

## **2013 National FFA Agronomy CDE**

### **Team Event**

Your chapter is farming a half section (5280 ft. X 2640 ft.) of irrigated land in Sherman County, Texas. The weather has been cool and damp this spring which is highly unusual. This field has been in a Roundup Ready corn and soybean rotation for several years. Last year the field was in corn. The land is rented from an FFA Alumni member who is offering an operating loan for the expenses at a 5% annual interest rate. The crop will be sold at the local elevator at harvest.

Your team is serving as consultants for this project. The profit from this project funds your chapter's trip to the National FFA Convention. You also must maintain good management practices.

The Alumni member wants you to raise no-till soybeans.

A local agronomist scouted the field last summer and found redroot pigweed and kochia that she believes to be glyphosate resistant. The field also had green and yellow foxtail along with johnsongrass. He recommends a pre-emergence program followed by in crop application and a pre-harvest application of herbicides to control the weeds. Phytophthora root rot has been an occasional problem. Soybean aphids are a common and persistent problem in the area. She also recommends a granular inoculant be used with the seed. Plant population should be 105,000 plants per acre.

Pre-emergence and post emergence herbicide application will be done by ground sprayer at 10 gallons of spray solution applied per acre. All weeds are at or below 3 inches at time of application.

All fungicide, insecticide and pre-harvest herbicide application will be applied by airplane. The airplane applies 3.0 gallons of spray per acre.

The National Weather Service predicts 12 inches of rainfall for this season. Soybeans need a minimum of 25 inches of water per year.

Non-Ionic Surfactants will be used at 1 quart per 100 gallons of spray solution (when needed).

The local elevator is paying \$12.78 per bushel.

All answers are to full bag or gallon except bulk fertilizer.

**FOR EVENT USE ONLY**

**2013 National FFA Agronomy CDE**  
**Team Event Input Costs**

**Fertilizer**

| Product                                            |                  | Price per ton           |
|----------------------------------------------------|------------------|-------------------------|
| 46-0-0                                             | Urea             | \$425                   |
| 11-52-0                                            | MAP              | \$580                   |
| 82-0-0                                             | NH3              | \$640                   |
| 0-0-60                                             | Potash           | \$650                   |
| 21-0-0-24                                          | Ammonium sulfate | \$340 (bulk fertilizer) |
| Soybean Granular Inoculant (required) \$4 per acre |                  |                         |

**Lime**

Ag-ground limestone \$32.00 per acre, per ton delivered and applied.

**Chemical Costs:**

|                            |                                                            |
|----------------------------|------------------------------------------------------------|
| RT3                        | \$19.55 per gallon (bulk)                                  |
| Roundup PowerMax           | \$22.00 per gallon (bulk)                                  |
| Liberty SL                 | \$68.00 per gallon (bulk)                                  |
| AMS (Ammonium Sulfate)     | 51 pound bag for use in spray applications \$27.00 per bag |
| 2,4D LV6                   | \$31.50 per gallon (bulk)                                  |
| Corn Belt Premier 90 (NIS) | \$39.20 per gallon (bulk)                                  |
| Clethodim 2E               | \$85.50 per gallon (bulk)                                  |
| Permit                     | \$32.50 per ounce                                          |
| Resolve Q                  | \$29.75 per ounce                                          |
| Baythroid XL               | \$196.30 per gallon                                        |

**Irrigation**

Water and equipment is \$6.80 per inch of water per acre.

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**LABOR AND MACHINERY COSTS**

No-till planting \$19.85 per acre

Fertilizer application (dry) \$4.95 per acre

Pesticide application (ground) \$6.65 per acre (per application)

Pesticide application (airplane) \$9.85 per acre (per application)

Harvesting (including trucking) \$37.00 per acre

**RENT**

\$50 per acre paid to Alumni Member

The local elevator is paying \$12.78 per bushel.

**FOR EVENT USE ONLY**

SOIL TEST RECOMMENDATION SHEET

| Crop Year | Field ID | Field Descriptio | Acreage |
|-----------|----------|------------------|---------|
| 2013      | 4        | north 20         | 360     |

Soil Test Information

| P  | K   | Ca   | Mg  | pH  | LTl | Subsoil pH (optional) | Depth of Tillage |
|----|-----|------|-----|-----|-----|-----------------------|------------------|
| 25 | 140 | 1300 | 250 | 6.5 | 69  | 6.2                   | 0                |

Units

ppm (P & K)

| CEC  | % Ca | % Mg | % K | % BS | Previous Crop |
|------|------|------|-----|------|---------------|
| 10.1 | 64.3 | 20.3 | 3.5 | 88   | No Crop       |

