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### Minnesota evaluation of alfalfa varieties and germplasms ...2009 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 and forage quality. Results from yield trials will be available on the web at [www.maes.umn.edu](http://www.maes.umn.edu) and [www.extension.umn.edu/forages/](http://www.extension.umn.edu/forages/).

We are recommending to Minnesota farmers that when selecting varieties, they give first priority to varieties that have 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 forage quality tests, ensures a more complete description of an alfalfa variety's genetic potential.

New yield tests in 2009 will be established at Rosemount, Lamberton, and Stearns County. Data will be reported from current trials only.

### MINNESOTA ALFALFA PERFORMANCE TRIALS POLICIES AND PROCEDURES

#### **Description of Tests**

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.

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), and crude protein (CP). In addition, whole plant leaf percentage will be quantified. 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 below).*

### **Entry Fee**

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

1. Forage Yield Varieties– \$525.00 per entry (4-year test).
2. Forage Yield Experimentals – \$400.00 per entry (4-year test).
3. Forage Quality performance – \$525.00 per entry (2-year test).
4. Both Forage Yield (Rosemount) and Quality performance (Varieties) - \$850.00 per entry.
5. Both Forage Yield (Rosemount) and Quality performance (Experimentals) - \$750.00 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. 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.**

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)) 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](mailto: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 and growing season yield will be summarized and appropriate statistical analyses conducted. It then will be posted on [www.extension.umn.edu/forages](http://www.extension.umn.edu/forages) 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 2009 (4th quarter), data will be published on our website [www.extension.umn.edu/forages/](http://www.extension.umn.edu/forages/), 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.**