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Influence of Water-Stressed Rice on Feeding Behaviour of Brown Planthopper, *Nilaparvata lugens* (Stål)[1]

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Abstract:

Climate change can impact insects through abnormal weather conditions such as elevated temperatures and droughts. Crops experiencing periods of water stress from droughts may have significant effects on pest populations because of physiology changes, insect behavior and adaptation. Here we report on the effects of water stress on the rice pest, the brown planthopper (BPH), *Nilaparvata lugens* (Stål). In the multiple choice test, both the fifth instar nymphs and female adults BPH preferred plants under the low stress level over control and high stress plants. The electrical penetration graph (EPG) showed that the fifth instar nymphs spent more time in non-penetration activities while the female adults spent less. Both the fifth instar nymphs and female adults spent more time in salivation on high stress plants than in control and low stress plants indicating difficulties in feeding. In addition there was marked increase in probe numbers

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