# WHEAT FOR GRAIN, INTENSIVE MANAGEMENT GEORGIA, 2020/21

#### **Estimated Costs and Returns**

| Ехр                                | pected Yield:      | 75 bushel    |              | Υοι | ur Yield  |     |        |           |
|------------------------------------|--------------------|--------------|--------------|-----|-----------|-----|--------|-----------|
| Variable Costs                     | Unit               | Amount       | \$/Unit      |     | Cost/Acre |     | bushel | Your Farm |
| Treated Seed                       | pound              | s 125        | \$<br>0.52   | \$  | 65.00     | \$  | 0.87   |           |
| Lime                               | ton                | 0.25         | \$<br>50.00  | \$  | 12.50     | \$  | 0.17   |           |
| Fertilizer                         |                    |              |              |     |           |     |        |           |
| Nitrogen                           | pound              | s 120        | \$<br>0.90   | \$  | 108.00    | \$  | 1.44   |           |
| Phosphate                          | pound              | s 50         | \$<br>0.70   | \$  | 35.00     | \$  | 0.47   |           |
| Potash                             | pound              | s 60         | \$<br>0.70   | \$  | 42.00     | \$  | 0.56   |           |
| Weed Control                       | acre               | 1            | \$<br>27.82  | \$  | 27.82     | \$  | 0.37   |           |
| Insect Control                     | acre               | 1            | \$<br>1.43   | \$  | 1.43      | \$  | 0.02   |           |
| Disease Control***                 | acre               | 1            | \$<br>12.30  | \$  | 12.30     | \$  | 0.16   |           |
| Disease Spray by Air               | acre               | 1            | \$<br>8.00   | \$  | 8.00      | \$  | 0.11   |           |
| Preharvest Machinery               |                    |              |              |     |           |     |        |           |
| Fuel                               | gallon             | 7.0          | \$<br>3.10   | \$  | 21.62     | \$  | 0.29   |           |
| Repairs and Maintenance            | acre               | 1            | \$<br>16.21  | \$  | 16.21     | \$  | 0.22   |           |
| Harvest Machinery                  |                    |              |              |     |           |     |        |           |
| Fuel                               | gallon             | 3.0          | \$<br>3.10   | \$  | 9.39      | \$  | 0.13   |           |
| Repairs and Maintenance            | acre               | 1            | \$<br>6.37   | \$  | 6.37      | \$  | 0.08   |           |
| Labor                              | hours              | 1.2          | \$<br>13.50  | \$  | 16.50     | \$  | 0.22   |           |
| Irrigation*                        | applica            | ations       | \$<br>9.25   | \$  | -         | \$  | -      |           |
| Crop Insurance                     | acre               | 1            | \$<br>17.00  | \$  | 17.00     | \$  | 0.23   |           |
| Land Rent                          | acre               | 1            | \$<br>-      | \$  | -         | \$  | -      |           |
| Interest on Operating Capital      | percen             | it \$ 199.57 | 5.50%        | \$  | 10.98     | \$  | 0.15   |           |
| Drying - 2 Points                  | bushel             | 82           | \$<br>0.09   | \$  | 7.41      | \$  | 0.10   |           |
| Total Variable Costs:              |                    |              |              | \$  | 417.52    | \$  | 5.57   |           |
| Fixed Costs                        |                    |              | <br>         |     |           |     |        |           |
| Machinery Depreciation, Taxes, Ins | urance and Housing |              |              |     |           |     |        |           |
| Preharvest Machinery               | acre               | 1            | \$<br>46.50  | \$  | 46.50     | \$  | 0.62   |           |
| Harvest Machinery                  | acre               | 1            | \$<br>30.17  | \$  | 30.17     | \$  | 0.40   |           |
| Irrigation                         | acre               | 1            | \$<br>135.00 | \$  | 135.00    | \$  | 1.80   |           |
| General Overhead                   | % of V             | C \$ 417.52  | 5%           | \$  | 20.88     | \$  | 0.28   |           |
| Management                         | % of V             | C \$ 417.52  | 5%           | \$  | 20.88     | \$  | 0.28   |           |
| Owned Land Cost, Taxes, Cash Payı  | ment, etc. acre    | 1            | \$<br>-      | \$  | -         | \$  | -      |           |
| Other                              | acre               | 1            | \$<br>-      | \$  | -         | \$  | -      |           |
| Total Fixed Costs                  |                    |              |              | \$  | 253.43    | \$  | 3.38   |           |
| Total Costs Excluding Land         |                    |              |              | \$  | 670.95    | \$  | 8.95   |           |
| Your Profit Goal                   |                    |              | \$           |     |           | /bı | ushel  |           |
| Price Needed for Profit            |                    |              | \$           |     |           | /bi | ushel  |           |

\*Average of diesel and electric irrigation application costs. Electric is estimated at \$7/appl and diesel is estimated at \$9/appl when diesel costs \$2/gal.