Crops in Rotation

Build/Maintenance

| Year One   | Yield Goal, bu/A | Lime Req, t/A | N Rec, lb/A | P2O5 Rec, lb/A | K2O Rec, lb/A | Liming Material ENP | Lime Rec, t/A | N source  | P source | K source | N material rate, lb/A | P material rate, lb/A | K material rate, lb /A |
|------------|------------------|---------------|-------------|----------------|---------------|---------------------|---------------|-----------|----------|----------|-----------------------|-----------------------|------------------------|
| Soybean    | 50               | 0.0           | 0           | 55             | 50            | 2000                | 0.0           | Anhydrous | MAP      | Potash   | 0                     | 106                   | 83                     |
| Year Two   | None             |               | N Rec, lb/A | P2O5 Rec, lb/A | K2O Rec, lb/A |                     |               | N source  | P source | K source | N material rate, lb/A | P material rate, lb/A | K material rate, lb /A |
| No Crop    | 0                |               | 0           | 0              | 0             |                     |               | UAN - 28  | DAP      | Potash   | 0                     | 0                     | 0                      |
| Year Three | None             |               | N Rec, lb/A | P2O5 Rec, lb/A | K2O Rec, lb/A |                     |               | N source  | P source | K source | N material rate, lb/A | P material rate, lb/A | K material rate, lb /A |
| No Crop    | 75               |               | 0           | 0              | 0             |                     |               | UAN - 28  | DAP      | Potash   | 0                     | 0                     | 0                      |

Sufficiency

| Year One   | Yield Goal, bu/A | Lime Req, t/A | N Rec, lb/A | P2O5 Rec, lb/A | K2O Rec, lb/A | Liming Material ENP | Lime Rec, t/A | N source  | P source | K source | N material rate, lb/A | P material rate, lb/A | K material rate, lb /A |
|------------|------------------|---------------|-------------|----------------|---------------|---------------------|---------------|-----------|----------|----------|-----------------------|-----------------------|------------------------|
| Soybean    | 0                | 0.0           | 0           | 0              | 0             | 2000                | 0.0           | Anhydrous | MAP      | Potash   | 0                     | 0                     | 0                      |
| Year Two   | None             |               | N Rec, lb/A | P2O5 Rec, lb/A | K2O Rec, lb/A |                     |               | N source  | P source | K source | N material rate, lb/A | P material rate, lb/A | K material rate, lb /A |
| No Crop    | 0                |               | 0           | 0              | 0             |                     |               | UAN - 28  | DAP      | Potash   | 0                     | 0                     | 0                      |
| Year Three | None             |               | N Rec, lb/A | P2O5 Rec, lb/A | K2O Rec, lb/A |                     |               | N source  | P source | K source | N material rate, lb/A | P material rate, lb/A | K material rate, lb /A |
| No Crop    | 75               |               | 0           | 0              | 0             |                     |               | UAN - 28  | DAP      | Potash   | 0                     | 0                     | 0                      |

Liming Material

| TNP, % | Moisture | % passing 8 mesh | % passing 20 mesh | % passing 60 mesh |
|--------|----------|------------------|-------------------|-------------------|
| 98     | 12       | 97               | 95                | 90                |

**NATIONAL FFA AGRONOMY CDE**  
**2012 SOYBEAN VARIETY TRIAL**  
**NORTH TEXAS**

| VARIETY  | AVE. YIELD | LODGING | PHYT. RESIS | RHIZ RESIS | COUNTY  |      |        | GERM | PRICE   |
|----------|------------|---------|-------------|------------|---------|------|--------|------|---------|
|          |            |         |             |            | SHERMAN | HALE | OLDHAM |      |         |
| P444RR   | 39         | 2       | 1           | 2          | 39      | 42   | 36     | 99   | \$60.00 |
| L09-20LL | 43         | 2       | 3           | 3          | 42      | 46   | 41     | 98.3 | \$59.00 |
| R2T009RR | 45         | 1       | 2           | 4          | 45      | 44   | 46     | 97.9 | \$60.00 |
| S04-B6RR | 43         | 1       | 4           | 2          | 40      | 46   | 43     | 98.9 | \$60.00 |
| AS102LL  | 43         | 2       | 4           | 1          | 44      | 43   | 42     | 98.5 | \$58.00 |
| P454RR   | 41         | 1       | 1           | 2          | 41      | 42   | 40     | 99.1 | \$58.00 |
| AS1015   | 41         | 2       | 1           | 3          | 41      | 41   | 41     | 97.9 | \$57.00 |
| IN230LL  | 44         | 1       | 1           | 3          | 45      | 46   | 41     | 99.2 | \$60.00 |
| PY99RR   | 44         | 1       | 2           | 1          | 44      | 46   | 42     | 99.1 | \$59.00 |
|          |            |         |             |            |         |      |        |      |         |

All varieties average 140,000 seeds per 50 pound bag.

Lodging rating 1-5, 1 being very little, 5 being severe

Phyt. Resis Phytophthora root rot resistance 1 being resistant, 5 being susceptible

Rhiz Resis Rhizoctonia Resistance 1 being resistant, 5 being susceptible

RR designates a Roundup Ready Variety (glyphosate tolerant)

LL designates a Liberty-Link Variety