

2008 OHIO FORAGE PERFORMANCE TRIALS

R. Mark Sulc, John S. McCormick, David J. Barker, and Keith A. Diederick

Summary

This report is a summary of performance data collected from forage variety trials in Ohio during 2008, including commercial varieties of alfalfa, red clover, orchardgrass, tall fescue, perennial and annual ryegrass, teff, sorghum x sudangrass, sudangrass, and forage sorghum in tests planted in 2005 to 2008 across three sites in Ohio: South Charleston, Wooster, and Jackson. For more details on forage species and management, see the *Ohio Agronomy Guide*, Ohio State University Extension Bulletin 472, (available online at <http://ohioline.osu.edu/b472/0008.html>).

Interpreting Yield Data in this Report

Least significant differences (LSD) are listed at the bottom of the tables along with the trial average (mean). Differences between varieties are statistically significant if the difference is equal to or greater than the LSD value. For example, if a variety yields more than another variety by the LSD value, then we are 95% sure that the yield difference is real, with only a 5% probability that the difference is due to chance alone. Results reported here should be representative of what might occur throughout the state but would be most applicable under environmental and management conditions similar to those at the testing sites.

Summary of 2008 Growing Conditions

The growing season began with above normal temperatures in April followed by below normal temperatures in May. Temperatures were below normal all months except April and June, and in September at South Charleston and Jackson. Total rainfall for the season was normal at all locations: Wooster (-4.26 inches), South Charleston (-1.88 inches) and Jackson (-1.31 inches). June was the only month with rainfall well above normal at all locations. Surprisingly alfalfa yields were excellent but grass yields were somewhat lower than average in our trials.

Alfalfa

The trial established in 2007 at Wooster had the highest yields, averaging 8.28 tons/acre. Good yields were also obtained in the Wooster trial seeded in 2006 (7.61 tons/acre) and at South Charleston in 2005 (7.10 tons/acre). Alfalfa weevil populations were low at all sites and no insecticide was required for their control. Insecticide applications were used at all locations for control of potato leafhopper (PLH) in the standard yield trials.

No insecticide was applied to control potato leafhopper in the alfalfa yield trial for potato leafhopper resistance conducted at South Charleston, OH and seeded this year. Thresholds resulted in significant yield differences among varieties in response to PLH injury. Leafhopper resistant varieties are not resistant to alfalfa weevil, and will need to be treated with insecticides if weevil populations exceed action thresholds.

Orchardgrass

Yield in 2008 was lower due to the reduced rainfall. Orchardgrass varieties differed greatly in yield over the season, and all varieties went dormant for part of the summer due to dry weather.

Tall Fescue

The tall fescue trial of endophyte-free varieties established at Jackson in 2004 had low yields in 2008, although they were greater than in 2007. Only two harvests were collect in 2007 and three in 2008 due to lack of rainfall. New varieties that are endophyte free or that contain a non-toxic endophyte (eg., Jessup Max Q) have potential to increase animal performance, especially during the summer grazing season, and to provide forage for beef cattle and sheep during autumn and early winter.

Perennial Ryegrass

The perennial ryegrass trial at South Charleston also had reduced yields in 2008. Only three harvests were made due to the reduced growth from below normal rainfall. Perennial ryegrass (diploid and tetraploid) is the most winter hardy of the ryegrass types. A couple of varieties in the ryegrass trial were **festuloliums**, which are crosses between annual ryegrass and fescue. They generally are more winter-hardy and slightly more drought tolerant than perennial ryegrass, although those characteristics vary by variety as can be seen in this trial.

Annual Ryegrass

Total forage yields in the annual ryegrass trial seeded September 2007 ranged from 1.74 to 5.76 tons/acre among varieties. Annual ryegrass is a cool-season annual bunch grass that is highly palatable and digestible. It has high seedling vigor and is well adapted to either conventional or no-till establishment methods.

Red Clover

Forage yields of red clover varieties were slightly less than 5 tons/acre in 2008, except for Red Gold (due to poor establishment) and “common” seed (due to stand loss from diseases). Newer varieties of red clover yield more and persist longer than “common” red clover.

