

LETTER

12 January 2007

To: Alfalfa Developers and Marketers

From: Craig Sheaffer, Paul Peterson, and Joshua Larson

Re: 2007 Alfalfa Performance Trial Applications

Attached are detailed descriptions of the 2007 trials. We want to call attention to the following:

- New yield trials will be seeded at Rosemount, Stearns County, Lamberton, and Grand Rapids. The price per entry for all trials is \$500 for varieties and \$375 for experimentals.
- Forage quality testing will be conducted, at Rosemount, MN. Crude protein (CP), oil, ash, NDF digestibility, Relative Forage Quality (RFQ), and Milk2000 values will be reported. The rates are now \$500 per entry; however if you enter a variety in both the Rosemount yield trial and the forage quality trial, the price is \$800 for varieties and \$700 for experimentals.
- Winter survival continues to be comprehensively tested, now at one site in Minnesota, one site in eastern South Dakota, and two sites in Wisconsin. The testing fee is \$550 per entry. www.uwex.edu/ces/forage/news/alfalfa.pdf
- All entry forms are on the web at <http://forages.cfans.umn.edu/>. Please include your email address because all applications will be processed electronically.

We greatly appreciate your participation in our past trials and hope you continue to enter in the future. Alfalfa variety trials are a valuable source of information for producers, agricultural professionals, and the alfalfa industry. Over 60,000 copies of our results are distributed in the *Minnesota Variety Trials* and the *Agri News* paper for southern Minnesota. Our results are also available on the web at <http://www.maes.umn.edu> and <http://forages.cfans.umn.edu>.

For questions regarding our trials, email us at sheaf001@umn.edu or larso276@umn.edu.

GUIDELINES

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12 January 2007

Minnesota evaluation of alfalfa varieties and germplasms ...2007 seedings

The Alfalfa Variety Testing Program at the Minnesota Agricultural Experiment Station (MAES) provides a high quality service to both forage producers and sellers of alfalfa varieties by helping to describe performance of alfalfa varieties marketed in Minnesota and surrounding states. The Alfalfa Variety Testing Program provides fee tests that evaluate alfalfa for forage yield, winter survival, forage quality, and in-field root lesion nematode resistance. Results from yield trials will be available on the web at <http://www.maes.umn.edu> and <http://forages.cfans.umn.edu>.

We are strongly recommending to Minnesota farmers that when selecting varieties, they give first priority to varieties that have winter survival and forage quality evaluations in addition to yield performance from at least 3 locations. The current "Minnesota Varietal Trials Results" highlights varieties with yield data for at least 6 site-years. Having at least 3 seedings for yield, and participating in the winter survival and forage quality tests, ensures a more complete description of an alfalfa variety's genetic potential.

New yield tests in 2007 will be established at Rosemount, Stearns County, Lamberton, and Grand Rapids. Data will be reported from current trials only.

MINNESOTA ALFALFA PERFORMANCE TRIALS POLICIES AND PROCEDURES

Description of Tests

Standard Forage Yield – Trials will be conducted according to protocol established by the North American Alfalfa Improvement Conference. Forage yields will be determined at least twice in the seeding year and on a 3-or 4-cut per year schedule in subsequent years. All stands will be harvested for at least 3 years after the year of seeding, unless the stands are depleted sooner. Stand persistence will be evaluated every spring.

RR Forage Yield – Trials will be conducted according to protocol established by the North American Alfalfa Improvement Conference. The trial will be established using Roundup herbicide as labeled in the establishment and proceeding years as needed. Conventional standards will be established using high yield management with conventional herbicide. Forage yields will be determined at least twice in the seeding year and on a 3-or 4-cut per year schedule in subsequent years. All stands will be harvested for at least 3 years after the year of seeding, unless the stands are depleted sooner. Stand persistence will be evaluated every spring.

