

RASPBERRY

(Rubus ideaus)

Final Trials Report

2005 – 2009



RHS Trial of Raspberry

Objectives

The objectives of the trial were:

- To assess, compare and judge a range of cultivars for the Award of Garden Merit (AGM).
- To recommend cultivars suitable for the amateur gardener
- To demonstrate the cultivation of both summer and autumn fruiting raspberries

Evaluation

The Fruit Trials Sub-Committee assessed entries in the trial for the Award of Garden Merit on the following dates:

2007: 21st June, 12th July, 16th August, 5th September.

2008: 18th June, 16th July, 20th August, 9th September, 2nd October.

2009: 24th June, 15th July, 19th August, 9th September, 1st October.

The judging criteria were as follows:

- Fruit quality - taste, appearance, size.
- Yield - overall weight per plant and weight per variety.
- Plant habit - uprightness, length of laterals and their strength of attachment, ease of picking, cultivation etc.
- Plant vigour.
- Resistance to disease.
- Duration of fruiting season.

Entries

There were 27 entries in the trial, 16 summer fruiting and 11 autumn fruiting varieties, which were submitted by various commercial growers across the UK, listed as supplying certified stock in the DEFRA Plant Health Propagation Scheme list.

Cultivation

Prior to planting, the trial site was prepared by breaking up the soil and incorporating well-rotted manure. The plot was sterilised in September 2005 using Basamid (active ingredient: dazomet) which is a soil fumigant. The Trial was planted in December 2005 with newer pot-grown cultivars planted in April 2006.

Posts and wires were put up to provide support and a cage erected around the trial to prevent bird damage.

Summer fruiting cultivars were planted alongside a single fence system with 3 equally spaced horizontal wires. Plants were spaced 45cm apart, with 180cm between each row. Autumn fruiting cultivars were planted on parallel wires and spaced 45cm apart, with 180cm between rows. Permanent drip irrigation was put in place at the base of the canes and an overall mulch of chipped bark was applied following planting.

Following soil analysis in March 2006 nitrogen was applied (as Sheppey Nitripal) at a rate of 33 g/m² and potassium as sulphate of potash at 12g/ m².

Summer fruiting cultivars crop on those canes that have developed in the previous year. After cropping, canes that had produced fruit were cut down and the best young canes tied in 7.5-10cm (3-4") apart. Autumn fruiting cultivars crop at the top of the current season's canes, subsequently all canes were cut down to ground level each February and new canes tied to wires as they grew.

Pest and Disease

The following pests and diseases were encountered during the trial:

- Leaf and bud mite – treated using *Amblyseius cucumeris* and *Amblyseius andersoni* (predatory mites) as bio control.
- Raspberry beetle – treated using a Pyrethrum based solution.
- Powdery mildew – treated using Serenade®.

Other Findings and Panel Comments

A loss in vigour was noted in some plants. This was put down to poor drainage across a section of the trial plot. *Phytophthora* was suspected but not confirmed by laboratory tests, though *Pythium* species were found.

Of the cultivars entered two 'Valentina' and 'Malling Juno' were removed being incorrect stock. These two cultivars were in the early category leaving only 'Malling Minerva' to compare with the standard 'Glen Moy'. There was one late entry 'Cascade Delight' which the panel monitored but felt they could not include in the final results as it only came into full crop during 2009 the final year of the trial. 'Malling Jewel' was included as the standard early/mid-season cultivar while the new cultivar 'Julia' was compared with the standard mid-season cultivars 'Glen Ample', 'Glen Prosen' and 'Malling Admiral'.

The new late cultivars 'Glen Doll' and 'Glen Magna', 'Tulameen' and 'Malling Hestia' were compared with 'Malling Leo' as the standard. There was one very late cultivar 'Octavia' with no strict comparable standard stock available.

Early Cultivars

'Malling Minerva' - began cropping as early as 'Glen Moy' and finished slightly later but out cropped 'Glen Moy' in all three years of the trial. The panel found it had a good growing habit and it was easy to pick. The fruit quality was also deemed good. An improvement on 'Glen Moy'.

'Glen Moy' - although an early cropping cultivar with good fruit quality it has been superseded by 'Malling Minerva'.

