

## A METHOD OF PRE-SOWING MAGNETIC TREATMENT OF DRY SEEDS

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Throughout the development of life on Earth living organisms are evolving in an environment where electromagnetic fields of low intensity are present [1], for example waves Schumann (7.8–8 Hz). All processes that have place in the cells of living organisms are associated with such natural fields [2, 3].

The goal of our research was to investigate the effect of alternating pulsed magnetic field with induction of 40–50  $\mu\text{T}$  in the frequency range from 1 Hz to 10 Hz. Effecting signals have very low intensity and the frequency which are characteristic for all living organisms, therefore such signals can not cause adverse reactions in cells and are environmentally safe. As response to such exposure in plant cells occurs resonance, the electromagnetic response, which is expressed in the optimal growth and development.

We have conducted laboratory experiments on the effects of the magnetic field with the above parameters on seeds of wheat, cucumber, melon, watermelon, and radish of different varieties. There was obtained germination of seeds of 97–100% in the experiment, and a significant uniformity of seedlings. On the average in the control sample the germination was 60–65% without uniformity.

We have performed a field experiment to test the method of pre-sowing magnetic treatment of dry seeds of cucumbers and tomatoes.

According to the results of the harvest the following data were obtained:

1. In the test sample with cucumbers the crop yield was 24.8% higher than in the control sample.
2. In the test sample with tomatoes the crop yield was 43.9% higher than in the control sample.

By the end of the field period plants in the test sample remained green with plenty of flowers in contrast to the control sample, where the vegetation was almost over (the plants have turned yellow without flowers).

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[2] Temuryanz N. A., Vladimirsky B. M., Tishkin O. G. *Ultra-low frequency electromagnetic signals in the biological world*. Kiev, Naukova Dumka, 1992. [in Russian]

[3] Berkutov A. V., Zhuleva V. I., Kuraeva G. A., Proshina E. M. *Systems for complex electromagnetotherapy*, Moscow (2000). [in Russian]