



Czech University of Life Sciences Prague

**Faculty of Agrobiography,
Food and Natural Resources**

Study programme: **Special Crop Science**

Department of: **Crop Production**

Supervisor: **Prof. Ing. Ivana Capouchova, CSc.**

Co-supervisor: Katerina Pazderu

Topic: Seed vigor as a decisive factor affecting the establishment of field crops stands in adverse environmental conditions

Hypotheses:

Seed quality can be greatly improved by more accurate testing of its vigor.

The low vigor of the seeds is caused by the high heterogeneity of the harvested natural seed.

Summary:

Today's agriculture faces a major challenge to adapt to ongoing climate change. With an increase in extreme weather patterns, the need for agriculture to respond to these extremes is growing. Different climate models predict in the context of global climate change an increase of precipitation in the winter period and its reduction in spring and summer to the year 2030, respectively 2050 in the Central European region. Also, more frequent occurrences of extreme events are predicted.

Natural seed harvested from one seed stand is a heterogeneous material that is unified in its properties through a number of post-harvest and pre-sowing treatments. The heterogeneity of the seeds is influenced by the variability of the abiotic factors that act in the formation and maturation of the seeds, especially on their vigor. The focus of seed quality testing on its vigor could be to improve the ability of seeds to emerge under less favorable environmental conditions.

Source of: possible collaboration with Selgen at the level of samples for analysis

In Prague, date 2017-03-21

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