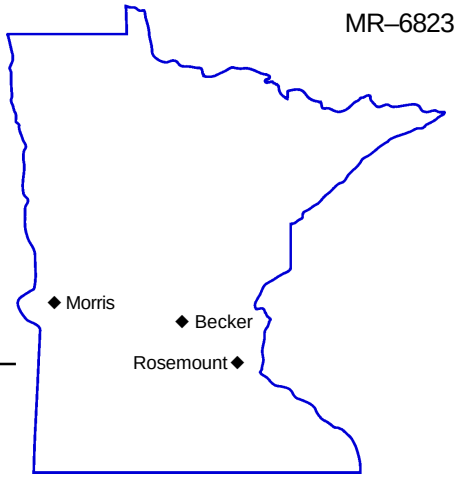
Minnesota Agricultural Experiment Station

VARIETY TRIALS

Winter Rye



Locations of winter rye trials.

Winter rye is not widely grown in Minnesota. Nevertheless, its successful production depend to a considerable extent on selecting the best varieties for a particular farm. For that reason, varieties were, in past years, compared in trial plots on Minnesota Agricultural Experiment Station fields at Rosemount, Morris and Becker. Varieties were grown in replicated plots at each location, with the plots handled so that the factors affecting yield and other characteristics were as nearly the same for all varieties at each location as is possible.

Variety Classifications

Tested winter rye varieties were not classed into any subgroupings such as "early" and "late" maturity. Variety descriptions are arranged alphabetically in the text and within the tables of this report.

Seed of tested varieties may be eligible for certification, and the use of certified seed is suggested. However, certification does not imply recommendation. Registered and certified seed of varieties described in this report can be purchased from seed dealers or from growers listed in the *Minnesota Registered and Certified Seed Directory for 1997 Planting.* This annual publication can be obtained without charge from the Minnesota Crop Improvement Association, 1900 Hendon Avenue, St. Paul, MN 55108, or from county extension agents' offices. The information is also available on-line at:

<http://www.rrtrade.org/mcia/>.

Interpreting the Tables

The LSD (Least Significant Difference) figures listed for performance under the various columns on tables in this report are statistical measures of variability within the trials. This statistic is used to determine whether the differences between two measures are due primarily to genetic difference in the varieties.

If the difference between two varieties equals or exceeds the LSD value listed at the bottom of a table column, you can conclude that the variety with the higher value was superior in that quality. If the difference is less, greater attention should be given to other traits which are also important in making your variety choices.

Authors/Researchers

The original author of the material used in this report was L.A. Field.

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WINTER RYE VARIETY TRIALS

Minnesota Agricultural Experiment Station — University of Minnesota
Reviewed February 1997

Results of Winter Rye Variety Tests Conducted by the Minnesota Agricultural Experiment Station. This report was prepared by Larry A. Etkin, experiment station senior editor, from material prepared by L.A. Field for the 1993 edition of *Varietal Trials of Selected Farm Crops*. For further information on winter rye varieties contact Ervin A. Oelke, extension agronomist, Department of Agronomy and Plant Genetics, University of Minnesota, St. Paul, MN 55108. [phone: 612/625-1211; e-mail: <oelke002@maroon.tc.umn.edu>].

Report Background

Varieties are listed in alphabetical order. The yield information provided here includes performance of several hybrids and advanced lines which were relatively new at the time of the trials. Some displayed excellent yield potential and winter hardiness. The availability of seed of some of those varieties was limited at that time, but may currently be more readily available.

Additional production information is provided in the Rye chapter of the *Alternative Field Crops Manual.* Contact your county extension agent or The Center for Alternative Plant and Animal Products, 340 Alderman Hall, University of Minnesota, St. Paul, MN 55108, for details about this publication.

Varieties

Amando—Hybrid variety developed by Hybro GbR, Saatzucht Langenbrüken, 7525 Bad Schönborn 2, Germany.

Dacold (ND-1)—Developed by the North Dakota Experiment Station, Fargo, ND.

