Other        |                               | 0              | \$0.00     | \$0.00          | _____               |
| <b>Total</b> |                               |                |            | <b>\$75.54</b>  | _____               |

**Table 2. Chemicals<sup>2,3</sup>**

| Chemical     | Function    | Description       | Unit | Number of Apps. | Quantity | Price   | Total (\$/Acre) | Your Farm (\$/Acre) |
|--------------|-------------|-------------------|------|-----------------|----------|---------|-----------------|---------------------|
| Herbicides   | Burndown    | Gramoxone SL      | oz.  | 1               | 48       | \$0.14  | \$6.60          | _____               |
|              | Pre-Emerge  | Roundup Power Max | qt.  | 1               | 1        | \$4.49  | \$4.49          | _____               |
|              | Post-Emerge | Harmony Extra     | oz.  | 1               | 0.5      | \$14.03 | \$7.02          | _____               |
|              |             | Axial XL          | oz.  | 1               | 16.4     | \$1.07  | \$17.55         | _____               |
|              |             | Surfactant        | pt.  | 1               | 0.1      | \$3.52  | \$0.35          | _____               |
|              |             |                   |      |                 |          |         | \$0.00          | _____               |
| Insecticides |             | Seed Treatment    | acre | 1               | 1        | \$11.00 | \$11.00         | _____               |
| Insecticides |             | Foliar            | acre | 1               | 1        | \$3.00  | \$3.00          | _____               |
| Fungicides   |             | Seed Treatment    | acre | 1               | 1        | \$8.40  | \$8.40          | _____               |
| Fungicides   |             | Foliar            | acre | 1               | 1        | \$12.00 | \$12.00         | _____               |
| <b>Total</b> |             |                   |      |                 |          |         | <b>\$70.41</b>  | _____               |

**Table 3. Machinery<sup>4</sup>**

| Power Unit      | Implement            | Size   | Capital Recovery | Repairs & Maintenance | Fuel, Oil & Filter | Labor         | Total           | Your Farm (\$/Acre) |
|-----------------|----------------------|--------|------------------|-----------------------|--------------------|---------------|-----------------|---------------------|
| Burndown        | SP Boom Sprayer      | 90'    | \$4.19           | \$0.24                | \$0.20             | \$0.16        | \$4.79          | _____               |
| Chisel          | Tractor, 215 hp      | 21'    | \$1.90           | \$2.38                | \$1.55             | \$1.16        | \$6.98          | _____               |
| Disk            | Tractor, 215 hp      | 29'    | \$4.48           | \$2.59                | \$1.25             | \$0.93        | \$9.25          | _____               |
| Prepare Seedbed | Tractor, 215 hp      | 26.5'  | \$2.43           | \$2.21                | \$1.31             | \$0.97        | \$6.92          | _____               |
| Plant           | Tractor, 215 hp      | 20 ft  | \$4.69           | \$7.26                | \$1.98             | \$1.47        | \$15.40         | _____               |
| Weed Control    | SP Boom Sprayer      | 90'    | \$4.19           | \$0.24                | \$0.20             | \$0.16        | \$4.79          | _____               |
| Weed Control    | SP Boom Sprayer      | 90'    | \$4.19           | \$0.24                | \$0.20             | \$0.16        | \$4.79          | _____               |
| Fungicide       | SP Boom Sprayer      | 90'    | \$4.19           | \$0.24                | \$0.20             | \$0.16        | \$4.79          | _____               |
| Fertilize       | Tractor, 215 hp      | 900#   | \$1.65           | \$2.03                | \$1.13             | \$0.84        | \$5.66          | _____               |
| Insecticide     | SP Boom Sprayer      | 90'    | \$4.19           | \$0.24                | \$0.20             | \$0.16        | \$4.79          | _____               |
| Harvest         | Combine              | 30 ft  | \$11.11          | \$9.80                | \$3.45             | \$1.23        | \$25.59         | _____               |
| Haul            | Tractor, 215 hp      |        | \$2.31           | \$1.06                | \$0.69             | \$0.52        | \$4.57          | _____               |
| Haul            | Semi Tractor/Trailer | 800 bu | \$4.83           | \$0.52                | \$1.16             | \$0.93        | \$7.44          | _____               |
| <b>Total</b>    |                      |        | <b>\$50.17</b>   | <b>\$28.82</b>        | <b>\$13.31</b>     | <b>\$8.68</b> | <b>\$100.99</b> | _____               |

## **FOOTNOTES**

- 1) Wheat price was estimated using weighted average futures prices from July 2017 to May 2018 on December 30, 2016, adjusted by average monthly basis in Tennessee. If a market for straw is available, add an appropriate amount to return to land, management, and risk, based on the expected yield and price of the straw, less harvest and marketing costs.
- 2) Additional seed treatment is to protect against Barley Yellow Dwarf virus.
- 3) Cost may vary depending on fungicide used and application rate per acre. Check with farm suppliers for rebates, discounts, and incentives for seed and chemicals. Substantial cost savings may be available.
- 4) Machinery expenses will vary dramatically by operation, financial resources, and land base. The machinery cost estimates provided in Table 3 are provided as an estimate of cost of ownership and operation for specified pieces of machinery that would be available to a "representative" row-crop farm in Tennessee. To estimate machinery costs for a specific set of equipment, interested parties can utilize the Excel version of the budgets and modify the Machinery Assumptions Table.
- 5) Cash rental rates are the 2016 USDA-NASS reported cash rental rates for cropland in Tennessee. Substantial differences may exist in cash rental rates reported by NASS and the prevailing rate in your location.
- 6) Crop insurance is an estimate and will vary by policy, county, and coverage election. The estimate provided is the average premium paid per insured acre of wheat in Tennessee for the previous production year as reported by USDA RMA's Summary of Business Report.
- 7) Operating interest is assumed to be charged on half of all variable expenses.