Early Mid- Season Cultivars

'Malling Jewel' - this is an old well established cultivar which still performs well. It has a lovely raspberry flavour and is easy to grow with a compact habit. The yield of this cultivar is not high but very acceptable to the amateur gardener. This cultivar already has an AGM and this was confirmed by the panel.

Mid- Season Cultivars

'Glen Ample' - this is a vigorous cultivar with tall cane. The new cane can shade out the lower fruiting buds and can be susceptible to leaf and bud mite which is a pest that is difficult to control. It has a high yield with large, good flavoured fruit; well suited to freezing. It already has an AGM and this was confirmed by the panel.

'Julia' - not quite spineless on the canes with long fruiting laterals which can break especially under weight of fruit. A firm berry which looks good on the plant but the flavour is weak. A consistent cropping cultivar but is not an advance on the other standard mid-season cultivars.

'Glen Prosen' - this cultivar has spine-free cane which is easy to manage. Its firm, round berries did not have an intense raspberry flavour and the yield was disappointing. Although this cultivar has an AGM in 1993 the panel now feels it has been superseded by others.

'Malling Admiral' - it has cane with good habit. The fruiting laterals are long which can be damaged in windy conditions. This must be borne in mind if planting this cultivar. It has high quality fruit but yields have been disappointing over the 3 years of the trial. It already had an AGM which the panel reconfirmed.

Late Season Cultivars

'Glen Doll' - the panel found little to recommend this cultivar to the amateur gardener. Yield was consistently poor and other cultivars in this category were far superior.

'Glen Magna' - is a very vigorous cultivar with long, strong fruiting laterals. It has large fruit with a good flavour. Yields were consistently high with a long cropping season. The panel recommended this cultivar for an AGM.

'Tulameen' - this was the outstanding cultivar of the whole trial. It has strong cane growth with an upright habit. It is spine free and easily handled by the amateur grower. The panel felt it had exceptional fruit quality and produced the highest yield in all three years of trial. It is also less prone to pest and disease than other varieties. The panel recommended this cultivar for an AGM.

'Malling Leo' - this was the standard late variety. It has strong canes with long fruiting laterals. The fruit is of high quality with a very good flavour. However, yield was disappointing and the panel felt that other late varieties were now far superior.

'Malling Hestia' - another strong, upright growing variety but fruit was variable in size and appearance with an average flavour. Rather prone to pest and disease which the amateur gardener would have difficulty controlling. Other later varieties were far superior.

Very Late Cultivars

'Octavia' - this is a very late cultivar cropping into early August which could fill a gap for some gardeners. This is a strong growing cultivar with good fruit quality and provides very acceptable yields.

Yields

Many of the cultivars in the trial performed well and only 'Autumn Bliss' could not be included as the stock provided proved defective and it was also adversely affected by the poor drainage conditions on part of the site. The panel concluded it was not worth recording but, on the basis of their experience of Autumn Bliss elsewhere, concluded that it continues to deserve its AGM.

Of the others 'Joan J' gave the top average total yield over the 3 year period of 8.72 kgs. 'All Gold' and 'Caroline' were second and third at an average total yield of 7.95 kgs and 7.77 kgs respectively. 'Polka' and 'Himbo Top' also performed well giving over 7 kgs average yield over the 3 years.

Cultivars

'Joan J' - was highlighted by the panel as a cultivar which is easy to grow, reach and pick for the amateur gardener. The habit of the cultivar is upright allowing easy access for growing and picking. Berry size is good and the eating quality was deemed very acceptable. The panel recommended this cultivar for an AGM.

Joan Irene - was very late ripening and may be too late for the north of England and for Scotland. It also has very tall cane which means that fruiting will start over 1.5 m from ground level. Although the panel was quite impressed with berry size and appearance many felt the eating quality was only moderate. Its yield was never fully evaluated as the fruit was so late ripening.

'Autumn Britten' - this cultivar has very thorny canes and not very nice to handle. This also makes picking more difficult although the average yield over 3 years was well over 6.5 kgs. The good sized fruit can tend to break up on picking as they are more difficult to plug. On balance the panel felt that other cultivars were superior.

