

MSU Weed Science Research Program

Weed control systems with Cadet and Permit in dry edible beans

Trial ID: DB04-11 Study Dir.: Sprague, Powell
Conducted: T-15W Campus Investigator: Christy Sprague

Date Planted: 6/8/2011 Row Spacing: 30 IN
Variety: Vista Navy No. of Reps: 4
Population: 106,000 seeds/acre % OM: 2.6
Soil Type: Loam pH: 6.5
Plot Size: 10 X 35 FT Design: RANDOMIZED COMPLETE BLOCK

Tillage: Previous crop: soybean, spring soil finish (2X)
Fertilizer: None.

Crop and Weed Description

Table with 4 columns: Weed Code, Common Name, Scientific Name. Lists weeds 1-5 and crop 1.

Application Description

Table with 4 columns: Application Timing, A, B, C. Lists application details for PRE, POST, and LPOS treatments.

Crop Stage at Each Application

Table with 4 columns: Crop Name, A, B, C. Lists crop stages for PHSVX at different application points.

Weed Stage at Each Application

Table with 4 columns: Weed Name, A, B, C. Lists weed stages for ANGR, CHEAL, AMBEL, ABUTH, and SINAR.

Weed Density (plants/sq. ft.)

Table with 5 columns: Weed Name, Density. Lists densities for ANGR, CHEAL, AMBEL, ABUTH, and SINAR.

Application Equipment

Table with 11 columns: Appl, Sprayer, Speed, Nozzle, Nozzle, Nozzle, Nozzle, Boom, Width, GPA, Carrier, PSI. Lists equipment for treatments A, B, and C.

Comments: A blanket treatment of Dual II Magnum (1.33 pt) was applied immediately after planting to treatments 5-15.