Contributors: Clarence Renk, Joe Davlin, Kenny Wells, Paul Brown, Lynn Ault, Greg Smith



Summary of Alfalfa Variety Performance in Ohio

Standard Trials - Insecticide Applied (values are yield as a percentage of the trial average)

| Variety | Marketer | Jackson | South Charleston | | Wooster | | Total site-yrs | Average all site yrs |
|--|------------------|---------|------------------|------|---------|---------|-------------------|-------------------------|
| | | 2004-08 | 2005-08 | 2008 | 2006-08 | 2007-08 | | |
| 6415 | Garst | | | | | 101 | 2 | 101 |
| 6417 | Garst | | | 118 | | | 1 | 118 |
| 6420 | Garst | | 102 | | | | 27 | 101 |
| 6552 | Garst | | | 89 | | | 1 | 89 |
| 4A421 | Mycogen Seeds | | 103 | | 99 | | 11 | 101 |
| 53Q30 | Pioneer | | 100 | | 97 | | 7 | 99 |
| 54V46 | Pioneer | | 102 | | 100 | 98 | 21 | 101 |
| 55V48 | Pioneer | | | 122 | | 103 | 3 | 110 |
| 6400HT | Garst | 103 | 103 | | 96 | 103 | 25 | 101 |
| A 4330 | Producers Choice | | | 104 | | | 1 | 104 |
| A 5225 | Producers Choice | | | | | 99 | 2 | 99 |
| Ameristand 407TQ | Americas Alfalfa | | | 98 | | | 1 | 98 |
| Anchormate | Central Farm | | | | | 102 | 2 | 102 |
| Baralfa 53HR | Barenbrug USA | | 103 | | | | 4 | 103 |
| DKA 41-18 RR | Monsanto | | | | 98 | | 3 | 98 |
| FSG 408 DP | Allied Seed | | 102 | | | | 4 | 102 |
| Genoa | NK Brand Seed | 97 | 105 | 98 | 100 | | 16 | 102 |
| HybriForce-420/wet | Dairyland | 102 | | | | | 16 | 100 |
| Integrity | Producers Choice | | 99 | | | | 4 | 99 |
| L-447-HD | Legacy Seed | | | | 103 | | 3 | 103 |
| Marvel | Allied Seed | | 99 | | | | 4 | 99 |
| PGI 459 | Producers Choice | | | 98 | | | 1 | 98 |
| Radiant-AM | Ampac Seed | | | | 100 | | 3 | 100 |
| Rebound 5.0 | Croplan Genetics | | 103 | | | | 8 | 104 |
| Reward II | Producers Choice | 101 | | | | | 8 | 101 |
| SummerGold | Beck's Hybrid | 96 | | | | | 8 | 100 |
| VERNAL | Public | 101 | 94 | 80 | 95 | 98 | 87 | 92 |
| WL 335 HQ | WL Research | | 98 | | | | 8 | 97 |
| WL 335 RR | WL Research | | | | 97 | | 3 | 97 |
| WL 343 HQ | WL Research | | | 99 | 97 | 96 | 6 | 97 |
| WL 348 AP | WL Research | | 98 | | | | 8 | 99 |
| WL 363 HQ | WL Research | | | 93 | | | 1 | 93 |
| Trial Average Yield (annual tons/acre) | | 4.34 | 7.10 | 1.60 | 7.61 | 8.28 | -- | -- |
| Number of site years | | 4 | 4 | 1 | 3 | 2 | -- | -- |

Seed Marketers of Varieties Included in 2008 Forage Performance Trials

| | | | | | |
|-----------------------|--------------------|------------------------|--------------------|-----------------------|--------------|
| AGSP | 541-926-4611 | DLF -International | 800-445-2251 | Pennington Seed Inc. | 541-451-5261 |
| Allied Seed | 660-385-6690 | Doebler PA Hybrid Inc. | 570-753-5503 | Pioneer Hi-Bred Int'l | See local |
| America's Alfalfa | 800-873-2532 | Forage Genetics | (800) 635-5701 | Producers Choice | 608-786-1554 |
| Ampac Seed | 574-268-9549 | Fraser Seeds Ltd. | 604-929-7371 | ProSeeds Marketing | 541-928-9999 |
| Ag Research USA | 828-645-3872 | Garst Seed Company | 888-464-2778 | Saddle Butte Ag. | 541-491-3501 |
| Barenbrug USA | 541-926-5801 | Gries Seed Farms | 419-332-5571 | Seed Rsch. of Oregon | 541-757-2663 |
| Becks Hybrids | 800-yes-beck | Hankins Seed | 541-545-6649 | Seed Solutions | 800-562-2459 |
| Byron Seeds | 765-435-7243 | Legacy Seeds Inc. | 866-866-3888 | Smith Seed Service | 614-890-2929 |
| Central Farm & Garden | 330-237-6446 | Lewis Seed Co. | 541-466-3704 | Snow Brand Seed | 503-443-3717 |
| CISCO | 800-888-2986 | Monsanto | See local retailer | Target Seed | 208-250-0376 |
| Columbia Seeds | 541-757-1468 | Mountain View Seeds | 503-588-7333 | The Seed Center | 740-666-4050 |
| Croplan Genetics | See local retailer | Mycogen Seeds | 800-mycogen | W-L Research | 608-240-0630 |
| Dairyland Seeds | 800-236-0163 | NK Brand Seeds | See local retailer | Wax Seed Company | 800-647-1226 |
| Derry Warehouse Co. | 503-623-6969 | Oregon Seeds Inc. | 541-258-1001 | Winfield Solutions | 800-356-7333 |

