

## Evaluating Abnormal Condition in Physiological Disorder Using a Fluctuation Characteristic of Plant Bioelectric Potential

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For maintaining a steady food supply, the trend has been toward developing factory-like production methods in Japan. To date, there has been no indicator that can predict the growth status of crops. We have accordingly focused on the bioelectric potential inside the plant, which could be an indicator of plant growth. However, a few research studies have been conducted on its role in determining the plant growth status. In this study, we aimed to use plant bioelectric potential as a means of determining growth conditions. Fluctuation characteristics in plant bioelectric potential frequency components should provide indicators of conditions between normal and inhibited growth processes. We discuss that different growth condition factors were identified using logistic regression analysis. This experiment yields a discrimination rate of 86.6% obtained using the calculated logistic regression model between these conditions.

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