



R2113

**UNDERSTANDING THE PRODUCTION OF
OUTDOOR VEGETABLES AND FRUIT**

Tuesday 28 June 2011

13.30 – 14.10

Written Examination

Candidate Number:

Candidate Name:

Centre Number/Name:

IMPORTANT – Please read carefully before commencing:

- i) The duration of this paper is **40 minutes**;
- ii) **ALL** questions should be attempted;
- iii) **EACH** question carries **10 marks**;
- iv) Write your answers legibly in the spaces provided;
- v) Use metric measurements only;
- vi) Where plant names are required, they should include genus, species and where appropriate, cultivar.

Answer all questions

Marks

1. Describe **FIVE** factors to be considered when selecting a site for outdoor food production.

10

Total Mark

Please see over

- 22

6

Total Mark

3

3. a) Give details of the effect of plant spacing on a **NAMED** vegetable crop.

6

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

- b) State what is meant by the following terms:

- i) 'cut and come again';
- ii) 'intercropping'.

2

2

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Total Mark

Please see over

4. a) Describe the production of a **NAMED** soft fruit crop under **EACH** of the following headings: **1**

- i) purchasing stock; **2**
- ii) mulching and weed control. **2**

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

b) State **FIVE** factors that affect the successful storage of the soft fruit named in a). **5**

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Total Mark

Please turn over

- 4

[illegible]

- 6

[illegible]

Please see over

6. Name **ONE** pest and **ONE** possible control measure for **EACH** of the following fruits by completing the table below:

10

	Pest	Control measure
Apple		
Plum		
Strawberries		
Blackcurrants		
Raspberries		

Total Mark

**© These questions are the property of the Royal Horticultural Society.
They may not be reproduced or sold.**

**The Royal Horticultural Society, Wisley, Woking, Surrey GU23 6QB
RHS Registered Charity No: 222879/SC038262**



R2113

**UNDERSTANDING THE PRODUCTION OF
OUTDOOR VEGETABLES AND FRUIT**

Level 2

Tuesday 28 June 2011

Candidates Registered	813	Pass with Commendation	252 (37.95%)
Candidates Entered	664 (81.5%)	Pass	277 (41.72%)
Absent/Withdrawn/Deferred	149 (18.5%)	Fail	135 (20.33%)
Total Candidates Passed	529 (79.67%)		

Senior Examiner's Comments:

1. Candidates should be able to demonstrate a good range of plant knowledge and be able to give accurately named plant examples where appropriate. Common names and generic names are often too vague and cannot be rewarded in the positive manner that genus, species and where appropriate, variety/cultivar can. This is particularly important when answering questions relating to particular (named) plant(s). Marks can only be awarded for these narratives where the example(s) are correctly and fully identified.
2. Candidates must be able to display accurate knowledge of the technical terms and concepts detailed in the syllabus, in the context of horticulture and be aware that wider interpretation will not be rewarded. The examination should be regarded as a possible introduction to higher level studies, which will only be open to those who are in possession of a clear understanding of the horticultural terms and concepts which are current.
3. The introductory rubric given on the first page of each question paper should be read carefully by candidates. At each examination there are a significant number of candidates who ignore or misread the instructions given and consequently may not perform as well as they could have done.
4. Candidates should pace themselves during each paper. The most successful candidates allow sufficient time to read the question thoroughly before answering it and also take time to read through their answers. They should take care to write as legibly as possible, so that the examiner is in no doubt about what is intended.

5. Candidates need to interpret key words within questions, particularly those such as 'state', 'list' and 'describe'. Questions requiring descriptions or explanations obviously require a more detailed answer than those requiring a list.
6. It is important to ensure that responses to questions are to the point. Candidates should bear in mind that small sketches might be used to convey information more succinctly than words.
7. Successful candidates ensure that their answers are focused and to the point. It is disappointing when they cannot be rewarded for their efforts because the answer is irrelevant to the particular question. Candidates should take note of the mark allocation for specific sections and allocate their time and efforts accordingly.
8. Diagrams can enhance an answer and where appropriate can replace detailed descriptions. They should be large, clear and well annotated, and preferably in pencil. Colour may be used successfully but only where it is relevant to the answer.
9. In each examination it is clear that some candidates are ill prepared to answer papers of the type set. It is essential that candidates have the opportunity to practice questions. Ideally some papers should be answered in a time constrained situation.
10. Candidates should be aware of the reading list of suggested books for the RHS Level 2 Certificate in The Principles of Garden Planning, Establishment and Maintenance which is available from the Qualifications Section and can also be found on the RHS website together with past papers.