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| Weed Code          | ANGR     | CHEAL    | AMBEL    | ABUTH    | SINAR    | PHSVX    |
|--------------------|----------|----------|----------|----------|----------|----------|
| Crop Code          | PHSVX    |          |          |          |          | PHSVX    |
| Rating Data Type   | injury   | control  | control  | control  | control  | injury   |
| Rating Unit        | percent  | percent  | percent  | percent  | percent  | percent  |
| Rating Date        | 7/6/2011 | 7/6/2011 | 7/6/2011 | 7/6/2011 | 7/6/2011 | 7/8/2011 |
| Trt-Eval Interval  | 28 DA-A  | 28 DA-A  | 28 DA-A  | 28 DA-A  | 28 DA-A  | 3 DA-B   |
| # Subsamples, Dec. |          |          |          |          |          |          |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Grow Stg | Appl Code | ANGR | CHEAL | AMBEL | ABUTH | SINAR | PHSVX |
|---------|----------------|-----------|-----------|------|-----------|----------|-----------|------|-------|-------|-------|-------|-------|
| 1       | Untreated      |           |           |      |           |          |           | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 2       | Dual II Magnum | 7.64      | L         | 1    | pt/a      | PRE      | A         | 0.0  | 98.3  | 99.0  | 95.8  | 99.0  | 0.8   |
| 2       | Permit         | 75        | WG        | 0.66 | oz/a      | PRE      | A         |      |       |       |       |       |       |
| 3       | Dual II Magnum | 7.64      | L         | 1    | pt/a      | PRE      | A         | 0.0  | 98.5  | 67.5  | 37.5  | 83.8  | 56.3  |
| 3       | Permit         | 75        | WG        | 0.66 | oz/a      | POST     | B         |      |       |       |       |       |       |
| 3       | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |      |       |       |       |       |       |
| 4       | Raptor         | 1         | L         | 4    | fl oz/a   | POST     | B         | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 4       | Basagran       | 4         | L         | 1    | pt/a      | POST     | B         |      |       |       |       |       |       |
| 4       | Herbimax (COC) |           | L         | 1    | % v/v     | POST     | B         |      |       |       |       |       |       |
| 4       | AMS            |           | WG        | 2.5  | lb/a      | POST     | B         |      |       |       |       |       |       |
| 5       | Cadet          | 0.91      | L         | 0.5  | fl oz/a   | POST     | B         | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 13.0  |
| 5       | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |      |       |       |       |       |       |
| 6       | Cadet          | 0.91      | L         | 0.7  | fl oz/a   | POST     | B         | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 16.3  |
| 6       | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |      |       |       |       |       |       |
| 7       | Cadet          | 0.91      | L         | 0.9  | fl oz/a   | POST     | B         | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 23.8  |
| 7       | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |      |       |       |       |       |       |
| 8       | Cadet          | 0.91      | L         | 0.5  | fl oz/a   | POST     | B         | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 28.8  |
| 8       | MSO            |           | L         | 1    | % v/v     | POST     | B         |      |       |       |       |       |       |
| 9       | Cadet          | 0.91      | L         | 0.7  | fl oz/a   | POST     | B         | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 32.5  |
| 9       | MSO            |           | L         | 1    | % v/v     | POST     | B         |      |       |       |       |       |       |
| 10      | Cadet          | 0.91      | L         | 0.9  | fl oz/a   | POST     | B         | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 42.5  |
| 10      | MSO            |           | L         | 1    | % v/v     | POST     | B         |      |       |       |       |       |       |
| 11      | Reflex         | 2         | L         | 1    | pt/a      | POST     | B         | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.8   |
| 11      | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |      |       |       |       |       |       |
| 12      | Basagran       | 4         | L         | 1    | pt/a      | POST     | B         | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 12      | Herbimax (COC) |           | L         | 1    | % v/v     | POST     | B         |      |       |       |       |       |       |
| 13      | Cadet          | 0.91      | L         | 0.5  | fl oz/a   | POST     | B         | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 32.5  |
| 13      | Raptor         | 1         | L         | 4    | fl oz/a   | POST     | B         |      |       |       |       |       |       |
| 13      | Herbimax (COC) |           | L         | 1    | % v/v     | POST     | B         |      |       |       |       |       |       |
| 14      | Cadet          | 0.91      | L         | 0.5  | fl oz/a   | POST     | B         | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 16.3  |
| 14      | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |      |       |       |       |       |       |
| 14      | Cadet          | 0.91      | L         | 0.5  | fl oz/a   | LPOS     | C         |      |       |       |       |       |       |
| 14      | Activator 90   |           | L         | 0.25 | % v/v     | LPOS     | C         |      |       |       |       |       |       |
| 15      | Cadet          | 0.91      | L         | 0.7  | fl oz/a   | POST     | B         | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 18.8  |
| 15      | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |      |       |       |       |       |       |
| 15      | Cadet          | 0.91      | L         | 0.7  | fl oz/a   | LPOS     | C         |      |       |       |       |       |       |
| 15      | Activator 90   |           | L         | 0.25 | % v/v     | LPOS     | C         |      |       |       |       |       |       |

|                    |      |      |       |       |       |       |      |
|--------------------|------|------|-------|-------|-------|-------|------|
| LSD (P=.05)        | 0.00 | 0.40 | 5.74  | 3.77  | 2.32  | 5.51  | 6.16 |
| Standard Deviation | 0.00 | 0.28 | 4.01  | 2.64  | 1.62  | 3.86  | 4.31 |
| CV                 | 0.0  | 2.14 | 36.16 | 29.71 | 13.33 | 37.25 | 27.5 |

