

Various topics

### **Wheat growth (7 days) and extremely diluted gibberellic acid (10e-30): Repetitive experiments on a fundamental homoeopathy research model**

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#### **Objective**

To test, in multiresearcher experiments, a hypothesis on the seasonal influence on the effect of extremely diluted gibberellic acid (10e-30) on wheat growth (7 days).

#### **Background**

In a first project phase (2007-2009, see ECIM abstract 2009 by Endler et al.), several independent researchers working at the Interuniversity College found significantly *reduced* longitudinal growth of wheat stalks in groups treated with gibberellic acid 30x (stepwise diluted and succussed, 10e-30: "G 30x") as compared with groups treated with water 30x (W 30x) when experiments were performed in autumn season. However, in replications in winter growth rates in the G 30x groups were approximately equal to or higher than in the W 30x groups. As a rule, each single experiment comprised 500 seedlings per group of G 30x or W 30x.

researcher	Pfleger autumn 07	Hofäcker autumn 07	Reich autumn 08	Reischl winter 09/10	Thieves 1 winter 09/10	Thieves 2 winter 09/10	Pfleger winter 09/10
rel. diff. (%)	- 6.7	- 11.2	- 6.2	+ 7.5	+ 9.7	+ 0.4	+ 10.0

#### **Methods**

In a second project phase (2009-2010), the experiment was repeated a) in autumn and b) in winter. Wheat stalk growth after 7 days was observed under the influence of G 30x (potentized verum, see above, background) and W 30x (potentized control), as well as W0 (inert control). Each experiment comprised 500 seedlings per group G 30x and W 30x. Results (stalk lengths based on numbers of germinated seedlings) were analysed by means of analysis of variance.

#### **Results**

Interestingly, in all experiments, stalk growth after 7 days was reduced in groups treated with G 30x compared to W 30x.

researcher	Hartmann autumn 09	Scherer 1 autumn 09	Scherer 2 autumn 09	Scherer 3 autumn 09	Matzer winter 09/10
rel. diff. (%)	- 1.8	- 4.7	- 6.9	- 5.5	- 3.4

#### **Conclusion**

The idea (derived from ECIM abstract 2009) that the direction of the effect depends on the experimental season (autumn or winter) has to be modified. It rather appears that experiments in autumn (i.e. the natural growth season) reliably show less growth under treatment with G 30x (7 out of 7 experiments), whereas experiments in winter (i.e. natural resting season) yield inconsistent results (out of 5 experiments, 1 showed less, 3 showed more and one showed equal growth under G 30x). We therefore suggest performing further repetitive studies on the model in the autumn season. Furthermore, it may be interesting to examine germination rates within the first day(s) of development (see ECIM abstract 2010 by Hartung et al.).