| Alfalfa Variety Trial Ohio, South Charleston, Sown 4-14-05 | | | | | | | |
|---|----------------------------------|------|------|------|---------|---------|---------|
| Variety | 2008 | 2007 | 2006 | 2005 | 2005-08 | % Stand | 2005-08 |
| | ----- Tons Dry Matter/Acre ----- | | | | | Sep-08 | % mean |
| Genoa | 7.52 | 5.63 | 7.35 | 1.87 | 22.37 | 85 | 105 |
| 4A21 | 7.54 | 5.70 | 6.98 | 1.88 | 22.10 | 89 | 103 |
| Baralfa 53HR | 6.95 | 5.69 | 7.63 | 1.83 | 22.09 | 91 | 103 |
| Rebound 5.0 | 6.97 | 5.82 | 7.39 | 1.90 | 22.08 | 87 | 103 |
| Escalade | 7.37 | 5.46 | 7.17 | 2.07 | 22.06 | 86 | 103 |
| 6400HT | 7.34 | 5.40 | 7.20 | 2.09 | 22.03 | 85 | 103 |
| FSG 408DP | 7.38 | 5.41 | 7.24 | 1.84 | 21.87 | 89 | 102 |
| 54V46 | 7.72 | 5.51 | 7.00 | 1.63 | 21.85 | 91 | 102 |
| 6420 | 7.06 | 5.59 | 6.97 | 2.14 | 21.76 | 86 | 102 |
| 53Q30 | 6.80 | 5.47 | 7.30 | 1.86 | 21.44 | 84 | 100 |
| Integrity | 7.21 | 5.07 | 7.14 | 1.79 | 21.21 | 91 | 99 |
| Marvel | 7.25 | 5.30 | 6.50 | 2.15 | 21.19 | 90 | 99 |
| WL 335 HQ | 7.05 | 5.59 | 6.61 | 1.79 | 21.04 | 89 | 98 |
| WL 348 AP | 7.06 | 5.35 | 6.85 | 1.75 | 21.00 | 87 | 98 |
| Vernal | 6.67 | 4.72 | 6.90 | 1.86 | 20.15 | 89 | 94 |
| Mean | 7.10 | 5.37 | 7.02 | 1.89 | 21.38 | 88 | -- |
| LSD 0.05 | ns | 0.59 | ns | ns | 1.46 | ns | -- |

ns = no significant differences among varieties.

2008 Fertilization: 200 lb/a of 0-46-0 and 500 lb/a of 0-0-60 in March 2008.

Insecticide applied on 13-June, 18-July, 22-August for potato leafhopper control.

| Alfalfa Variety Trial Ohio, Wooster, Sown 4-23-2007 | | | | | | | |
|--|---------------------------------|-------|-------|-------|------|------|---------|
| Variety | 28-May | 1-Jul | 4-Aug | 8-Sep | 2008 | 2007 | 2007-08 |
| | -----Tons Dry Matter/Acre ----- | | | | | | % mean |
| 55V48 | 3.06 | 2.48 | 1.99 | 1.07 | 8.53 | 2.37 | 10.90 |
| 6400 HT | 3.03 | 2.54 | 2.08 | 0.92 | 8.60 | 2.29 | 10.89 |
| Anchormate | 3.18 | 2.58 | 1.87 | 0.86 | 8.48 | 2.26 | 10.74 |
| 6415 | 2.86 | 2.31 | 2.07 | 0.99 | 8.28 | 2.39 | 10.67 |
| A 5225 | 3.03 | 2.32 | 1.88 | 0.98 | 8.26 | 2.20 | 10.46 |
| 54V46 | 2.84 | 2.32 | 1.95 | 0.97 | 8.15 | 2.23 | 10.38 |
| Vernal | 3.05 | 2.46 | 1.76 | 0.74 | 7.95 | 2.43 | 10.37 |
| WL 343 HQ | 2.84 | 2.32 | 1.99 | 0.96 | 8.04 | 2.08 | 10.13 |
| Mean | 2.98 | 2.41 | 1.95 | 0.94 | 8.28 | 2.26 | 10.54 |
| LSD 0.05 | 0.17 | ns | 0.21 | 0.10 | 0.39 | ns | ns |

