

### 2009 Soybean standard treatments (L0943).

A field study was initiated near Lincoln, Nebraska to evaluate commercial standards for weed control in soybean. The experimental design was a randomized complete block with four replications. Plots were 10 feet wide by 30 feet long and located on a Sharpesburg silty clay loam soil with an organic matter of 3.1 % and a pH of 6.6. Asgrow '2903RR' soybeans were planted on May 11. Soybeans emerged on May 22. Preemergent herbicides were applied on May 12, early post herbicides on June 4, midpost herbicides on June 17, and late post herbicides on July 7. Herbicides were applied with a tractor mounted sprayer calibrated to deliver 15 gallons per acre at 40 psi with Teejet 110015 AIXR nozzles. The environmental conditions at the time of spraying are given in Table 1. Rainfall received May 2 – July 17 is listed in Table 2.

Major weeds consisted of velvetleaf (*Abutilon theophrasti*), sunflower (*Helianthus annuus*), and yellow foxtail (*Setaria glauca*) species at average densities of 10, 2, 5, and 2 plants/ft<sup>2</sup>. Weed densities were taken at the time of spraying in the center of the plot, two ft<sup>2</sup> samples were taken. Plots were evaluated using visual ratings. No crop injury was observed on any treatment.

Table 1. Environmental conditions at the Time of Herbicide Application.

| Date    | Air Temperature (F) | Soil Temperature At 4 in (F) | Humidity | Wind Speed & direction (mph) | Time of Day | Application Timing | Weed Heights (inches) |       |       |
|---------|---------------------|------------------------------|----------|------------------------------|-------------|--------------------|-----------------------|-------|-------|
|         |                     |                              |          |                              |             |                    | ABUTH                 | HELAN | SETGL |
| May 12  | 63                  | 63                           | 72       | 10 S                         | 12:30 pm    | PRE                | NA                    | NA    | NA    |
| June 4  | 70                  | 73                           | 26       | 3 WNW                        | 12:01 pm    | EPOST              | 2                     | 3     | 2     |
| June 17 | 86                  | 79                           | 54       | 8 SE                         | 11:00 am    | MPOST              | 5                     | 5     | 4     |
| July 7  | 74                  | 77                           | 66       | 9 SSW                        | 9:00 am     | LPOST              | 3                     | 0     | 2     |

Table 2. Rainfall received May 2 – July 17.

| Date    | Amount (in) | Date    | Amount (in) |
|---------|-------------|---------|-------------|
| May 6   | 0.11        | June 20 | 0.27        |
| May 12  | 0.14        | June 21 | 0.23        |
| May 13  | 0.39        | June 22 | 0.73        |
| May 26  | 0.12        | July 3  | 0.88        |
| May 27  | 0.56        | July 6  | 0.13        |
| June 1  | 0.27        | July 14 | 0.11        |
| June 2  | 0.21        | July 16 | 0.30        |
| June 6  | 1.14        |         |             |
| June 7  | 0.83        |         |             |
| June 11 | 0.47        |         |             |
| June 15 | 0.24        |         |             |
| June 16 | 0.11        |         |             |
| June 19 | 0.71        |         |             |



Table 3. Soybean standard treatments

| Treatment              | Rate | Unit    | Application<br>Timing | Velvetlf | Sunflwr | Yel foxtl | Velvetlf | Sunflwr | Yel foxtl | Velvetlf | Sunflwr | Yel foxtl | Velvetlf | Sunflwr | Yel foxtl | YIELD   |         |         |         |
|------------------------|------|---------|-----------------------|----------|---------|-----------|----------|---------|-----------|----------|---------|-----------|----------|---------|-----------|---------|---------|---------|---------|
|                        |      |         |                       | CONTROL  | CONTROL | CONTROL   | CONTROL  | CONTROL | CONTROL   | CONTROL  | CONTROL | CONTROL   | CONTROL  | CONTROL | CONTROL   | CONTROL | CONTROL |         |         |
|                        |      |         |                       | %        | %       | %         | %        | %       | %         | %        | %       | %         | %        | %       | %         | %       | %       | %       |         |
|                        |      |         |                       | 6/4/09   | 6/4/09  | 6/4/09    | 6/17/09  | 6/17/09 | 6/17/09   | 7/7/09   | 7/7/09  | 7/7/09    | 7/21/09  | 7/21/09 | 7/21/09   | 7/21/09 | 7/21/09 | 7/21/09 | bu/acre |
| Optill                 | 2    | oz/a    | PRE                   | 88.8     | 93.8    | 94.8      | 87.5     | 91.3    | 91.3      | 99       | 96.8    | 99        | 99       | 96.8    | 99        | 47.2    |         |         |         |
| Roundup PowerMax + AMS | 22   | fl oz/a | MPOST                 |          |         |           |          |         |           |          |         |           |          |         |           |         |         |         |         |
| Roundup PowerMax + AMS | 30   | fl oz/a | MPOST                 | 22.5     | 52.5    | 81.3      | 30       | 55      | 82.5      | 96       | 96.8    | 99        | 92.3     | 96.8    | 99        | 43.7    |         |         |         |
| Untreated              |      |         |                       | 0        | 0       | 0         | 0        | 0       | 0         | 0        | 0       | 0         | 0        | 0       | 0         | 22.4    |         |         |         |
| LSD (P=.05)            |      |         |                       | 30.58    | 28.83   | 16.59     | 18.14    | 14.36   | 6.36      | 4.62     | 2.69    | 1.04      | 6.03     | 2.69    | 0         | 6.5     |         |         |         |