'Polka' - this cultivar gave an early flush of fruit with berry size and appearance rated highly by the panel. It yielded on average over 7 kgs and was consistent over the three year period. It has a good upright habit with medium vigorous cane growth. The panel recommended this cultivar for an AGM.

'Joan Squire' - this cultivar disappointed overall. Yield was not as good and the panel did not rate the eating quality highly either. Its cane habit was rather floppy and needed support throughout the trial. Although it has some good points overall other cultivars in the trial were preferred.

'All Gold' - this was the only yellow/golden fruited cultivar in the trial. It needed to be left to ripen well before the flavour is fully tasted. It performed well and was liked by the panel. The average yield was just under 8 kgs for the 3 year period. Yield generally built up peaking at the end of August and early September much like 'Joan J'. It has an upright habit with easy to manage cane. The panel recommended this cultivar for an AGM.

'Himbo Top' - this cultivar has tall cane making it more difficult to manage for the amateur gardener. Its average yield was over 7 kgs for the period of the trial having good berry size and fruit appearance. Its resistance to pest and disease was also noted. A good strong growing cultivar.

'Caroline' - the flavour of this cultivar was rated highly by the panel when allowed to mature and this was complimented by its high average yield of 7.7 kgs. It out-cropped all other autumn fruiting cultivars in the trial during 2008. The berry size and appearance also impressed the panel. The panel recommended this cultivar for an AGM.

Plants Receiving the Award of Garden Merit

The following are the plants thought to fulfil the Award of Garden Merit criteria during the trial and to be worthy of receiving the award. The criteria which a plant needs to fulfil in order to receive the award are:

- excellent for ordinary use in appropriate conditions
- available
- of good constitution
- essentially stable in form and colour
- reasonably resistant to pests and diseases

Hardiness ratings are as follows:

- H3 – hardy outside in some regions; needs frost-free protection in winter
- H4 – hardy throughout the British Isles

Plants Awarded AGM

***Rubus ideaus* ‘Glen Magna’ AGM (H4) 2009**

[Trial No. 22]

Summer Cropping, Late Ripening

Mean yield (perfect fruit) 12.2 kg

“Very vigorous. Large fruit with good flavour. Not easily plugged. Long, strong laterals with slight spines.”

Sender: R. W. Walpole Ltd



***Rubus ideaus* ‘Tulameen’ AGM (H4) 2009**

[Trial No. 23]

Summer Cropping, Late Ripening

Mean yield (perfect fruit) 14.64 kg

“Very good flavour. Good sized fruit and good yield. Vigorous, long laterals, spine free. Seems to have good disease resistance.”

Sender: Welsh Fruit Stocks

***Rubus ideaus* 'All Gold' AGM (H4) 2009**

[Trial No. 7]

Autumn Cropping

Mean yield (perfect fruit) 7.81 kg

*"Lovely looking fruit with a delicate flavour.
Healthy plants."*

Sender: R. W. Walpole Ltd



***Rubus ideaus* 'Caroline' AGM (H4) 2009**

[Trial No. 11]

Autumn Cropping

Mean yield (perfect fruit) 9.93 kg

"Superb flavour when fully ripe. Good crop."

Sender: Edward Vinson Plants Ltd

***Rubus ideaus* 'Joan J' AGM (H4) 2009**

[Trial No. 9]

Autumn Cropping

Mean yield (perfect fruit) 8.82 kg

*"Good looking fleshy fruits but variable in size.
Very good flavour."*

Sender: R. W. Walpole



***Rubus ideaus* 'Polka' AGM (H4) 2009**

[Trial No. 5]

Autumn Cropping

Mean yield (perfect fruit) 6.9 kg

*"Very aromatic, beautiful flavour and good
looking fruit. Healthy plants."*

Sender: Hargreaves Plants Ltd

Reconfirmed AGMs

***Rubus ideaus* 'Malling Jewel' AGM (H4) 1993**

[Trial No. 16]

Summer Cropping

Mean yield (perfect fruit) 8.76 kg

"Short laterals, compact. Good standard, performs well. Easy variety for amateurs."