2008 Fertilization: 200 lb/a of 0-46-0 and 500 lb/a of 0-0-60.

Insecticide applied 16-June, 21-July & 26-August for potato leafhopper

| Alfalfa Variety Trial Ohio, Jackson, Sown 8-12-2004 | | | | | | | |
|--|----------------------------------|------|------|------|---------|---------|---------|
| Variety | 2008 | 2007 | 2006 | 2005 | 2005-08 | 2005-08 | % Stand |
| | ----- Tons Dry Matter/Acre ----- | | | | | % mean | Oct-08 |
| 6400 HT | 4.45 | 1.11 | 5.55 | 3.07 | 14.18 | 103 | 79 |
| HybriForce 420/wet | 4.51 | 1.14 | 5.28 | 3.15 | 14.06 | 102 | 77 |
| Vernal | 4.24 | 1.14 | 5.46 | 3.12 | 13.97 | 101 | 71 |
| Reward II | 4.59 | 1.08 | 5.15 | 3.08 | 13.88 | 101 | 74 |
| Genoa | 4.23 | 1.01 | 5.12 | 3.06 | 13.37 | 97 | 72 |
| SummerGold | 4.01 | 1.05 | 5.22 | 2.92 | 13.27 | 96 | 74 |
| Mean | 4.34 | 1.09 | 5.30 | 3.07 | 13.79 | -- | 74 |
| LSD 0.05 | 0.30 | ns | 0.29 | ns | 0.42 | -- | 3.38 |

2008 Fertilization: 50 lb/a of 0-46-0 and 100 lb/a of 0-0-60 was applied March 2008.

| Alfalfa Variety Trial Ohio, South Charleston, Sown 4-23-08 | | | | | |
|---|-------------------------------|--------|-------|------|--------|
| Variety | 2-Jul | 11-Aug | 8-Sep | 2008 | 2008 |
| | ----Tons Dry Matter/Acre ---- | | | | % mean |
| 55V48 | 0.37 | 0.94 | 0.63 | 1.95 | 122 |
| 6417 | 0.38 | 0.83 | 0.67 | 1.88 | 118 |
| A4330 | 0.20 | 0.80 | 0.66 | 1.66 | 104 |
| WL 343 HQ | 0.16 | 0.82 | 0.60 | 1.59 | 100 |
| PGI 459 | 0.21 | 0.72 | 0.64 | 1.57 | 98 |
| AmeriStand 407TQ | 0.19 | 0.79 | 0.58 | 1.57 | 98 |
| Genoa | 0.24 | 0.78 | 0.56 | 1.57 | 98 |
| WL 363 HQ | 0.18 | 0.74 | 0.55 | 1.48 | 92 |
| 6552 | 0.16 | 0.68 | 0.58 | 1.42 | 89 |
| Vernal | 0.16 | 0.70 | 0.43 | 1.28 | 80 |
| Mean | 0.23 | 0.78 | 0.59 | 1.60 | -- |
| LSD 0.05 | 0.14 | ns | ns | 0.34 | -- |

Insecticide was applied on 16-June, 18-July, 22-August for potato leafhopper control.

Herbicide was applied on June 4 for weed control.

| Alfalfa Variety Trial Ohio, Wooster, Sown 4-12-2006 | | | | | |
|--|----------------------------------|------|------|---------|---------|
| Variety | 2008 | 2007 | 2006 | 2006-08 | 2006-08 |
| | ----- Tons Dry Matter/Acre ----- | | | | % mean |
| L 447 HD | 7.78 | 7.47 | 2.87 | 18.12 | 103 |
| Genoa | 7.56 | 7.51 | 2.63 | 17.70 | 100 |
| 54V46 | 7.50 | 7.51 | 2.63 | 17.65 | 100 |
| Radiant-AM | 7.44 | 7.46 | 2.71 | 17.61 | 100 |
| 4A421 | 7.55 | 7.13 | 2.75 | 17.44 | 99 |
| DKA 41-18RR | 7.29 | 7.41 | 2.61 | 17.30 | 98 |
| WL 343 HQ | 7.33 | 7.38 | 2.47 | 17.17 | 97 |
| WL 335 RR | 7.12 | 7.44 | 2.58 | 17.14 | 97 |
| 53Q30 | 7.49 | 7.00 | 2.64 | 17.13 | 97 |
| 6400 HT | 6.98 | 7.32 | 2.72 | 17.02 | 96 |
| Vernal | 7.25 | 7.03 | 2.58 | 16.85 | 95 |
| Mean | 7.61 | 7.36 | 2.69 | 17.66 | -- |
| LSD 0.05 | 0.45 | ns | 0.18 | 0.73 | -- |

2008 Fertilization: 200 lb/a of 0-46-0 and 500 lb/a of 0-0-60

Insecticide was applied 16-June, 21-July & 26-August for potato leafhopper control.