Examiners' Comments:

		Marks
1.	<i>Describe FIVE factors to be considered when selecting a site for outdoor food production.</i>	10
	<p>The candidates who provided five dissimilar factors clearly described the impacts of those factors and where appropriate provided ways to minimise any negative impacts gained full marks.</p> <p>Examples of acceptable factors included; exposure, soil, topography, aspect, accessibility and water availability.</p> <p>A few candidates described soil pH, texture/structure and drainage as separate factors. Marks could only be awarded for one factor as they are all related to soil.</p>	
2.	a) <i>Describe what is meant by the following terms with reference to cultivating the soil:</i>	
	i) <i>'consolidation';</i>	2
	ii) <i>'tilth production'.</i>	2

- b) State **THREE** benefits of **EACH** of the following cultivation techniques by completing the table below:

6

<i>Digging</i>	<i>Rotary cultivation</i>

a) Most candidates were able to describe consolidation as a process whereby the soil is firmed by the removal of air pockets through treading (using the heel of the boot or by shuffling) and/or by the use of the back of a rake. Those candidates who confused consolidation with compaction could not be awarded any marks.

aii) Candidates who described tilth production as the final stage of soil cultivation (secondary cultivation) with the production of a fine crumbly, friable texture through repeated raking in two directions that aids seed production were awarded full marks.

b) The majority of candidates provided three benefits for digging and rotary cultivation and examples included; enables varying depth of cultivation, allows for the incorporation of organic matter and green manures, removal of perennial weeds and brings pests to the surface for birds and hand removal. Suitable examples for rotary cultivation included; large areas can be cultivated quickly, finer tilth can be produced and annual weeds can be buried.

3. a) Give details of the effect of plant spacing on a **NAMED** vegetable crop.

6

- b) State what is meant by the following terms:

- i) 'cut and come again';
ii) 'intercropping'.

2

2

a) Most candidates were able to name a vegetable crop e.g. carrots and those that focussed their answers on the effects of spacing gained full marks. Candidates included details on optimum yield, optimum use of space, competition with weeds, date of maturity of the crop and how close spacing could cause competition for light, water and nutrients and encourage pests and diseases.

b) The majority of candidates were able to state the meaning of 'cut and come again' as where some foliage is harvested and the plant is allowed to regrow so it can be harvested at a later date e.g. chard. Similarly the best answers for 'intercropping' stated that a fast growing crop is sown alongside a slower growing crop to maximise the use of space without competing for resources e.g. radishes with parsnips.

4. a) Describe the production of a **NAMED** soft fruit crop under **EACH** of the following headings: 1
- i) purchasing stock; 2
- ii) mulching and weed control. 2
- b) State **FIVE** factors that affect the successful storage of the soft fruit named in a). 5
- a) Most candidates were able to name a soft fruit e.g. blackcurrant or raspberry. Unfortunately no marks were awarded to a few candidates who named a top fruit.
- Full marks were gained by candidates who described the purchasing of certified stock from a reliable source which is pest and disease free and true to type.
- Mulching was described well by many candidates who included details on the benefits of mulching i.e. weed suppression, moisture retention, timing of applying a mulch and materials that can be used. The best candidates included other forms of weed control e.g. hand weeding, hoeing and the use of herbicides.
- b) A range of factors were provided by candidates and those that qualified the factors gained full marks. Factors given included; ripeness, careful handling, keeping the fruit cool and dry, storing fruit that is pest and disease free, providing good ventilation and ensuring good hygiene.
5. a) List **FOUR** methods used to extend the productive season of outdoor food crops. 4
- b) Describe **TWO** of the methods named in a), using clearly labelled diagrams where appropriate. 6
- a) Candidates listed a wide range of methods which included the use of; cloches, cold frames, netting, fleece, floating mulch, forcing pots etc. The use of glasshouses and polythene tunnels was acceptable when qualified by stating that they are used to raise plants that are then planted outdoors.
- b) The majority of candidates provided concise descriptions of the methods named with clearly labelled diagrams and gained full marks.

6. Name **ONE** pest and **ONE** possible control measure for **EACH** of the following fruits by completing the table below:

10

	<i>Pest</i>	<i>Control measure</i>
<i>Apple</i>		
<i>Plum</i>		
<i>Strawberries</i>		
<i>Blackcurrants</i>		
<i>Raspberries</i>		

A number of distinct pests and control measures were given by candidates e.g. codling moth on apples, sawfly on plum, two-spotted red spider mite on strawberries, gall mite on blackcurrants and raspberry aphid on raspberries. Where chemical controls are given it's important that they are still available for use e.g. bifenthrin was withdrawn from use in May 2011.

© These questions are the property of the Royal Horticultural Society.
They may not be reproduced or sold.
The Royal Horticultural Society, Wisley, Woking, Surrey GU23 6QB
RHS Registered Charity No: 222879/SC038262

November 2011