

**Rosa variety 'Magical Fantasy' as cut foliage**  
**Interim Report**  
**Year Ending 2007**



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### **Background**

Roses are grown for their hips which are used in autumn bouquets and floral designs. They are hardy and produce rosehips every year on one-year-old wood. They are increasing in popularity and can be of high value.

A range of varieties are available in the market which give a harvesting season from September to November.

The variety 'Magical Fantasy' was selected to be assessed for yield of marketable stems and for management techniques required for a successful crop at Greenmount Campus. This is an early maturing variety with a September harvesting period. This variety has thorns. Some of the cultural techniques adopted for this variety may well be transferable to other varieties.

### **Plant source**

Gebr. Kolster B. V. Boskoop, Holland.

### **Cultural and management techniques**

Plants were planted as bare root plants in Autumn 2004 at spacing of 1.5 m x 1.5 m giving a planting density of 4,444 per ha. Plants cost approximately £2.00 each in 2004 not including carriage. Three new varieties have been planted in 2007 at 1m x 1m spacings giving 10,000 plants per ha.

In the present trial woven polypropylene fabric was used as ground cover for weed control. Other forms of weed control could be polythene mulch or chemical weed control.

To ensure pollination and hips to set, it is recommended that beehives are placed near the roses for optimal results. However we relied on natural pollination and achieved good results.

### **Soil Nutrition**

Fertiliser was applied according to soil analysis as a base dressing before planting in 2004 to bring soil indices up to the level required for field grown nursery stock. This involved increasing the soil indices for Potassium and Phosphate to above index 3. Nitrogen was also added at equivalent to 50 kg per ha.

In spring 2006 the woven polypropylene cover was removed and a compound fertiliser containing NPK (12.11.18) at 30 g/m<sup>2</sup> was added as a top dressing. The crop was again top dressed with the same compound fertiliser at 10 g/plant in August 2007, much later than expected because of the very dry spring.

Experience elsewhere, especially in Holland, shows that most foliage crops get 12:10:18 or 16:10:20 at a rate of 100 - 125 Kg N / ha. In spring, in either clay or peat soils, one application is sufficient by the end of March or the beginning of April. Crops in sandy soils will require two 50% strength applications, in order to account for the expected

higher leaching effect. As with Hypericum, early feeding at end of March to early April, is very important. Flowering is around the end of July after which any released nitrogen is detrimental as it can encourage more vegetative growth.

### **Crop Pruning**

In spring 2005 the plants were not cut back to allow them to establish. In the Autumn of 2005 they looked untidy, with some short stems bearing berries. All were left until spring 2006 before pruning to 12 cm above the ground, repeated in the spring of subsequent years.

### **Pest and Diseases**

Roses are susceptible to a range of pests and diseases including aphids, spider mites and downy mildew. In September 2006, 30% of the rose hips in one of the two plots were damaged with downy mildew and botrytis and were not marketable. The disease was noticed in our crop walking but was not fully controlled by our chemical programme. More regular preventative spraying would have been required.

Regular monitoring of pests and diseases was undertaken by crop walking every week during the May to September period and appropriate sprays were applied as in Appendix 1. See Appendix 2 for chemicals used.

Guidelines for pest and disease control are in Appendix 3.

### **Post Harvest Treatment**

The most important post harvest activity is to reduce contamination from bacteria and to keep the stems clean using clean secateurs. Stems should not be placed on the ground or unclean surfaces. Buckets and containers should be kept clean with a chlorine product.

### **Results**

Rosa 'Magical Fantasy' is an early maturing variety which was ready to harvest in September. The thorns on this variety made it difficult to handle at harvesting stage. Stems were cut to specific lengths (see Table 1) in bunches of 10 stems per bunch.

**Table 1 Yields of marketable stems per plant for Rosa 'Magical Fantasy' from plants planted in Autumn 2004**

Length of stem	40-50 cm	50-60 cm	60-70 cm	70-80 cm	Total
2005	nil	nil	nil	nil	nil
2006	10	12	3	2	27
2007	11	7	2	nil	21

No stems were cut in 2005 to allow the plants to become established. Longer stems would be desirable as these are higher value.

## **Conclusions**

This variety has established well and has grown satisfactorily in our climate. Yields of stems have been in line with experience in other regions. Local florists have not generally liked the thorns on this variety. This is a niche market product on the local market purchased in small volumes. It is becoming a popular product in other European markets as it is relatively high value with prices which can be up to 30 - 35p per stem depending upon quality and volume.

