



Agriculture & Horticulture  
DEVELOPMENT BOARD



# **Grower Summary**

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## **SF 93**

Evaluation of six black raspberry  
cultivars

Final 2012

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<b>Project Number:</b>	SF 93
<b>Project Title:</b>	Evaluation of six black raspberry cultivars
<b>Project Leader:</b>	James Carew
<b>Contractor:</b>	FAST (Farm Advisory Services Team Ltd)
<b>Industry Representative:</b>	Tim Place, Place UK Ltd
<b>Report:</b>	Final Report 2012
<b>Publication Date:</b>	06 July 2012
<b>Previous report/(s):</b>	Annual Report 2011
<b>Start Date:</b>	01 April 2008
<b>Expected End Date:</b>	31 December 2011
<b>Project Cost (Total Project Cost):</b>	£8,673.00

## Headline

- In an assessment of four black raspberry varieties in UK conditions, Mac Black and Jewel produced the best yields and fruit quality.

## Background and expected deliverables

The black raspberry is a member of the *Rosaceae* and it belongs to the same sub-genus (*Idaeobatus*) as the red raspberry (*Rubus idaeus* L.), with which it shares the trait of its fruit separating cleanly from the receptacle. Black raspberry (*R. occidentalis* L.) production has traditionally been concentrated almost completely in Oregon, 'Munger' and 'Jewel' being the leading varieties with Munger being bred in the 1890s and Jewel in 1957 (Graham and Jennings, 2009). However, since the early 1900s, black raspberry production in the United States has seen a marked decline that many attribute to disease and a lack of varieties with sufficient disease resistance. At the same time, breeding progress has slowed dramatically due to an apparent lack of genetic variability in available elite germplasm. Interest in black raspberries has been growing in recent years in a number of countries from the U.S.A. to South Korea (Graham and Jennings, 2009) because of their high anthocyanin content and antioxidant capacity. New varieties, which are adapted to the biotic and abiotic stresses of the Pacific Northwest, may help expand the market for black raspberry fruit and improve the financial return to the growers.

The aim of the work described here was to obtain varieties of black raspberry for trialling in the U.K. and to identify whether any of the tested varieties showed promise for commercialisation. Whilst the four varieties that were obtained are described in this report, these descriptions are based on experience of growing the varieties in the U.S.A. and information from U.K. based trials is needed.

## Summary of the project and main conclusions

The first stage of the project was to collect the varieties and propagate them. Haut, Huron and Jewel were sourced from SCRI, Dundee in January 2009. Mac Black was supplied by Edward Vinson Ltd., Faversham, Kent.

### *Background to the varieties chosen*

**Haut** [Manteo x (Bristol x Bristol)] From Maryland. Medium sized, firm fruit ripens over a long period. Plants are vigorous with good productivity.

**Huron** (Rachel x Dundee) From New York. Medium sized fruit is firm and glossy. Canes are vigorous moderately hardy and moderately resistant to anthracnose. Lawrence (1979) also

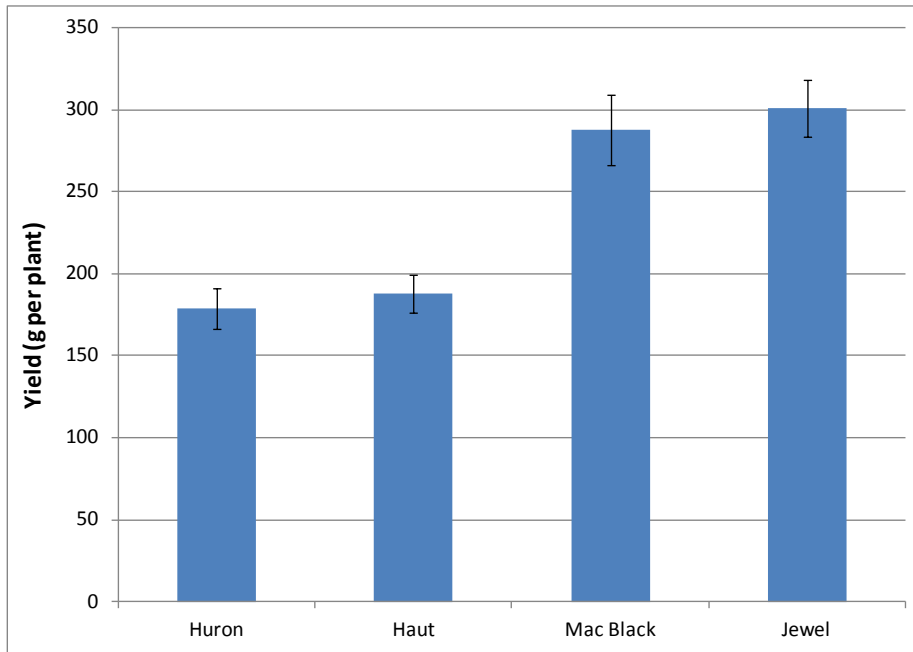
described Huron as originating from New York, as a late midseason variety with large glossy firm berries with vigorous canes.