Means followed by same letter do not significantly differ (P=.05, LSD)  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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| Weed Code          | ANGR      | CHEAL     | AMBEL     | ABUTH     | SINAR     | PHSVX     |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code          |           |           |           |           |           | PHSVX     |
| Rating Data Type   |           |           |           |           |           | injury    |
| Rating Unit        | control   | control   | control   | control   | control   | injury    |
| Rating Date        | percent   | percent   | percent   | percent   | percent   | percent   |
| Trt-Eval Interval  | 7/12/2011 | 7/12/2011 | 7/12/2011 | 7/12/2011 | 7/12/2011 | 7/19/2011 |
| # Subsamples, Dec. | 7 DA-B    | 7 DA-B    | 7 DA-B    | 7 DA-B    | 7 DA-B    | 14 DA-B   |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Grow Stg | Appl Code | PHSVX injury percent | ANGR control percent | CHEAL control percent | AMBEL control percent | ABUTH control percent | SINAR control percent | PHSVX injury percent |
|---------|----------------|-----------|-----------|------|-----------|----------|-----------|----------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| 1       | Untreated      |           |           |      |           |          |           | 0.0                  | 0.0                  | 0.0                   | 0.0                   | 0.0                   | 0.0                   | 0.0                  |
| 2       | Dual II Magnum | 7.64      | L         | 1    | pt/a      | PRE      | A         | 0.0                  | 98.0                 | 99.0                  | 92.3                  | 96.0                  | 99.0                  | 0.0                  |
| 2       | Permit         | 75        | WG        | 0.66 | oz/a      | PRE      | A         |                      |                      |                       |                       |                       |                       |                      |
| 3       | Dual II Magnum | 7.64      | L         | 1    | pt/a      | PRE      | A         | 20.0                 | 98.5                 | 51.3                  | 73.8                  | 89.3                  | 82.5                  | 5.0                  |
| 3       | Permit         | 75        | WG        | 0.66 | oz/a      | POST     | B         |                      |                      |                       |                       |                       |                       |                      |
| 3       | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |                      |                      |                       |                       |                       |                       |                      |
| 4       | Raptor         | 1         | L         | 4    | fl oz/a   | POST     | B         | 5.3                  | 40.0                 | 80.0                  | 73.8                  | 90.0                  | 81.3                  | 0.8                  |
| 4       | Basagran       | 4         | L         | 1    | pt/a      | POST     | B         |                      |                      |                       |                       |                       |                       |                      |
| 4       | Herbimax (COC) |           | L         | 1    | % v/v     | POST     | B         |                      |                      |                       |                       |                       |                       |                      |
| 4       | AMS            |           | WG        | 2.5  | lb/a      | POST     | B         |                      |                      |                       |                       |                       |                       |                      |
| 5       | Cadet          | 0.91      | L         | 0.5  | fl oz/a   | POST     | B         | 10.0                 | 97.5                 | 83.8                  | 53.8                  | 99.0                  | 75.0                  | 3.5                  |
| 5       | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |                      |                      |                       |                       |                       |                       |                      |
| 6       | Cadet          | 0.91      | L         | 0.7  | fl oz/a   | POST     | B         | 12.5                 | 98.5                 | 83.8                  | 71.3                  | 99.0                  | 77.5                  | 4.5                  |
| 6       | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |                      |                      |                       |                       |                       |                       |                      |
| 7       | Cadet          | 0.91      | L         | 0.9  | fl oz/a   | POST     | B         | 16.3                 | 98.0                 | 87.5                  | 70.8                  | 99.0                  | 82.5                  | 5.5                  |
| 7       | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |                      |                      |                       |                       |                       |                       |                      |
| 8       | Cadet          | 0.91      | L         | 0.5  | fl oz/a   | POST     | B         | 22.0                 | 98.5                 | 86.3                  | 73.8                  | 99.0                  | 81.3                  | 8.8                  |
| 8       | MSO            |           | L         | 1    | % v/v     | POST     | B         |                      |                      |                       |                       |                       |                       |                      |
| 9       | Cadet          | 0.91      | L         | 0.7  | fl oz/a   | POST     | B         | 23.3                 | 97.5                 | 92.3                  | 70.3                  | 99.0                  | 82.5                  | 9.3                  |
| 9       | MSO            |           | L         | 1    | % v/v     | POST     | B         |                      |                      |                       |                       |                       |                       |                      |
| 10      | Cadet          | 0.91      | L         | 0.9  | fl oz/a   | POST     | B         | 36.3                 | 98.0                 | 92.0                  | 81.5                  | 99.0                  | 85.5                  | 12.5                 |
| 10      | MSO            |           | L         | 1    | % v/v     | POST     | B         |                      |                      |                       |                       |                       |                       |                      |
| 11      | Reflex         | 2         | L         | 1    | pt/a      | POST     | B         | 1.8                  | 98.5                 | 27.5                  | 86.0                  | 15.0                  | 99.0                  | 0.0                  |
| 11      | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |                      |                      |                       |                       |                       |                       |                      |
| 12      | Basagran       | 4         | L         | 1    | pt/a      | POST     | B         | 0.0                  | 97.5                 | 93.5                  | 60.0                  | 89.8                  | 94.7                  | 0.0                  |
| 12      | Herbimax (COC) |           | L         | 1    | % v/v     | POST     | B         |                      |                      |                       |                       |                       |                       |                      |
| 13      | Cadet          | 0.91      | L         | 0.5  | fl oz/a   | POST     | B         | 27.5                 | 98.0                 | 86.3                  | 74.5                  | 99.0                  | 83.3                  | 14.3                 |
| 13      | Raptor         | 1         | L         | 4    | fl oz/a   | POST     | B         |                      |                      |                       |                       |                       |                       |                      |
| 13      | Herbimax (COC) |           | L         | 1    | % v/v     | POST     | B         |                      |                      |                       |                       |                       |                       |                      |
| 14      | Cadet          | 0.91      | L         | 0.5  | fl oz/a   | POST     | B         | 7.8                  | 98.5                 | 78.3                  | 63.8                  | 99.0                  | 78.3                  | 21.3                 |
| 14      | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |                      |                      |                       |                       |                       |                       |                      |
| 14      | Cadet          | 0.91      | L         | 0.5  | fl oz/a   | LPOS     | C         |                      |                      |                       |                       |                       |                       |                      |
| 14      | Activator 90   |           | L         | 0.25 | % v/v     | LPOS     | C         |                      |                      |                       |                       |                       |                       |                      |
| 15      | Cadet          | 0.91      | L         | 0.7  | fl oz/a   | POST     | B         | 10.5                 | 99.0                 | 85.0                  | 69.5                  | 99.0                  | 83.3                  | 26.3                 |
| 15      | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |                      |                      |                       |                       |                       |                       |                      |
| 15      | Cadet          | 0.91      | L         | 0.7  | fl oz/a   | LPOS     | C         |                      |                      |                       |                       |                       |                       |                      |
| 15      | Activator 90   |           | L         | 0.25 | % v/v     | LPOS     | C         |                      |                      |                       |                       |                       |                       |                      |