Danko (Dankowskie-Nowe—Developed by DanKow-Laski and Choryn Expt. Stns, Poland. NorFarm Seeds, Inc., Box 725, Bemidji, MN 56601.

Frederick—Developed by South Dakota Agricultural Experiment Station. Released 1984.

Halo—Developed by F. von Lochow-Petkus GMBH Postfach 1311, 3103 Bergen 1, Germany.

Hancock—Developed by Wisconsin Agricultural Experiment Station. Released 1979.

Kodiak—Available from Alberta Wheat Pool, 505 2nd St. SW., Calgary, Canada T2P 2P5.

Luchs—Hybrid variety developed by F. von Lochow-Petkus GMBH Postfach 1311, 3103 Bergen 1, Germany.

Marder—Hybrid variety developed by F. von Lochow-Petkus GMBH Postfach 1311, 3103 Bergen 1, Germany.

Mitzi—Developed by Elliot Plant Breeding, Ottertail, MN.

Musketeer—Developed by Agriculture Canada. Licensed in 1980. Production of certified seed limited to Canada.

Pastar—Distributed by NorFarm Seeds, Inc., Box 725 Bemidji, MN 56601.

Prima—Developed by Agriculture Canada. Production of certified seed limited to Canada.

Rapid—Hybrid variety developed by Hybro GbR, Saatzucht Langenbrüken, 7525 Bad Schönborn 2, Germany.

Rymin—Developed by Minnesota Agricultural Experiment Station. Released 1973.

X79-8—Experimental line developed by the South Dakota Agricultural Experiment Station.

Table 1. Seed yield, in bushels per acre, of winter rye varieties (1991-92).

Note Key:

[1] Yield data not present, stand was reduced by winter kill.

[2] Average for three sites not provided due to stand winterkill.

[3] Check variety. Rosemount data from 1981-85 trials, Becker from 1982-85, Morris from 1982-86; average for five sites (above plus Crookston and Grand Rapids for 1982-86).

Locations: Ros=Rosemount; Bec=Backer; Mor=Morris; AVG=average for all three sites.

Variety	Ros	Bec	Mor	AVG
Amando	74	48	[1]	[2]
Dacold	78	41	63	61
Dankowski	68	48	65	60
Frederick	64	35	56	51
Halo	68	39	67	58
Hancock [3]	59	46	57	54
Kodiak	67	28	56	50
Luchs	57	[1]	84	[2]
Marder	[1]	[1]	76	[2]
Mitzi	69	40	76	61
Musketeer	67	43	63	58
Pastar	77	47	68	64
Prima	77	43	76	65
Rapid	49	42	[1]	[2]
Rymin [3]	58	50	60	57
X79-8	62	35	57	51
LSD 0.05	15	9	12	

Table 2. Characteristics of winter rye varieties, average of Rosemount and Becker, 1992.

Note Key:

[1] Percent of stand damaged by winterkill.

[2] Height expressed in inches.

[3] Lodging score: 1=erect; 10=severe lodging. Score is an average of the two sites.

[4] Date of maturity.

[5] Test weight expressed as pounds per bushel.

Variety	Winterkill [1]	Height [2]	Lodging [3]	Maturity [4]	Test Weight [3]
Amando	14	48	3	7-13	56
Dacold	1	49	5	7-12	55
Dankowski	5	53	3	7-11	58
Frederick	1	56	7	7-10	56
Halo	21	49	4	7-13	57
Hancock	—	47	3	7-17	—
Kodiak	1	59	8	7-12	53
Luchs	56	42	4	7-12	55
Marder	86	40	3	7-14	—
Mitzi	3	54	6	7-11	56
Musketeer	1	57	8	7-9	56
Pastar	2	63	7	7-11	57
Prima	2	57	7	7-9	57
Rapid	64	46	1	7-13	55
Rymin	1	40	2	7-18	—
X79-8	1	62	10	7-10	56
LSD 0.05	10	3	1	2	1

Winter Rye Planting Rate and Date

Rate is 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.

Bushel Weight (pounds)	Seeds/pound (number)	Rate/acre (pounds)	Rate (seeds)	Planting Date
56	18,200	60	25/square foot	September