

TIMOTHY

VARIETY TRIALS

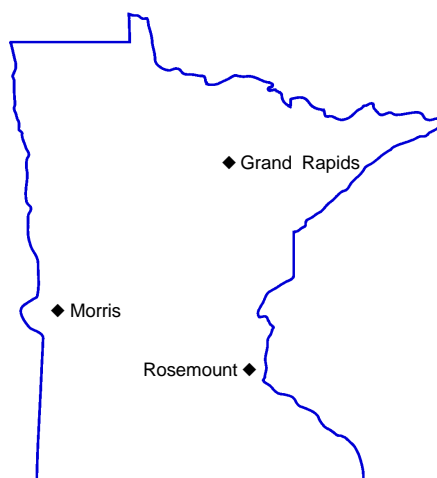
Minnesota Agricultural Experiment Station — University of Minnesota
Revised January 1999

This is a report on results of timothy variety performance tests conducted by the Minnesota Agricultural Experiment Station. This report was prepared by Nancy J. Ehlke (612-625-1791; <ehlke001@tc.umn.edu>), agronomist, and Donn J. Vellekson (612-625-9765; <velle001@tc.umn.edu>), research plot coordinator, Department of Agronomy and Plant Genetics, University of Minnesota, St. Paul, MN 55108. New trials were *not* conducted in 1998 for the 1999 production year, but data from previous years' trials remains current and relevant.

Successful production of timothy depends to a considerable extent on selecting the best varieties for a particular farm. For that reason, varieties were compared in trial plots on Minnesota Agricultural Experiment Station fields at Grand Rapids, Morris and Rosemount. Varieties were grown in replicated plots at each location. These plots were handled so that the factors affecting yield and other characteristics are as nearly the same for all varieties at each location as is possible.

Timothy is adapted throughout Minnesota for use in hay and pasture mixes. When timothy is the major component in hay, its stage of maturity affects both yield and quality. Harvesting timothy at early heading is the preferred time. Timothy produces the majority of its forage at the first harvest.

Varieties of timothy differ in maturity so care should be taken in choosing ones that fit the management requirements of the crop and mixture. Early varieties are best adapted to a three-cut system with alfalfa. Intermediate to late maturing varieties should not be harvested more than twice during the growing season. Therefore, appropriately selected timothy varieties are compatible with red clover and birdsfoot trefoil in mixtures for hay production.



Locations where timothy trials were conducted for this report.

Performance in Trials

Varieties in the experiment station timothy trials were established in pure stands in 1992 at Rosemount and Morris and again at Grand Rapids in 1993. Nitrogen was applied at all

locations in the early spring and after each harvest at a rate of 50 pounds per acre.

Early maturing varieties of timothy had greater forage production than the late maturing varieties at all locations over all harvest years. Timothy is normally less persistent than other cool-season grasses such as reed canarygrass.

Interpreting the Table

The LSD (Least Significant Difference) values associated with the data in table 1 are measures of variability within the trials. If a yield difference between two varieties within a single column exceeds the LSD value at the bottom, you can assume that the higher yielding variety was truly better yielding.

A 5 percent level of significance is used in the table. This means that yield differences exceeding the stated LSD value are real 95 percent of the time. If the difference is less than the LSD, greater attention should be given to other traits which are also important in making your variety choices.

Acknowledgements, Permissions and Caveats

Fieldwork for timothy trials was supervised by Gregory Cuomo and Russell Mathison.

Publication project chair is Leland L. Hardman, professor, Agronomy and Plant Genetics. Web product manager for extension communications is Larry A. Etkin, senior editor.

The University of Minnesota, including the Minnesota Agricultural Experiment Station, is committed to the policy that all persons shall have equal access to its programs, facilities and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status or sexual orientation.

The information in this report is presented under authority granted the Minnesota Agricultural Experiment Station, by the Hatch Act of 1887, to conduct performance trials on farm crops and interpret data to the public.

Permission is granted to reproduce tables only in their entirety, without rearrangement, manipulation or reinterpretation. Permission is also granted to reproduce a maturity group sub-table provided that complete table headings and footnotes are included. Reproductions should credit the Minnesota Agricultural Experiment Station as its source.

In accordance with the Americans with Disabilities Act, this material is also available in alternative formats upon request. Contact the Distribution Center, 20 Coffey Hall, 1420 Eckles Avenue, St. Paul MN 55108-6069, (800) 876-8636.

Produced in the Communication and Educational Technology Services unit of the University of Minnesota Extension Service.

Table 1 — Dry matter yields, in tons dry matter per acre, of timothy seeded at three locations.

Variety	Grand Rapids 1994-1996	Rosemount 1993-1995	Morris 1993-1996	Average
<u>Early-Intermediate maturity</u>				
Climax	3.6	3.8	4.0	3.8
Comtal	3.4	3.7	—	3.6
Goliath	3.4	3.4	—	3.4
Timfor	3.5	3.8	—	3.7
Toro	3.7	3.9	—	3.8
<u>Late maturity</u>				
Heidemij	3.5	3.0	3.5	3.3
Hokusen	3.3	3.4	3.6	3.4
LSD 5%	0.4	0.4	NS	

Table 2 — Potential 1999 timothy seed sources known to the Minnesota Crop Improvement Association.

ABT/La Crosse Seed Company PO Box 187 LaCrosse WI 54601 800-658-9428	Olds Seed Company Box 7790 Madison WI 53707 800-356-7333, 608-249-9291
Agassiz Seed & Supply 445 7th Street NW West Fargo ND 58078 701-282-8118	Peterson Seed Company Box 346 Savage MN 55378 800-328-5898
Albert Lea Seed House 1414 West Main, PO Box 127 Albert Lea MN 56007 507-373-3161, 800-352-5247	Premium Seed Company, Inc. 7800 East State Hwy 101 Shakopee MN 55379 612-496-1783
Croplan Genetics PO Box 64089, Cenex/Land O' Lakes St. Paul MN 55164 612-451-5490	R.J. Hunt Seed Company 13477 County Road 101 Wadena MN 56482 218-631-4190
Discount Farm Center PO Box 84, West Hwy 212 Watertown SD 57201 605-886-5888	Top Farm Hybrids 17177 60th Street Southwest Cokato MN 55321 320-286-5516
Garst Seed Company 2369 330th Street Slater IA 50244 800-831-6630	Trelay, Inc. 11623 Hwy 80 North Livingston WI 53554 800-421-0397, 608-943-6363
Geertson Seed Farm 1665 Burrough Rd Adrian OR 97901 541-339-3768	Twin Cities Seeds 7265 Washington Avenue South Edina MN 55439 800-545-8873
International Seeds Inc. PO Box 168 Halsey OR 97348 541-369-2251	Werner Farm Seeds 3104 Millersburg Blvd. Dundas MN 55019 507-645-7995

Timothy Planting Rates and Dates

Rates are based on normal seedbeds and on normal size, good quality seed. Rate used can vary greatly depending on seed cost, desired stand, expected mortality, emerging ability, seed weight, seed germination, seedbed condition, depth of planting and planting equipment. Weight given is the most widely accepted in the U.S.

Crop Use	Bushel Weight (pounds)	Seeds/pound (number)	Rate/acre (pounds)	Rate (seeds)	Planting Date
Alone	45	1,234,000	8	225/square foot	Early spring or late summer
In mixtures			3	85/square foot	Use date for legume