

### **Abstract**

In large-scale greenhouse production, technological developments can reduce production costs; mechanization of crop maintenance and harvesting is one desirable way to accomplish this. In this context, we have developed three types of harvesting robot. Our prototype strawberry-harvesting robot could judge maturity and make basic harvesting movements. Our eggplant-harvesting robot achieved a harvesting rate of 29.1%, averaging 43.2 seconds per fruit. The stereoscopic vision system of our tomato harvesting robot could detect individual fruit, and detected the closest ripened tomato with an accuracy of approximately 85%.