\*\*There is much volatility and uncertaintly in the markets. Prices may change 10% or more in a matter of days. These costs are relevant as of Nov 1, 2021

\*\*\* If disease is expected to be a problem, add an additional \$12-15/acre for chemical and application costs.

Developed by Amanda Smith.



# Sensitivity Analysis of WHEAT FOR GRAIN, INTENSIVE MANAGEMENT

| Net Returns Above Variable Costs Per Acre |          |          |          |          |          |  |  |  |  |  |
|---|----------|----------|----------|----------|----------|--|--|--|--|--|
| Varying Prices and Yields (bushel)        |          |          |          |          |          |  |  |  |  |  |
|   | -25%     | -10%     | Expected | +10%     | +25%     |  |  |  |  |  |
| Price \ bushel/Acre                       | 56       | 68       | 75       | 83       | 94       |  |  |  |  |  |
| \$6.00                                    | -\$80.02 | -\$12.52 | \$32.48  | \$77.48  | \$144.98 |  |  |  |  |  |
| \$6.25                                    | -\$65.96 | \$4.35   | \$51.23  | \$98.10  | \$168.41 |  |  |  |  |  |
| \$6.50                                    | -\$51.90 | \$21.23  | \$69.98  | \$118.73 | \$191.85 |  |  |  |  |  |
| \$6.75                                    | -\$37.84 | \$38.10  | \$88.73  | \$139.35 | \$215.29 |  |  |  |  |  |
| \$7.00                                    | -\$23.77 | \$54.98  | \$107.48 | \$159.98 | \$238.73 |  |  |  |  |  |
| \$7.25                                    | -\$9.71  | \$71.85  | \$126.23 | \$180.60 | \$262.16 |  |  |  |  |  |
| \$7.50                                    | \$4.35   | \$88.73  | \$144.98 | \$201.23 | \$285.60 |  |  |  |  |  |

### Estimated Labor and Machinery Costs per Acre

# **Preharvest Operations**

|  |            | Number   | Labor    |          |          |       |             |       |
|--|------------|----------|----------|----------|----------|-------|-------------|-------|
|  |            | of Times | Use****  | Fuel Use | Repairs  |       | Fixed Costs |       |
| Operation  | Acres/Hour | Over     | (hrs/ac) | (gal/ac) | (\$/ac)  |       | (\$/ac)     |       |
| Plow 4 Bottom Switch with Tractor (180-199<br>hp) MFWD 190 | 2.3        | 1        | 0.54     | 4.20     | \$       | 8.61  | \$          | 25.93 |
| Disk Harrow 32' with Tractor (180-199 hp)<br>MFWD 190      | 16.3       | 1        | 0.08     | 0.60     | \$       | 1.97  | \$          | 5.72  |
| Grain Drill 15' with Tractor (180-199 hp)<br>MFWD 190      | 8.0        | 1        | 0.16     | 1.23     | \$       | 3.47  | \$          | 9.78  |
| Spray (Broadcast) 60' with Tractor (120-139<br>hp) 2WD 130 | 35.5       | 5        | 0.18     | 0.94     | \$       | 2.15  | \$          | 5.07  |
|  |            |          |          |          | \$<br>\$ | -     | \$<br>\$    | -     |
| Total Preharvest Values                                    |            |          | 0.95     | 6.98     | \$       | 16.21 | \$          | 46.50 |

\*\*\*\*\*Add ~\$3.70/ac in variable costs if you seed with spin spreader and disking it into the field as opposed to using a grain drill. Fixed costs would decrease by ~\$2/ac.

### **Harvest Operations**

|  |            | Number   | Labor    |          |         |      |             |       |
|--|------------|----------|----------|----------|---------|------|-------------|-------|
|  |            | of Times | Use****  | Fuel Use | Repairs |      | Fixed Costs |       |
| Operation                                    | Acres/Hour | Over     | (hrs/ac) | (gal/ac) | (\$/ac) |      | (\$/ac)     |       |
| Header Wheat/Sorghum 22' Rigid with          | 7.9        | 1        | 0.16     | 2.11     | ć       | 4.25 | ć           | 24.31 |
| Combine (300-349 hp) 325 hp                  | 7.5        | T        | 0.10     | 2.11     | Ļ       | 4.25 | Ļ           | 24.31 |
| Grain Cart Wht/Sor 500 bu with Tractor (180- | 10.6       | 1        | 0.12     | 0.92     | ć       | 2.12 | ć           | 5.86  |
| 199 hp) MFWD 190                             | 10.0       | T        | 0.12     | 0.92     | Ļ       | 2.12 | Ļ           | 5.80  |
| Total Harvest Values                         |            |          | 0.28     | 3.03     | \$      | 6.37 | \$          | 30.17 |

\*\*\*\* Includes unallocated labor factor of 0.25. Unallocated labor factor is percentage allowance for additional labor required to move equipment and hook/unhook implements, etc.

\*\*There is much volatility and uncertaintly in the markets. Prices may change 10% or more in a matter of days. These costs are relevant as of Nov 1, 2021

Developed by Amanda Smith.