Forage Quality performance - The test will be seeded in plots at Rosemount, MN with a minimum of four replicates. Forage quality and yield will be determined at least once in the seeding year and for all cuts in the year following seeding following North American Alfalfa Improvement Conference protocol. Alfalfa will be harvested at late bud to early flower. Herbage samples for forage quality analysis will be taken from standing forage. Forage quality measurements will include whole plant neutral detergent fiber (NDF), NDF digestibility (NDFD), crude protein (CP), ash, and oil. Relative forage quality (RFQ), milk production per ton and per acre will be calculated to rank varieties. Entries may be either released varieties or experimentals. *The forage quality trial is now a stand alone trial; however if entries are entered in this trial and the Rosemount yield trial there is a price break (see Entry Fee Schedule above).*

Winter Survival evaluation - This trial is established jointly with the University of Wisconsin and South Dakota State University. For one fee, varieties and experimentals will be planted at two sites in Wisconsin, one site in Minnesota, and one site in eastern South Dakota. Data from all sites will be combined and used in joint publications. The trial will be conducted according to protocol established by the North American Alfalfa Improvement Conference except that plots will be seeded rather than transplanted. The yield tables in Minnesota and Wisconsin Extension publications will highlight data from varieties participating in winter survival trials. Note that fees for winter survival evaluation in both states will be sent to the University of Wisconsin as a part of the Wisconsin application (entry form: *Wisconsin-Minnesota Alfalfa Winter Survival Application for Entry*).

Root-lesion Nematode resistance: Field screening test - The 2007 fee-test plots will be established at Grand Rapids, MN to provide maximum damage during stand establishment. Plot size will be approximately 3' x 25' with 5 replications. Plots will be seeded at 50 viable seed per square foot, thus providing nearly 20,000 seed per population as a base for selection. The plots will be mowed twice in 2007 and three times in 2008. In 2008 we will take spring growth observations and harvest plots, recording yields, three times by Sept. 1. About the second week in September, the plots will be undercut to permit individual plant selection by personnel from the submitting company.

Entry Fee

The schedule of entry fees follows. Entry fees must accompany the application for testing.

1. Forage Yield Varieties– \$500.00 per entry (4-year test).
2. Forage Yield Experimentals – \$375.00 per entry (4-year test).
3. Forage Quality performance – \$500.00 per entry (2-year test).
4. Both Forage Yield (Rosemount) and Quality performance (Varieties) - \$800.00 per entry.
5. Both Forage Yield (Rosemount) and Quality performance (Experimentals) - \$700.00 per entry.
6. Winter Survival test - \$550.00 (1 MN, 1 SD, and 2 WI sites, pay fee to Wisconsin).
7. Root-lesion Nematode Resistance: Field Screening test - \$250.00 per entry

Eligibility of Entries

Experimental entries – Entries should be identified using the company designation (name or number). *The entrant is obligated to notify the testing station (contact Joshua Larson) if the experimental designation is changed or a variety name assigned.*

Released (Commercial) Varieties – Entries should be identified using the variety name or number. The company requesting a test will submit the information required in the enclosed “Application for Entry”. “Released Varieties” herein refers to varieties which have received favorable action by the National Alfalfa Variety Review Board, or which have been recognized as eligible to be certified by AOSCA, or that have been approved for Plant Variety Protection.

Right to Reject

The testing station reserves the right to reject an application when:

1. The seed arrives late.
2. Sufficient seed is not available.
3. It is known that the seed is misrepresented.
4. Facilities are not available.

Seed Requirements for Testing

Experimental entries – Provide the following quantities: forage yield, 125 grams; forage quality, 200 grams; root-lesion nematode screening, 100 grams. The seed should be accompanied by a statement certifying that it is a true sample of the designated entry. Send all seed for all tests of a given entry packaged as one sample. Seed treated with a pesticide will not be accepted.

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Released Varieties in market channels (those receiving favorable action by the National Alfalfa Variety Review Board or PVP) - The entrant will ensure that commercial seed is available for testing per CAIC protocol from the University of Wisconsin central source. When an application for entry into the performance trials is submitted to the University of Minnesota, applicants should also notify Wisconsin’s *Kevin Silveira* (608-262-6203, email: [kgsilvei@facstaff.wis](mailto:kgsilvei@facstaff.wis.edu)) that seed of that variety will need to be available. If you are entering only the Minnesota trials, a commercial seed bag can be sent directly to us (contact Joshua Larson 612-625-8189 or larso276@umn.edu).

Use of Seed

Seed received for testing experimental entries will not be used for increase, selection or distribution by the testing station.

Publication of Results

Data for spring stand, winter survival and yield will be summarized and appropriate statistical analyses conducted. It then will be posted on <http://forages.cfans.umn.edu> in a timely fashion during the growing season. Forage quality results will be published in the fall.