Ohio Forage Network

<http://forages.osu.edu>

Ohio Forages Blog

<http://ohioforages.blogspot.com>

| Potato Leafhopper Resistant Alfalfa Variety Trial Ohio, South Charleston, Sown 4-23-08 | | | | | | | |
|---|-------------------|----------------------------------|--------|-------|------------|-------------|---------------------|
| Variety | Marketers | 2-Jul | 11-Aug | 8-Sep | Total 2008 | % of Checks | Injury ^a |
| | | ----- Tons Dry Matter/Acre ----- | | | | | 11-Aug |
| 53H92 | Pioneer | 0.27 | 0.64 | 0.32 | 1.21 | 135 | 2.0 |
| FG 45H353* | Forage Genetics | 0.17 | 0.60 | 0.39 | 1.20 | 133 | 1.8 |
| EverGreen 3 | NK Brand Seeds | 0.14 | 0.59 | 0.27 | 0.98 | 109 | 2.5 |
| 6426 | Garst | 0.10 | 0.57 | 0.29 | 0.97 | 108 | 2.3 |
| AmeriStand 404LH | America's Alfalfa | 0.03 | 0.63 | 0.26 | 0.87 | 97 | 1.8 |
| Susceptible Checks** | | 0.11 | 0.52 | 0.25 | 0.90 | -- | 4.5 |
| Mean | | 0.13 | 0.57 | 0.29 | 0.99 | -- | 3.0 |
| LSD 0.05 | | 0.11 | ns | ns | 0.25 | -- | 0.93 |

* Variety tested using experimental seed that may not perform identically to that of commercially available seed.

** Susceptible check varieties were Vernal, DK 140 and 5454

^a Potato leafhopper injury where 1 = no visible injury to 5 = most severe injury.

ns = no significance difference among varieties.

| Tall Fescue Variety Trial Ohio, Jackson, Sown 8-12-2004 | | | | | | | |
|--|------------------|----------------------------------|------|------|------|---------|---------|
| Variety | Marketer | 2008 | 2007 | 2006 | 2005 | 2005-08 | % Stand |
| | | ----- Tons Dry Matter/Acre ----- | | | | % mean | 39729 |
| Hykor ^a | DLF Intl' Seed | 4.82 | 2.58 | 6.24 | 5.97 | 19.61 | 107 |
| Fuego | Seed Rsch Oregon | 4.99 | 2.79 | 6.16 | 5.55 | 19.49 | 106 |
| Montendre | Seed Rsch Oregon | 5.50 | 2.49 | 6.20 | 4.68 | 18.86 | 103 |
| Ky 31 | Public | 4.64 | 2.58 | 6.30 | 5.24 | 18.76 | 102 |
| HYMARK | Fraser Seeds | 4.64 | 2.26 | 6.13 | 5.54 | 18.58 | 101 |
| Stockman | Seed Rsch Oregon | 4.61 | 2.29 | 6.04 | 5.38 | 18.32 | 100 |
| CSN 26* | Fraser Seeds | 5.11 | 2.40 | 5.81 | 4.98 | 18.30 | 100 |
| Seine | Seed Rsch Oregon | 4.75 | 2.35 | 6.02 | 4.97 | 18.09 | 99 |
| Jessup Max Q | Pennington Seed | 4.77 | 2.05 | 5.67 | 5.43 | 17.94 | 98 |
| IS-FTF-12* | DLF Intl' Seed | 4.31 | 2.34 | 5.79 | 5.39 | 17.83 | 97 |
| Ridgeway | Columbia Seeds | 4.82 | 2.50 | 5.39 | 4.85 | 17.56 | 96 |
| Potomac | Public | 4.49 | 2.26 | 5.01 | 4.91 | 16.67 | 91 |
| Mean | | 4.79 | 2.41 | 5.90 | 5.24 | 18.33 | -- |
| LSD 0.05 | | 0.57 | 0.38 | 0.99 | 0.71 | 1.60 | -- |

* Variety tested using experimental seed that may not give performance identical to that of commercially available seed.