Sender: Welsh Fruit Stocks



***Rubus ideaus* 'Malling Admiral' AGM (H4) 1993**

[Trial No. 20]

Summer Cropping

Mean yield (perfect fruit) 4.88 kg

"Very vigorous. Quite strong with medium-long laterals. Dark berries, spine free. Easy variety for amateurs."

Sender: T J Moore

***Rubus ideaus* 'Glen Ample' AGM (H4) 2000**

[Trial No. 17]

Summer Cropping

Mean yield (perfect fruit) 11.61 kg

"Good size fruit with nice flavour. A good commercial variety, normally an excellent cropper on a par with 'Tulameen'."

Sender: Hargreaves Plants Ltd



***Rubus ideaus* 'Autumn Bliss' AGM (H4) 1993**

[Trial No. 3]

Autumn Cropping

Mean yield (perfect fruit) 2.1 kg

"Good upright habit."

Sender: Hargreaves Plants Ltd

The following previously awarded Awards of Garden Merit were not reconfirmed and will be considered during the Sunset Review 2012.

***Rubus ideaus* ‘Glen Moy’ AGM (H4) 1993**

[Trial No. 12]

Sender: Hargreaves Plants Ltd

***Rubus ideaus* ‘Glen Prosen’ AGM (H4) 1993**

[Trial No. 19]

Sender: Hargreaves Plants Ltd

Trial Index and Senders Details

Raspberry Trial 2005 - 2009		
No.	Cultivar	Sender
Autumn Cropping		
1	‘Autumn Treasure’	Meiosis
2	‘Marcela’	Meiosis
3	‘Autumn Bliss’	Hargreaves Plants Ltd
4	‘Autumn Britten’	Welsh Fruit Stocks
5	‘Polka’	Hargreaves Plants Ltd
6	‘Joan Squire’	R.W. Walpole
7	‘All Gold’	R. W. Walpole
8	‘Himbo Top’	R. W. Walpole
9	‘Joan J’	R. W. Walpole
10	‘Joan Irene’	Edward Vinson Plants Ltd
11	‘Caroline’	Edward Vinson Plants Ltd
Summer Cropping		
Early Ripening		
12	‘Glen Moy’	Hargreaves Plants
13	‘Malling Minerva’	R.W. Walpole
14	‘Valentina’	R. W. Walpole
15	‘Malling Juno’	R. W. Walpole
Early/Mid Ripening		
16	‘Malling Jewel’	Welsh Fruit Stocks

Midseason		
17	'Glen Ample'	Hargreaves Plants Ltd
18	'Julia'	T.J. Moore
19	'Glen Prosen'	Hargreaves Plants Ltd
20	'Malling Admiral'	T. J. Moore
Late Ripening		
21	'Glen Doll'	SCRI
22	'Glen Magna'	R.W. Walpole
23	'Tulameen'	Welsh Fruit Stocks
24	'Malling Leo'	Hargreaves Plants Ltd
25	'Malling Hestia'	R. W. Walpole
Very Late Ripening		
26	'Octavia'	Highland Fruit Stocks
Late Ripening (late entry)		
27	'Cascade Delight'	Meiosis

Sender Details

Edward Vinson Plants Ltd. 4 Ewell Barn, Graveney Road, Faversham, Kent ME13 8UP

Hargreaves Plants Ltd, Cowpers Gate, Long Sutton, Spalding, Lincolnshire PE12 9BS

Highland Fruit Stocks Limited, Mains of Murthly, Aberfeldy, Perthshire PH15 2EA

Meosis Ltd, Bradbourne House, Stable Block, East Malling, Kent ME19 6DZ

R.W. Walpole Ltd, Ivy Farm, Tuxhill Road, Terrington St Clement, Kings Lynn, Norfolk PE34 4PX

Scottish Crop Research Institute, Invergowrie, Dundee DD2 5DA

T.J. Moore, 63 Norwich Road, East Dereham, Norfolk NR20 3AL

Welsh Fruit Stocks, Llanerchir, Bryngwyn, Kington, Hereford HR5 3QZ

Source: Horticultural Trials and Relations, RHS Garden Wisley, Woking, Surrey GU23 6QB

E-mail: trials@rhs.org.uk

More information about RHS Trials and other colour illustrated reports can be found on the RHS Website: <http://www.rhs.org.uk/trials>