What Did You Say? Plant Communication in Transgenic and Non-Transgenic Soybeans

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Recently, studies on plant communication have been conducted by scientists. Many of these studies suggest plants can be trained to handle stress, such as drought and insects. This may be a safe and reasonable way to manage crops to be pesticide and herbicide free as effectively as genetically modified plants. Farmers, particularly in developing countries, would no longer need to rely as much on the weather for their income. Which leads to the question: Do genetically modified plants communicate as efficiently as non-transgenic plants and how far can plant signals travel? It was hypothesized that GMOs will communicate as well as the non-transgenic soybeans. Both GMO and non-transgenic soybeans were planted in containers either the average distance between plants or the rows. One plant of the pair was watered the appropriate amount, while the other soybean was no longer watered. There were also plants without a pair set as the control, half were watered and the other half were not. A leaf from every plant was taken and observed for either open or closed stomata. Then these results were compared to the control to see if the openness of the stomata matched closer to the amount of moisture received or who its partner was. The data supports the hypothesis: there is no difference in communication among GMO and non-transgenic soybeans placed at the usual spacing between plants and rows. Although there is a difference in the graph comparing the two, the difference is not statistically significant.

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