# Effect of storage conditions on seed quality of fine fescue seeds

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# Objective

**Determine the effect of storage conditions on seed viability and vigor of coated and non-coated seeds of creeping red fescue (*Festuca rubra* L. spp. *rubra)* and chewing fescue *[Festuca rubra* spp. *fallax* (Thuill.)] stored at three environments for two years**

# Rationale

- No information is available on the extent of deterioration of fine fescues in storage under different warehouse or other environments over extended period of time.
- The study will shed light on how to monitor seed viability and vigor of fine fescue in storage and the proper storage conditions for two-year period.

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# Materials and Methods

- **Crops to be used in the study**
- **Creeping red fescue (*Festuca rubra* L. spp. *rubra).***
- **Chewing fescue *[Festuca rubra* spp. *fallax* (Thuill.)].**

**2010 crops will be used.**

- **Three seed lots of different qualities from each crop will be used.**
- **Approximately, twenty pounds of each seed lot, half of which will be coated and the other half non-coated seeds.**

# Materials and Methods

## Storage conditions

- **Normal warehouse conditions in SW MO.**
- **Garden Center at home improvement store in Springfield, MO.**
- **Constant 10°C and RH ~55%.**

  **Temperature and relative humidity will be collected (monthly average) in each storage site.**
- **Storage containers will be identified and reported.**

# Materials and Methods

## Length of the study

**Two years, with various viability and vigor tests conducted each 6 months.**

- **Initial seed quality of each lot will be identified after harvest and cleaning (approximately Aug, 2010)**
- **Second testing: Feb 2011**
- **Third Testing: Aug 2011**
- **Fourth Testing: Feb 2012**
- **Fifth and final testing: Aug 2012**

# Materials and Methods

## Types of tests to be conducted every six month

- Seed moisture content.
- Tetrazolium.
- Standard germination.
- Accelerated aging.
- Cold Test.
- Electric conductivity.

# Materials and Methods

## Participating Labs

- We will announce the study on the AOSA/SCST web site and ask for participants.
- We hope to get six responses from labs that have experience in viability and vigor testing of fine fescue.
- A full study protocol and data sheets will be sent to participant laboratories.
- Data will be collected and analyzed.


We hope to publish the study findings