

## **Evaluation of potato cultivars for yield and processing quality**

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**Key Words:** potato, cultivar

### **Take home messages**

- ❖ *Potato cultivar evaluation is important for industry productivity and satisfying consumer demands.*
- ❖ *Experiments at Forthside Vegetable Research Facility contribute to data on which cultivar selection is based.*

### **Introduction**

Evaluation of potato cultivars for adaptation, yield and quality across a range of environments is vital to ongoing production and product improvement. It also ensures continuity of supply to processors and the fresh market. Multi-location trials contribute to the stability of the industry and ensure growers have suitable cultivars for use in their production systems. It is also important that processors have access to potato cultivars that are suitable for processing with characteristics such as a high proportion of suitable sized and shaped tubers, and produce processed potato products that meet consumer demands.

### **Objectives**

The objectives of this project were to: i) evaluate a number of cultivars of potatoes from McCain Foods for adaptation and yield in north-west Tasmania; and ii) carry out cooking quality tests on tubers.

### **Methods**

Field experiments involving a total of 28 cultivars were conducted on Forthside Vegetable Research Facility (FVRF). The experiments were fully irrigated and received optimum fertilizer and pest management. Trials were planted on 12/11/09 and 18/11/10, and dug on 13/04/10 and 10/5/11, respectively. Disease incidence, and yield, size and skin textures of tubers, were recorded. Assessments of cooking quality (bruising, initial flesh colour and colour after frying under standard conditions) were carried out by TIAR staff using 20 tubers per variety.

### **Outcomes**

Reports on cultivar suitability for the north-west Tasmania, their disease resistance, yield of tubers and some preliminary quality data (bruising, shape, color, texture and size of tubers and cooking quality) have been supplied to McCain Foods in 2010 and 2011. Cooking quality was assessed by TIAR at Devonport, as the evaluation was carried out under quarantine conditions and evaluation elsewhere is not appropriate. The data from this site contributes to the overall data resource on which cultivar selection for commercial production is based.

### **Funding and project duration**

Support provided by McCain Foods.

- Evaluation of potato cultivars has been undertaken at FVRF for many years, this paper reports on work conducted Nov 2009 - May 2011

### **Technology transfer and publications**

- Reports to McCain Foods

### **Additional collaborators**

- L. Murdoch (McCain Foods)



**McCain potato cultivar trial,  
FVRF**