



Faculty of  
Science and  
Technology  
Tokushima University

# Image Processing Is Applied in the Fields of Agriculture and Biology

## Designated Assistant Professor Kenshin Saitou



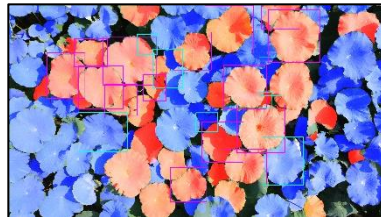
1. Early instar larva



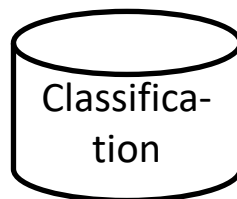
1. Late instar larva



1. Detection feeding damage of pest insect



2. Insect classification



### Content:

The number of agricultural workers in Japan's sole proprietorships has been declining in recent years. In response to these issues, smart agriculture, which utilizes robots and AI, is flourishing. Specifically, image technology utilizing cameras is being researched and developed for smart agriculture due to its lower implementation cost..

Therefore, we are applying image technology in the fields of agriculture and biology to improve production and reduce human effort.

1. Early detection of pest insects in lotus root fields using aerial imagery.

This research aims to automate pesticide spraying and reduce the spraying rate. We detect feeding damage from aerial imagery captured by UAVs to predict pest distribution.

2. Classification system of insect utilizing image of insect wing

This research aims to automatically classify insects to specify pest control methods.

Keywords: Computer Vision, Image Processing

E-mail: [saitou.kenshin@tokushima-u.ac.jp](mailto:saitou.kenshin@tokushima-u.ac.jp)

Tel. +81-88-656-9684