|                    |       |      |      |      |      |      |       |
|--------------------|-------|------|------|------|------|------|-------|
| LSD (P=.05)        | 3.85  | 1.57 | 8.45 | 7.39 | 4.31 | 8.05 | 3.18  |
| Standard Deviation | 2.69  | 1.10 | 5.91 | 5.17 | 3.02 | 5.64 | 2.23  |
| CV                 | 20.94 | 1.26 | 7.87 | 7.65 | 3.56 | 7.13 | 29.97 |

Means followed by same letter do not significantly differ (P=.05, LSD)  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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 Conducted: T-15W Campus Investigator: Christy Sprague

| Weed Code          | ANGR      | CHEAL     | AMBEL     | ABUTH     | SINAR     |          | ANGR     |
|--------------------|-----------|-----------|-----------|-----------|-----------|----------|----------|
| Crop Code          |           |           |           |           |           | PHSVX    |          |
| Rating Data Type   | control   | control   | control   | control   | control   | injury   | control  |
| Rating Unit        | percent   | percent   | percent   | percent   | percent   | percent  | percent  |
| Rating Date        | 7/19/2011 | 7/19/2011 | 7/19/2011 | 7/19/2011 | 7/19/2011 | 8/4/2011 | 8/4/2011 |
| Trt-Eval Interval  | 14 DA-B   | 14 DA-B   | 14 DA-B   | 14 DA-B   | 14 DA-B   | 30 DA-B  | 30 DA-B  |
| # Subsamples, Dec. |           |           |           |           |           |          |          |