Experimental entries - Each entrant will be provided with a summary of data for entries and check varieties. The data will be presented by company experimental designation until the entry either receives favorable action by the National Alfalfa Variety Review Board or is recognized as eligible to be certified by AOSCA or is approved for Plant Variety Protection. At that time, the Minnesota Agricultural Experiment Station is free to use the data from experimental entries to describe the variety (see next section).

Data collected on Syn2 or later generation experimental populations that are later released to farmers as varieties will be published, but only if the newly named variety is immediately entered again into trials using seed available through commercial channels. Data collected from experimental seed will no longer be included in the published data once two full

production years of data are collected from commercial seed with a number of tests sufficient to replace the data from the experimental entries.

If data are derived from experimental seed (Syn2 or later) testing, the data will be identified as such with a footnote similar to the following: "Variety was tested using experimental seed that may not give performance identical to commercially available seed". Data collected from alfalfa populations entered as experimentals in University trials that are not released as named varieties will be distributed via individual correspondence and through NOT FOR PUBLICATION documents.

Released Varieties – In 2006 (4th quarter), data will be published on our website <http://forages.cfans.umn.edu>, in Agri-News magazine, by the Minnesota Agricultural Experiment Station in the bulletin "Minnesota Varietal Trials Results" and on the MAES website <http://www.maes.umn.edu> and also included in SELECT software.

Variety names in the yield performance tables will be highlighted as entries with data sufficient for reliable yield comparisons if: The variety or its experimental predecessor is seeded in at least three tests and has yield data from at least 2 production years beyond the seeding year.

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 128 Crop Research 1902 Dudley Ave, St. Paul MN 55108
 Attn: Joshua Larson: 612-625-8189, FAX 625-8189
 Email: larso276@umn.edu
 http://forages.coafes.umn.edu/

*** Use ONE application form for each Entry

Date _____

Application for Entry

*** 2007 MINNESOTA ALFALFA PERFORMANCE TRIALS ***

** Minnesota - Wisconsin Alfalfa Forage Quality and Winter Survival Trials **

Due at St. Paul: March 1, 2007

SEED Lot Data

CV: Variety Name

(Include experimental name below, for cross reference) _____

Exp: Experimental designation _____

Synthetic Generation (where breeder seed is Syn 1)

National Review Board approval? Yes No Pending

MN seedlot # (MN office use only)

SEED Germination tests

Total % Germination _____

% Germination _____

Hard Seed _____

Scarified Yes No

Test Date _____

Locations of Trials

Forage Yield

RO: Rosemount CV\$500 Exp\$375

SC: Stearns Cnty CV\$500 Exp\$375

LA: Lamberton CV\$500 Exp\$375

GR: Grand Rapids CV\$500 Exp\$375

FQ: Forage Quality \$500

RO yield and FQ CV \$800 Exp \$700

RR: at SC CV \$400 (special)

Root lesion Nematode test \$250

Winter Survival 4 sites, MN, SD and 2 in WI; \$550 to WI

www.uwex.edu/ces/forage/news/forms.htm



Seed Lot Instructions:

Experimental entries: submit 125 g of seed for each Yield trial; Forage Quality: 200g; Nematode-field: 100g to Joshua Larson at Minnesota.

Winter Survival 150g of seed to Wisconsin.

Commercial Entries: per CAIC protocol using WI-centralized distribution, contact Kevin Silveira (Univ. Wisconsin, Dept. of Agronomy, 1575 Linden Drive, Madison, WI 53706, Phone: 608-262-6203 Fax 265-3747) by Feb. 15, 2004. See:

<http://www.uwex.edu/ces/forage/news/distribution.htm>

If you are entering only the Minnesota trials, a commercial seed bag can be sent directly to us.

Make check payable to: University of Minnesota, Agronomy Dept. (note: Alfalfa Fee Test). Send this application and fees to Minnesota address above.

Affidavit: I certify that the submitted seed is a true sample of the designated entry. I will not hold the University or its staff responsible for failure to obtain stand or growth due to unfavorable climatic conditions.

Signature _____

APPLICANT Information (Each of the identified seed source names/addresses will receive the end-of-season reports.)

Distributor/Marketer

Company _____

Contact/Title _____

Address _____

City, ST, Zip _____

Phone / Fax _____

E-mail _____

Web _____

address _____

Breeder/Developer:

Company _____

Contact/Title _____

Address _____

City, ST, Zip _____

Phone _____

E-mail _____

Web _____

address _____

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