Foliage was generally clean of leaf diseases such spots and mildews etc., apart from autumn 2006 when one plot had extensive damage caused by downy mildew and botrytis. This resulted in approximately 30% losses due to rotting and browning of the hips making them unmarketable. Our programme of pesticide application did not control these diseases so careful management and more regular preventative spraying will be required to ensure rose hips are clear of disease.

Further work is needed with other varieties and we have planted 3 new thornless varieties and later maturing varieties in 2007 to assess their performance. These are Rosa Amazing Fantasy, Rosa Magical Miracle and Rosa Autumn's Pride.

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## Appendix 1 Rosa Management Notes 2006/7

Please note that these were the actual tasks carried out and that this information is for guidance only. A spray programme should be worked out for each crop site.

Dates 2006	Operation
04-Apr	Fertiliser applied.
06-May	Sprayed Rosa with Decis (aphids & caterpillars).
25-May	Sprayed all plots with Toppel 10 (aphids and caterpillars).
25-May	Sprayed all plots with Systhane (vs mildew).
09-Jun	Sprayed all plots with Toppel 10(vs aphids and caterpillars).
30-Jun	Sprayed Rosa with Amistar + Fubol Gold( leaf spots).
11-Jul	Sprayed all plots with Decis (vs aphids & caterpillars).
18-Jul	Sprayed Rosa with Amistar + Aliette (Downy mildew).
07-Sep	Removed broken stems, dead leaves, other debris from Rose plots.
08-Sep	Sprayed Rosa plots with Rovral.( botrytis).
11-Sep	Sprayed Rosa plots with Aliette( downy mildew)
15-Sep	Sprayed Rosa plots with Rovral.
18-Sep	Sprayed Rosa plots with Aliette.
22-Sep	Sprayed Rosa plots with Rovral.
25-Sep	Sprayed Rosa plots with Aliette

### Appendix 1 contd.

Dates 2007	Operation
06-Jun	Sprayed with Rose Clear
12-Jun	Sprayed with Aliette + Amistar
19-Jun	Sprayed with Octave (leaf disease)
26-Jun	Sprayed with Octave
02-Jul	Planted out Rosa 'Amazing Fantasy', Rosa 'Autumn's Pride', Rosa 'Magical Miracle'
05-Jul	Sprayed with Dithane
17-Jul	Sprayed with Decis (aphids, caterpillars etc)
17-Jul	Sprayed with Apollo (spidermites)
17-Jul	Sprayed with Systhane 6 Flo (mildew)
30-Jul	Sprayed with Maxicrop Triple (foliar feed)
15-Aug	Sprayed with Aliette, Armistar, Majestic
22-Aug	Topdressed Rosa 'Magical Fantasy' with Hydrocomplex
	Applied Systhane 20EW and foliar feed
02-Oct	Harvested Rosa Magical Fantasy for yield count
11-Oct	Sprayed plots with Rose Clear 3 (aphids)
18-Oct	Sprayed Rosa with Magnesium Sulphate (epsom salts)
22-Oct	Harvested some Rosa for Florists.
15-Nov	Harvested some Rosa.

## Appendix 2

### Chemical names of pesticides used in project

Chemical name	Group	Example of trade
Deltamethrin	Pyrethroid insecticide	Decis
Cypermethrin	Pyrethroid insecticide	Toppel 10
Clofentezine	ovicidal tetrazine acaricide	Apollo 50 C
Myclobutanil	Conazole fungicide	Systhane 20 WE
Azoxystrobin	Strobilurin fungicide	Amistar
Mancozeb + Metalaxyl-M	Fungicide	Fubol Gold
Fosetyl – aluminium	Phosphonic acid fungicide	Aliette
Iprodione	Dicarboximide fungicide	Rovral
Prochloraz	Conazole fungicide	Octave
Mancozeb	Dithiocarbamate fungicide	Dithane
Natural plant extract	contact insecticide	Majestic

### Appendix 3 General guidance on the control of pests and diseases

General guidance on prevention of diseases based on experience elsewhere including Holland:-

When the growth of the roses slows down they are more susceptible to mildew. Mildew can be expected when the roses start to form buds and starts flowering, depending on the weather.

In wet periods botrytis can damage hips.

Do not use the same fungicide more than 3 times after each other. Do not alternate fungicides from the same group (e.g. strobilines).

It is advised to spray in the evening to avoid pollinating insects.

If applying any pesticides during flowering time it is important they are not toxic to bees.