| Trt No.            | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Grow Stg | Appl Code |      |      |      |      |      |       |      |
|--------------------|----------------|-----------|-----------|------|-----------|----------|-----------|------|------|------|------|------|-------|------|
| 1                  | Untreated      |           |           |      |           |          |           | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |      |
| 2                  | Dual II Magnum | 7.64      | L         | 1    | pt/a      | PRE      | A         | 97.0 | 99.0 | 89.3 | 96.8 | 99.0 | 0.0   |      |
| 2                  | Permit         | 75        | WG        | 0.66 | oz/a      | PRE      | A         |      |      |      |      |      | 97.5  |      |
| 3                  | Dual II Magnum | 7.64      | L         | 1    | pt/a      | PRE      | A         | 98.0 | 57.5 | 87.5 | 95.8 | 99.0 | 1.5   |      |
| 3                  | Permit         | 75        | WG        | 0.66 | oz/a      | POST     | B         |      |      |      |      |      | 97.3  |      |
| 3                  | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |      |      |      |      |      |       |      |
| 4                  | Raptor         | 1         | L         | 4    | fl oz/a   | POST     | B         | 74.0 | 70.8 | 75.8 | 96.0 | 99.0 | 5.0   |      |
| 4                  | Basagran       | 4         | L         | 1    | pt/a      | POST     | B         |      |      |      |      |      |       |      |
| 4                  | Herbimax (COC) |           | L         | 1    | % v/v     | POST     | B         |      |      |      |      |      |       |      |
| 4                  | AMS            |           | WG        | 2.5  | lb/a      | POST     | B         |      |      |      |      |      |       |      |
| 5                  | Cadet          | 0.91      | L         | 0.5  | fl oz/a   | POST     | B         | 96.0 | 73.3 | 47.5 | 99.0 | 77.5 | 0.0   |      |
| 5                  | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |      |      |      |      |      | 96.3  |      |
| 6                  | Cadet          | 0.91      | L         | 0.7  | fl oz/a   | POST     | B         | 97.0 | 91.5 | 65.8 | 99.0 | 80.8 | 0.0   |      |
| 6                  | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |      |      |      |      |      | 96.3  |      |
| 7                  | Cadet          | 0.91      | L         | 0.9  | fl oz/a   | POST     | B         | 97.0 | 89.5 | 67.5 | 99.0 | 87.8 | 0.0   |      |
| 7                  | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |      |      |      |      |      | 96.3  |      |
| 8                  | Cadet          | 0.91      | L         | 0.5  | fl oz/a   | POST     | B         | 97.5 | 90.0 | 69.5 | 98.5 | 82.5 | 0.0   |      |
| 8                  | MSO            |           | L         | 1    | % v/v     | POST     | B         |      |      |      |      |      | 95.0  |      |
| 9                  | Cadet          | 0.91      | L         | 0.7  | fl oz/a   | POST     | B         | 96.5 | 94.5 | 65.3 | 99.0 | 81.5 | 0.0   |      |
| 9                  | MSO            |           | L         | 1    | % v/v     | POST     | B         |      |      |      |      |      | 96.0  |      |
| 10                 | Cadet          | 0.91      | L         | 0.9  | fl oz/a   | POST     | B         | 97.0 | 93.3 | 72.0 | 99.0 | 81.5 | 3.8   |      |
| 10                 | MSO            |           | L         | 1    | % v/v     | POST     | B         |      |      |      |      |      | 96.0  |      |
| 11                 | Reflex         | 2         | L         | 1    | pt/a      | POST     | B         | 98.0 | 60.0 | 82.0 | 70.0 | 99.0 | 0.0   |      |
| 11                 | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |      |      |      |      |      | 96.5  |      |
| 12                 | Basagran       | 4         | L         | 1    | pt/a      | POST     | B         | 97.0 | 95.3 | 67.5 | 87.0 | 98.0 | 0.0   |      |
| 12                 | Herbimax (COC) |           | L         | 1    | % v/v     | POST     | B         |      |      |      |      |      | 97.0  |      |
| 13                 | Cadet          | 0.91      | L         | 0.5  | fl oz/a   | POST     | B         | 98.5 | 85.3 | 75.3 | 99.0 | 96.8 | 11.3  |      |
| 13                 | Raptor         | 1         | L         | 4    | fl oz/a   | POST     | B         |      |      |      |      |      |       |      |
| 13                 | Herbimax (COC) |           | L         | 1    | % v/v     | POST     | B         |      |      |      |      |      | 96.5  |      |
| 14                 | Cadet          | 0.91      | L         | 0.5  | fl oz/a   | POST     | B         | 97.0 | 89.0 | 71.3 | 99.0 | 85.8 | 8.8   |      |
| 14                 | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |      |      |      |      |      | 96.0  |      |
| 14                 | Cadet          | 0.91      | L         | 0.5  | fl oz/a   | LPOS     | C         |      |      |      |      |      |       |      |
| 14                 | Activator 90   |           | L         | 0.25 | % v/v     | LPOS     | C         |      |      |      |      |      |       |      |
| 15                 | Cadet          | 0.91      | L         | 0.7  | fl oz/a   | POST     | B         | 98.0 | 96.3 | 75.8 | 99.0 | 91.0 | 13.8  |      |
| 15                 | Activator 90   |           | L         | 0.25 | % v/v     | POST     | B         |      |      |      |      |      | 96.0  |      |
| 15                 | Cadet          | 0.91      | L         | 0.7  | fl oz/a   | LPOS     | C         |      |      |      |      |      |       |      |
| 15                 | Activator 90   |           | L         | 0.25 | % v/v     | LPOS     | C         |      |      |      |      |      |       |      |
| LSD (P=.05)        |                |           |           |      |           |          |           | 2.66 | 7.56 | 7.15 | 9.46 | 6.70 | 3.87  | 1.59 |
| Standard Deviation |                |           |           |      |           |          |           | 1.86 | 5.29 | 5.00 | 6.62 | 4.69 | 2.71  | 1.11 |
| CV                 |                |           |           |      |           |          |           | 2.09 | 6.69 | 7.42 | 7.44 | 5.59 | 92.28 | 1.26 |