^a Variety is a festulolium

** NOTE** Due to the drought in 2008 there were only three harvest.

2008 Fertilization: 200 lb/a of 34-0-0 applied on 4-April, 150 lb/a applied on 10-June and 8-August.

| Red Clover Variety Trial Ohio, South Charleston, Sown 4-13-2006 | | | | | | | |
|--|---------------------|---------------------------------|------|------|---------|---------|---------|
| Variety | Marketer | 2008 | 2007 | 2006 | 2006-08 | 2006-08 | % Stand |
| | | -----Tons Dry Matter/Acre ----- | | | | % mean | 39709 |
| Dominion | Seed Rsch of Oregon | 4.92 | 5.52 | 1.53 | 12.14 | 129 | 46 |
| FSG 9601 | Allied Seed | 4.88 | 5.31 | 1.66 | 12.05 | 128 | 48 |
| StarFire II* | Ampac Seed | 4.69 | 5.55 | 1.58 | 11.76 | 125 | 51 |
| Duration Extra* | Cisco | 4.65 | 5.18 | 1.63 | 11.45 | 122 | 48 |
| Cardinal | Seed Rsch of Oregon | 4.70 | 5.10 | 1.57 | 11.45 | 122 | 24 |
| PGI 33* | Producers Choice | 4.23 | 4.99 | 1.55 | 10.56 | 112 | 53 |
| NARN | DLF Int'l Seeds | 4.03 | 5.10 | 1.39 | 10.39 | 110 | 16 |
| Common ** | Public | 0.02 | 1.73 | 1.08 | 2.85 | 30 | 10 |
| Red Gold ** | Pro Seeds Marketing | 0.97 | 0.93 | 0.24 | 2.07 | 22 | 20 |
| Mean | | 3.67 | 4.38 | 1.36 | 9.41 | 35 | -- |
| LSD 0.05 | | 0.73 | 0.31 | 0.32 | 0.96 | 24.3 | -- |

* Variety tested using experimental seed that may not give performance identical to that of commercially available seed.

** NOTE** Red Gold & Common low yield is due to a poor stand.

2008 Fertility: 200 lb/a of 0-46-0 and 500 lb/a of 0-0-60, 2 ton of lime.

| Orchardgrass Variety Trial Ohio, South Charleston, Sown 4-13-2006 | | | | | | | |
|--|------------------|----------------------------------|------|------|---------|---------|-----------------------|
| Variety | Marketer | 2008 | 2007 | 2006 | 2006-08 | 2006-08 | Maturity ^a |
| | | ----- Tons Dry Matter/Acre ----- | | | | % mean | 20-May |
| OG 0204G* | Seed Rsch Oregon | 5.11 | 6.48 | 3.72 | 15.30 | 123 | 3.8 |
| Command | Seed Rsch Oregon | 4.57 | 5.26 | 4.11 | 14.12 | 114 | 4.3 |
| OG 001* | Seed Rsch Oregon | 4.69 | 5.29 | 3.92 | 14.00 | 113 | 3.8 |
| Endurance | DLF Intl. | 4.27 | 4.81 | 4.42 | 13.56 | 109 | 4.3 |
| Persist | Smith Seed Svcs. | 4.75 | 5.13 | 3.49 | 13.40 | 108 | 4.5 |
| Potomac | Public | 4.37 | 5.21 | 3.19 | 12.83 | 103 | 3.3 |
| Shiloh II | Pro Seed Mkt. | 4.31 | 3.88 | 4.69 | 12.75 | 103 | 4.3 |
| RAD-LCF-21* | Lewis Seed Co. | 4.37 | 4.24 | 4.17 | 12.67 | 102 | 3.5 |
| AGR DG 101* | Ag Rsch. USA | 0.02 | 0.01 | 3.24 | 3.09 | 25 | 1.0 |
| Mean | | 4.05 | 4.48 | 3.88 | 12.41 | -- | 3.6 |
| LSD 0.05 | | 0.58 | 0.81 | 0.71 | 1.17 | -- | 0.95 |

* Variety tested using experimental seed, may not perform identically to that of commercially available seed.

** NOTE** variety AGR DG 101 did not survive the 2006 winter.

^aMaturity: 1 =vegetative, 2 =early boot, 3 =initial emergence from boot,

4 =complete head emergence, 5 = elongated peduncle.

2008 Fertilization: 200 lb/a of 34-0-0 on 4-April, 150 lb/a on 24-May and 27-August

| Teff Variety Trial Ohio, South Charleston, Sown 6-12-2008 | | | | | |
|--|-----------------|----------------------------------|--------|--------|------------|
| Variety | Marketer | 21-Jul | 18-Aug | 25-Sep | Total 2008 |
| | | ----- Tons Dry Matter/Acre ----- | | | |
| Tiffany | Gries Seed Farm | 1.33 | 1.20 | 0.79 | 3.33 |
| VA-T1 (Brown) | Hankins Seed | 1.37 | 1.15 | 0.76 | 3.28 |
| Dessie | Allied Seed | 1.30 | 1.22 | 0.72 | 3.24 |
| Mean | | 1.33 | 1.19 | 0.75 | 3.28 |
| LSD 0.05 | | ns | ns | ns | ns |

Establishment: Seeded in rows at 5 lb/acre.

