

# ELECTROMAGNETIC EFFECTS ON SOYBEANS

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## ABSTRACT

In this study we have exposed different varieties of soybean seeds to electromagnetic (EM) radiation at a frequency other than that of light. The objective was to determine changes in the germination rate, if any, under the influence of EM field of a given frequency, power and exposure time.

Soybean was chosen because it could be used as a potential source for biofuel. Of the four soybean genotype used, Magellan showed better germination rate than Maverick, SS97-6946 and William82. Results on Magellan for repeat experiments were inconclusive at best. Germination for case studies with two hundred samples showed marked improvement but the statistical significance for much larger sample (1000 seeds) decreased. All the experiments were conducted in an anechoic chamber at a power level of 126 Watts, Frequency 100 MHz and exposure time 10 minutes.

For future work, we suggest similar experiments with other frequencies and different exposure times and power levels and other varieties of soybean seeds.