Means followed by same letter do not significantly differ (P=.05, LSD)  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

## MSU Weed Science Research Program

Weed control systems with Cadet and Permit in dry edible beans

Trial ID: DB04-11 Study Dir.: Sprague, Powell  
 Conducted: T-15W Campus Investigator: Christy Sprague

| Weed Code          | CHEAL          | AMBEL     | ABUTH     | SINAR    | PHSVX      | PHSVX      |           |      |       |      |       |      |       |
|--------------------|----------------|-----------|-----------|----------|------------|------------|-----------|------|-------|------|-------|------|-------|
| Crop Code          |                |           |           |          | moisture   | yield      |           |      |       |      |       |      |       |
| Rating Data Type   | control        | control   | control   | control  | percent    | cwt/acre   |           |      |       |      |       |      |       |
| Rating Unit        | percent        | percent   | percent   | percent  | percent    | percent    |           |      |       |      |       |      |       |
| Rating Date        | 8/4/2011       | 8/4/2011  | 8/4/2011  | 8/4/2011 | 10/18/2011 | 10/18/2011 |           |      |       |      |       |      |       |
| Trt-Eval Interval  | 30 DA-B        | 30 DA-B   | 30 DA-B   | 30 DA-B  | 132 DA-A   | at 18% M   |           |      |       |      |       |      |       |
| # Subsamples, Dec. |                |           |           |          | 1          | 1          |           |      |       |      |       |      |       |
| Trt No.            | Treatment Name | Form Conc | Form Type | Rate     | Rate Unit  | Grow Stg   | Appl Code |      |       |      |       |      |       |
| 1                  | Untreated      |           |           |          |            |            |           | 0.0  | 0.0   | 0.0  | 0.0   | 17.8 | 9.8   |
| 2                  | Dual II Magnum | 7.64      | L         | 1        | pt/a       | PRE        | A         | 99.0 | 87.5  | 94.5 | 99.0  | 18.2 | 17.5  |
| 2                  | Permit         | 75        | WG        | 0.66     | oz/a       | PRE        | A         |      |       |      |       |      |       |
| 3                  | Dual II Magnum | 7.64      | L         | 1        | pt/a       | PRE        | A         | 37.5 | 85.5  | 99.0 | 99.0  | 18.9 | 17.1  |
| 3                  | Permit         | 75        | WG        | 0.66     | oz/a       | POST       | B         |      |       |      |       |      |       |
| 3                  | Activator 90   |           | L         | 0.25     | % v/v      | POST       | B         |      |       |      |       |      |       |
| 4                  | Raptor         | 1         | L         | 4        | fl oz/a    | POST       | B         | 77.5 | 83.0  | 96.0 | 99.0  | 19.2 | 13.3  |
| 4                  | Basagran       | 4         | L         | 1        | pt/a       | POST       | B         |      |       |      |       |      |       |
| 4                  | Herbimax (COC) |           | L         | 1        | % v/v      | POST       | B         |      |       |      |       |      |       |
| 4                  | AMS            |           | WG        | 2.5      | lb/a       | POST       | B         |      |       |      |       |      |       |
| 5                  | Cadet          | 0.91      | L         | 0.5      | fl oz/a    | POST       | B         | 65.0 | 20.0  | 99.0 | 45.0  | 18.6 | 11.0  |
| 5                  | Activator 90   |           | L         | 0.25     | % v/v      | POST       | B         |      |       |      |       |      |       |
| 6                  | Cadet          | 0.91      | L         | 0.7      | fl oz/a    | POST       | B         | 77.5 | 32.5  | 99.0 | 40.0  | 18.0 | 13.1  |
| 6                  | Activator 90   |           | L         | 0.25     | % v/v      | POST       | B         |      |       |      |       |      |       |
| 7                  | Cadet          | 0.91      | L         | 0.9      | fl oz/a    | POST       | B         | 77.5 | 50.0  | 94.3 | 63.8  | 19.5 | 11.4  |