2008 Fertilization: 130 lb/a of 46-0-0 was applied prior to planting.

ns = no significant difference

| Sorghum x Sudangrass & Sudangrass Variety Trial Ohio, South Charleston, Sown 6-12-2008 | | | | | |
|---|-------------|----------------------------------|--------|--------|------------|
| Variety | Marketer | 21-Jul | 18-Aug | 25-Sep | Total 2008 |
| | | ----- Tons Dry Matter/Acre ----- | | | |
| S-222 ^a | Allied Seed | 2.01 | 1.02 | 1.20 | 4.21 |
| Greengrazer V ^a | Allied Seed | 2.14 | 0.85 | 1.22 | 4.18 |
| ProMax ^b | Ampac Seed | 1.72 | 1.21 | 1.17 | 4.11 |
| FSG 208 BMR ^a | Allied Seed | 1.82 | 0.63 | 1.44 | 3.92 |
| MS 202 BMR ^a | Allied Seed | 1.86 | 0.85 | 1.17 | 3.89 |
| Mean | | 1.91 | 0.91 | 1.24 | 4.06 |
| LSD 0.05 | | | 0.23 | 0.22 | 0.42 |

Establishment: Seeded in rows at 24 lb/acre.

2008 Fertilization: 130 lb/a of 46-0-0 was applied prior to planting.

^a Variety is sorghum x sudangrass.

^b Variety is sudangrass.

| Forage Sorghum Variety Trial Ohio, South Charleston, Sown 6-12-2008 | | |
|--|-------------|--------------------------|
| Variety | Marketer | 25-Sep-08 |
| | | - Tons Dry Matter/Acre - |
| Cowvittles | Allied Seed | 4.66 |
| BMR 106 | Allied Seed | 4.04 |
| Mean | | 4.35 |
| LSD 0.05 | | 0.58 |

Establishment: Seeded in rows at 12 lb/acre.

2008 Fertilization: 130 lb/a of 46-0-0 was applied prior to planting.

Annual Ryegrass Variety Trial
Ohio, South Charleston, Sown 9-6-2007

| Variety | Marketer | 1-Nov-07 | Total | | Maturity ^a | | | % Stand |
|------------------------------|----------------------|----------|-------|---------|-----------------------|--------|--------|---------|
| | | | 2008 | 2007-08 | 7-May | 30-May | 12-Jun | |
| --- Tons Dry Matter/Acre --- | | | | | | | | |
| RAD-CP5212* | Mountain View Seeds | 0.14 | 5.62 | 5.76 | 1.1 | 3.1 | 5.0 | 96 |
| MO-1* | DLF International | 0.26 | 4.46 | 4.72 | 1.8 | 3.3 | 6.0 | 91 |
| Max | Seed Research Oregon | 0.26 | 4.42 | 4.69 | 1.0 | 2.7 | 4.5 | 86 |
| Dino | Saddle Butte Ag Inc. | 0.19 | 4.24 | 4.43 | 1.7 | 2.6 | 6.0 | 84 |
| Ace | Snow Brand Seed | 0.21 | 4.13 | 4.35 | 1.0 | 3.0 | 4.8 | 92 |
| Barextra | Barenbrug | 0.15 | 4.14 | 4.28 | 1.4 | 3.4 | 5.0 | 90 |
| Hercules | Barenbrug | 0.17 | 3.69 | 3.86 | 1.5 | 3.6 | 5.5 | 87 |
| Flying A | Oregon Seeds Inc. | 0.27 | 3.47 | 3.74 | 2.0 | 2.8 | 6.3 | 96 |
| Marshall | Wax | 0.14 | 3.60 | 3.74 | 2.0 | 2.3 | 6.0 | 97 |
| Bounty | Saddle Butte Ag Inc. | 0.23 | 3.47 | 3.70 | 2.6 | 3.2 | 6.5 | 94 |
| FL/NE | Oregon Seeds Inc. | 0.02 | 3.68 | 3.70 | 2.8 | 3.7 | 6.0 | 76 |
| Striker | Seed Research Oregon | 0.28 | 3.42 | 3.69 | 2.3 | 3.9 | 6.5 | 81 |
| OCALA | AGSP | 0.11 | 3.50 | 3.61 | 2.7 | 3.3 | 6.8 | 90 |
| 50561 TA* | AGSP | 0.12 | 3.47 | 3.59 | 1.3 | 4.4 | 6.5 | 75 |
| Tam TBO | Oregon Seeds Inc. | 0.23 | 3.12 | 3.35 | 1.5 | 3.8 | 6.0 | 70 |
| Jackson | Wax | 0.22 | 2.92 | 3.14 | 3.3 | 4.1 | 7.0 | 80 |
| Graze N Gro | Seed Research Oregon | 0.18 | 2.92 | 3.09 | 1.8 | 4.1 | 6.5 | 88 |
| Bulldog | Derry Warehouse Co. | 0.20 | 2.89 | 3.09 | 3.1 | 3.4 | 6.5 | 81 |
| Tachimusha | Snow Brand Seed | 0.22 | 2.84 | 3.06 | 2.9 | 5.1 | 6.8 | 61 |
| AM4N | The Seed Center | 0.20 | 2.69 | 2.89 | 1.7 | 4.9 | 7.0 | 67 |
| Billiken | Snow Brand Seed | 0.24 | 2.53 | 2.77 | 1.2 | 4.1 | 5.3 | 65 |
| Yushun | Snow Brand Seed | 0.18 | 2.56 | 2.75 | 3.9 | 4.9 | 6.8 | 79 |
| Gulf | Public | 0.31 | 2.39 | 2.70 | 1.7 | 4.4 | 5.8 | 78 |
| Dryann | Snow Brand Seed | 0.22 | 2.37 | 2.59 | 2.2 | 4.4 | 7.0 | 77 |
| Tachimasari | Snow Brand Seed | 0.23 | 2.23 | 2.46 | 3.4 | 4.1 | 6.5 | 71 |
| Hanamiwase | Snow Brand Seed | 0.25 | 1.48 | 1.74 | 5.0 | 5.7 | 7.0 | 66 |
| Mean | | 0.20 | 3.32 | 3.52 | 2.2 | 3.8 | 6.1 | 81 |
| LSD 0.05 | | 0.09 | 0.64 | 0.61 | 0.80 | 0.87 | 0.81 | 12.61 |