**Jewel** originated in 1954 from a cross between New York 29773 (Bristol x Dundee) x Dundee (Fig. 3). It was selected in 1957 from a population of 104 seedlings and tested in New York. The plant is vigorous, erect, hardy and said to be consistently productive. The fruit ripens in mid-season and is large with glossy black skin but has a slight bloom. One issue is that it tends to produce a tight cluster of fruit at the tip of laterals which could make picking difficult (Ourecky and Slate, 1973).

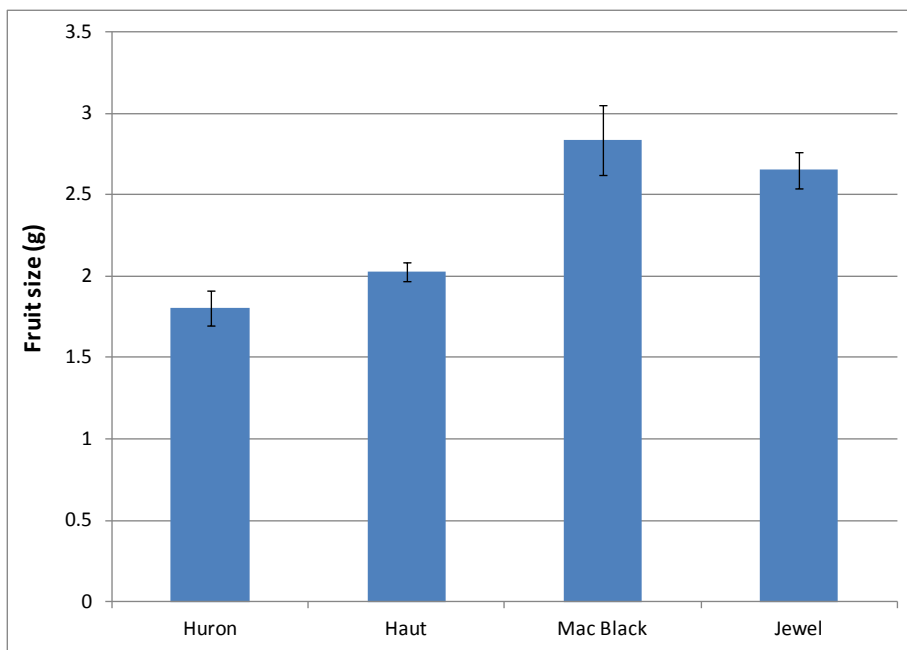
**Mac Black** (parentage unknown) From Michigan. Ripens medium large berries 7-10 days later than most cultivars. Fruit is somewhat soft. Canes are vigorous, erect, and hardy.

The mother plants were potted up into 10L black pots using a coarse peat based potting compost (Sinclair SHL Potting growing medium) in April 2009. The canes were allowed to develop during the early part of 2009 until cane height reached 2m. At this point the layering process was initiated. Canes were laid onto 8cm x 2.5m trays containing sowing compost (Sinclair SHL Sowing compost). The canes were pinned in place and the compost maintained damp whilst the canes began to produce roots. The rooted canes were cut into 5cm sections and allowed to develop long canes during 2010 to be cropped in a commercial raspberry tunnel in 2011. Yield, fruit quality and shelf life were recorded in 2011. There were clear differences between the varieties.

Yields of Mac Black and Jewel were much greater than either Haut or Huron (Figure 1). Fruit size was greatest in Mac Black (Figure 2) although compared to current commercial red raspberry varieties, fruit size was still small. Whilst there is a suggestion from the literature that shelf life of black raspberry is poor, this was found not to be the case in this trial.



**Figure 1** Comparisons of yields between the four varieties (total g/plant)



**Figure 2** Average fruit size

### Financial benefits

At this stage, no financial benefits can be identified.

### **Action points for growers**

- Whether the black raspberry varieties have commercial prospects will depend on customer perception.
- Those retailers who sampled the fruit felt the quality was not good enough to justify large plantings.
- However, Mac Black and perhaps Jewel stand out as the two most promising varieties and if growers choose to plant black raspberry, these varieties should be selected.
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