| 7                  | Activator 90   |           | L         | 0.25     | % v/v      | POST       | B         |      |       |      |       |      |       |
| 8                  | Cadet          | 0.91      | L         | 0.5      | fl oz/a    | POST       | B         | 77.5 | 53.8  | 99.0 | 52.5  | 17.8 | 14.0  |
| 8                  | MSO            |           | L         | 1        | % v/v      | POST       | B         |      |       |      |       |      |       |
| 9                  | Cadet          | 0.91      | L         | 0.7      | fl oz/a    | POST       | B         | 78.8 | 57.5  | 99.0 | 62.5  | 19.2 | 12.9  |
| 9                  | MSO            |           | L         | 1        | % v/v      | POST       | B         |      |       |      |       |      |       |
| 10                 | Cadet          | 0.91      | L         | 0.9      | fl oz/a    | POST       | B         | 80.0 | 62.5  | 99.0 | 60.0  | 18.4 | 14.5  |
| 10                 | MSO            |           | L         | 1        | % v/v      | POST       | B         |      |       |      |       |      |       |
| 11                 | Reflex         | 2         | L         | 1        | pt/a       | POST       | B         | 40.0 | 81.5  | 35.0 | 99.0  | 18.7 | 16.7  |
| 11                 | Activator 90   |           | L         | 0.25     | % v/v      | POST       | B         |      |       |      |       |      |       |
| 12                 | Basagran       | 4         | L         | 1        | pt/a       | POST       | B         | 82.5 | 54.5  | 87.0 | 91.8  | 18.9 | 12.6  |
| 12                 | Herbimax (COC) |           | L         | 1        | % v/v      | POST       | B         |      |       |      |       |      |       |
| 13                 | Cadet          | 0.91      | L         | 0.5      | fl oz/a    | POST       | B         | 84.3 | 74.0  | 99.0 | 99.0  | 18.8 | 16.5  |
| 13                 | Raptor         | 1         | L         | 4        | fl oz/a    | POST       | B         |      |       |      |       |      |       |
| 13                 | Herbimax (COC) |           | L         | 1        | % v/v      | POST       | B         |      |       |      |       |      |       |
| 14                 | Cadet          | 0.91      | L         | 0.5      | fl oz/a    | POST       | B         | 76.3 | 61.3  | 99.0 | 64.5  | 18.1 | 13.8  |
| 14                 | Activator 90   |           | L         | 0.25     | % v/v      | POST       | B         |      |       |      |       |      |       |
| 14                 | Cadet          | 0.91      | L         | 0.5      | fl oz/a    | LPOS       | C         |      |       |      |       |      |       |
| 14                 | Activator 90   |           | L         | 0.25     | % v/v      | LPOS       | C         |      |       |      |       |      |       |
| 15                 | Cadet          | 0.91      | L         | 0.7      | fl oz/a    | POST       | B         | 80.0 | 67.5  | 99.0 | 70.0  | 18.6 | 14.0  |
| 15                 | Activator 90   |           | L         | 0.25     | % v/v      | POST       | B         |      |       |      |       |      |       |
| 15                 | Cadet          | 0.91      | L         | 0.7      | fl oz/a    | LPOS       | C         |      |       |      |       |      |       |
| 15                 | Activator 90   |           | L         | 0.25     | % v/v      | LPOS       | C         |      |       |      |       |      |       |
| LSD (P=.05)        |                |           |           |          |            |            |           | 9.81 | 10.91 | 5.64 | 13.12 | 1.77 | 3.33  |
| Standard Deviation |                |           |           |          |            |            |           | 6.87 | 7.63  | 3.95 | 9.18  | 1.24 | 2.33  |
| CV                 |                |           |           |          |            |            |           | 9.97 | 13.15 | 4.56 | 13.18 | 6.68 | 16.78 |

Means followed by same letter do not significantly differ (P=.05, LSD)

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