

Enhancing the Growth of Lavender

FNE00-350
Final Report

August 29, 2001

Denise Schwartz
9 Pocumtuck Road
South Deerfield MA 01373
413-665-3921

Enhancing the Growth of Lavender

Recap of Goals

This project monitored and compared the growth and winter hardiness of lavender (*vera*) grown in the field and in greenhouses in an effort to gain an understanding of some factors that may contribute to winter loss of plants. It also will compare loss in mulched vs. unmulched. lavender plants after one winter in the field.

Methodology

Two test farms were selected to participate in the project. Both farms are members of the Lavender Growers of Franklin County; both farms had long histories of growing perennials and annuals for wholesale and retail.

The test farms were:

Sunderland Lavender Farm/Yurkevicz Greenhouses
86 Falls Road
Sunderland MA 01375
(413)665-2161

Pioneer Gardens
198 Mill Village Road
Deerfield MA 01342
(413)773-5360

Ninety lavender (*vera*) plants, started from cuttings in the winter of 2000 at Pioneer Gardens, were planted **at each test farm.**

At each test farm, 30 plants in gallon pots were overwintered in a greenhouse and 60 plants were put in the field. Of the 60 field plants, 30 were mulched with straw and 30 were left unmulched. Straw mulch purchased from one supplier was used at both test sites.

The experimental design for the field planted lavender was created under the direction of Dr. Lyle Kraker, Department of Plant and Soil Sciences, Stockbridge Hall, University of Massachusetts, Amherst MA 01003.

Results of growth and hardiness were assessed by visual inspection in December 2000 and April/May 2001.

Reports from farms attached.

The Test Sites

Sunderland Lavender Farm/Yurkevich Greenhouses

Sunderland Lavender Farm/Yurkevich Greenhouses has been a small, family-run operation in the Pioneer Valley for more than 25 years. Seasonally operated, the greenhouses have offered a variety of annuals, geraniums, vegetables and bedding plants at retail.

Pioneer Gardens

Pioneer Gardens was founded in 1996 with the objective to produce and market perennial plants to wholesale growers throughout North America by offering a product line of quality bare root plants and large 3" vernalized plugs. It is currently expanding its greenhouse operations.

Procedures

Representatives from both test Farms, Mark Mazzola from Pioneer Gardens, and Irene Yurcevicz from Sunderland Lavender Farm, and director of the project Denise Schwartz, founder of the Lavender and Herb Growers of Franklin County, met regularly throughout the spring, summer and winter of 2000, and the spring and summer of 2001.

Mazzola and Yurkevicz also met several times to discuss the planting of the lavender, mulching dates, etc.

Schwartz visited both sites regularly and maintained phone contact with the participants.

Lavender plants approximately 3" in diameter which had been grown from cuttings by Pioneer Gardens were planted in the field at both locations during the last week of August 2000. At the same time, 30 plants, transplanted into gallon containers, were placed in greenhouses at both locations.

Thirty of the 60 field plants were mulched with straw during the first week of December at both locations.

Field Data

Soil at both sites is sandy loam.

Greenhouse Data

Pioneer Gardens

Westbrook natural ventilation greenhouse. Computer controlled heating and irrigation. Winter temperature set at 35 F. Low temp. at 35 F; daytime temp in high 60's F.

Sunderland Lavender Farm

Plastic-covered, 60 ft. unheated greenhouse. Because unheated, plants were mulched in greenhouse due to varying temperatures from below freezing to above freezing on sunny days.

Conditions, Inspections - January 2001

As of January 1, 2001, field plants at both locations were under several feet of snow.

As of January 1, 2001, the lavender housed in the greenhouses at both locations "looked good," exhibited new foliage and were approximately 12" high.

Results - April - May 2001

Field Lavender

Lavender in the field at both locations was un-mulched during the last week of April 2001.

Result at Pioneer Gardens: All plants in the field at Pioneer Gardens in Deerfield, both mulched and unmulched, at this time (May 2001) were dead. 100% failure in field plants at this location.

Result at Sunderland Lavender Farm: As of May, 2001, most mulched plants "looked better than unmulched" plants. Unmulched plants were gray, dry and shriveled. Some mulched plants also looked "poor."

Of the mulched plants, 22 of the 30 (74%) survived the winter; of the unmulched lavender, 6 of the 30 (20%) survived. (Grower at this site noted losses of other lavender varieties (*Hidcote*, *Munstead*) that wintered unmulched in the field. These were not part of the test lavender.)

Weather Conditions-Winter 2000-2001

Autumn weather through November was relatively warm. December was recorded as the coldest in 100 years. In January alone, both locations endured more than a week of single digit temperatures at night. Snowstorm on December 30 completely covered field lavender at both sites.

Results- April – May 2001 Greenhouse Lavender

Result at Pioneer Gardens: Inspection of greenhouse plants on approximately May 15, 2001 at Pioneer Gardens showed that all plants were healthy, growing well and were approximately 18" high. Greenhouse plants at this location were not mulched.

Result at Sunderland Lavender Farm: At the same time, plants in the greenhouse at Sunderland Lavender Farm were reported as follows: "most plants looked poor, gray, dry foliage, and after two weeks, there was no recovery. Only 4 plants survived."

Conclusions

The mixed results of the study are somewhat inconclusive regarding the effect of mulching lavender; however, both growers agreed that the extremely harsh winter weather conditions resulted in some failure of lavender at each farm.

The 100% failure of mulched and 100% failure of unmulched field lavender at Pioneer Gardens compared to the 26% failure rate of mulched plants and 80% failure rate of unmulched plants at Sunderland Lavender Farm suggests that the slightly more open field condition at Pioneer Gardens resulted in exposure which contributed to failure and that in cases of open fields with high exposure, mulch did not positively affect survival.

Consider also that mulched plants house in the unheated greenhouse at Sunderland Lavender Farm experienced low survival rate.

Lavender wintered in the heated greenhouse at Pioneer Gardens survived and was extremely healthy upon visual inspection mid-summer 2001. Twelve of these plants were put in a south-facing "household garden" plot in August 2001 at the residence of Denise Schwartz, South Deerfield, in dirt that is very poor, dry and sandy. These plants will not be mulched during the winter of 2001-02. Visual inspection will be recorded May 2002.