* Variety tested using experimental seed that may not give performance identical to that of commercially available seed.

Maturity^a 1 =vegetative, 2 =early boot, 3 =initial emergence from boot, 4 =complete emergence, 5 = elongated peduncle, 6 = preanthesis, 7 = anthesis, 8 = post anthesis.

Perennial Ryegrass Variety Trial
Ohio, South Charleston, Sown 4-14-2005

| Variety | Marketer | 2008 2007 2006 2005 2005-08 2005-08 | | | | | % mean |
|-----------------------|-----------------------|-------------------------------------|-------|------|------|-------|--------|
| | | ----- Tons Dry Matter/Acre ----- | | | | | |
| Perun ^a | Byron Seeds | 2.95 | 2.83 | 8.67 | 1.84 | 16.47 | 138 |
| Aubisque | Seed Solutions | 2.43 | 2.32 | 6.26 | 1.01 | 11.98 | 101 |
| Mathilde | DLF International | 2.54 | 1.87 | 6.06 | 1.22 | 11.64 | 98 |
| Respect | Doeblers P.A. Hybrids | 2.28 | 1.94 | 5.47 | 0.87 | 10.50 | 88 |
| Portia | DLF International | 2.40 | 1.75 | 4.87 | 1.00 | 9.87 | 83 |
| CSBF 124 ^a | Saddle Butte Ag | 0.02 | -0.34 | 3.70 | 1.26 | 4.60 | 39 |
| Mean | | 2.39 | 2.00 | 6.30 | 1.23 | 11.92 | -- |
| LSD 0.05 | | 0.47 | 0.72 | 0.85 | 0.36 | 1.52 | -- |

^a Varieties are festuloliums -- variety CSBF 124 did not survive the 2006 winter.
2008 Fertilization: Applied 150 lb/a of 34-0-0 4-April, 24-May and 26-June



Inclusion of entries in Ohio Alfalfa Performance Trials does not constitute an endorsement of a particular entry by The Ohio State University, Ohio Agricultural Research and Development Center, or Ohio State University Extension. Where trade names appear, no discrimination is intended, and no endorsement is implied by The Ohio State University, Ohio Agricultural Research and Development Center, or Ohio State University Extension.

11/2008

All educational programs conducted by Ohio State University Extension are available to clientele on a non-discriminatory basis without regard to race, color, creed, religion, sexual orientation, national origin, gender, age, disability or Vietnam-era veteran status.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Keith L. Smith, Director, Ohio State