

# Alternative crop factsheet: Soft fruits

## OPPORTUNITIES FOR SOFT FRUIT PRODUCTION

UK soft fruit exports are worth £14 million a year, having increased 137% in the last 10 years. Soft fruit accounts for 60% of UK fruit production, with the East of Scotland, particularly Angus, being a major hub for British production.

Domestic consumption has also been growing steadily for many years, and modern methods enable the season to be extended beyond the traditional soft fruit season, meeting more of all-year-round consumer demand, strengthened by growing consumer interest and awareness of food provenance.

Nevertheless, the EU still provides the majority market for UK- soft fruit exports, with the Netherlands, Spain and Ireland as main buyers. EU tariffs of 11.2% on strawberries, and 8.8% on raspberries, blackberries and currants will now eat into margins of British soft fruit exporters following Brexit. How

much of this cost will be passed onto consumers in Europe and how much absorbed by producers in Europe will depend of various factors, e.g. level of competition within and without of the EU, which is linked to if during peak growing season in Europe or at the tail ends, impacting willingness to pay. Unlike the egg market, horticulture has less scope for adding value with quality assurance over other potentially cheaper non-EU exporters.

While there is potential for soft fruit market expansion, new producers will want to consider competitive advantage of production, both with current British producers and with European markets, as well as challenges closer-to-home such as uncertainty around labour availability post-Brexit, and establishment of new lines of distribution outside of the Scottish hub in Angus.

### GROSS MARGINS

#### Raspberries

*Source: Agricultural Budget Costing Book, Nov 2019*

Raspberries	/ha
Yield (t/ha)	10
Price per tonne	£ 6,250
<b>Output</b>	<b>£ 62,500</b>
<i>Establishment</i>	£ 1,300
<i>Structures</i>	£ 8,500
<i>Fertiliser</i>	£ 205
<i>Crop protection</i>	£ 650
<i>Casual labour</i>	£ 25,000
<i>Containers</i>	£ 7,500
<i>Commissions</i>	£ 6,250
<b>Variable costs</b>	<b>£ 49,405</b>
<b>Gross margin</b>	<b>£ 13,095</b>

#### Strawberries

*Source: Agricultural Budget Costing Book, Nov 2019*

	/ha
Yield (t/ha)	20
Price per tonne	£ 2,650
<b>Output</b>	<b>£ 53,000</b>
<i>Establishment</i>	£ 3,300
<i>Structures</i>	£ 8,500
<i>Fertiliser</i>	£ 161
<i>Crop protection</i>	£ 1,250
<i>Casual labour</i>	£ 20,000
<i>Containers</i>	£ 7,500
<i>Marketing</i>	£ 5,300
<b>Variable costs</b>	<b>£ 46,011</b>
<b>Gross margin</b>	<b>£ 6,989</b>

## PROCESSING AND SUPPLY CHAINS

- Labour requirements for picking and packaging of soft fruit is significant, estimated at £27,000 per hectare for strawberries, or £900 per tonne of fruit. This will vary between soft fruits.
- Packing and storage facilities should be located on-farm, to maximise the quality of fruit from picking to distribution; the fruit should be cooled as soon as possible after picking.



# CROP ESTABLISHMENT AND PRODUCTION

## LAND AND CLIMATE SUITABILITY

Strawberries, raspberries, blueberries and cloudbberries will grow well both indoors and outdoors in temperate climates like Scotland, although protected systems optimise growing conditions and ability for fruits to ripen further north. Strawberries can tolerate temperatures of as low as to -5°C during the growing season.

## SOIL TYPE

Some soft fruits are particular about soil pH which may limit areas of production, as well as terrain of land for polytunnels. Blueberries dislike soils with a pH greater than 5.5, and prefer peaty, acidic and lighter soils, as opposed to heavy clays, making Scotland well-suited for blueberry production with naturally acidic soils.

Strawberries can be grown in beds in areas of well-drained soil, or raised in beds or trays of substrate otherwise. Otherwise they have no specific requirements in terms of soil type however they are very sensitive to salinity so irrigation and fertigation needs to be carefully managed (Yara).

Raspberries thrive in well-drained but moisture-retentive, fertile and slightly acidic soils.

## INPUTS

Propagated material for soft fruit bushes (e.g. blueberries, raspberries) is bought 2 years in advance of production as it will take 2-3 years for the plant to reach full production. It is therefore important to plan ahead for ordering propagated materials, and factor in an unproductive phase for newly planted areas. Strawberry plants can produce in the year of planting if crowns are of sufficient size and in suitable condition (cold stored). Strawberry plants will last 4 years before they need to be replaced but in commercial situation usually just kept for 2 years as yield and quality decline sharply in year 3.

## CROPPING SYSTEMS

Most commercial soft fruit production in the UK is produced in protected systems, to optimise the growing environment, protect against severe weather, minimise pests such as birds that might eat the fruit, and help to bring forward harvest by around 1 month and also to extend the season. Pollinators must be purchased and introduced – bumble bees – to ensure adequate pollination during the spring.

Strawberries can be grown in beds of bagged soil, or raised in table-top systems or trays for greater control of water and nutrients. Bedding materials and substrates such as coir are also required. Raspberries may need support.

If grown directly into the ground, rotations are needed for strawberries to minimise disease build-up in the soil, particularly in rotations with tomatoes and potatoes due to verticillium wilt. For blueberries, where grass has been grown, a nematode test should be undertaken to assess populations of root feeding nematode species, and a break crop considered.

## MACHINERY AND EQUIPMENT

Polytunnels or glasshouses are required for commercial production of most soft fruits. Poly tunnel and irrigation costs are £255,000 per hectare over 10 years; tunnels are assumed to last 10 years if well-maintained. Table-top structures for strawberries are £30,000 per hectare over 10 years, and plastic £5,000 per hectare over 5 years.

Drip irrigation and plastic mulches commonly used. Irrigation costs – rainwater harvesting can reduce irrigation costs on the long term. Strawberries are particularly water-hungry.

Soft fruit picking is labour intensive, and as of now mechanisation technology is still in Research and Development.

Fruit should be stored between 1 and 4 C within 45 minutes of picking to preserve quality, before and after sorting and packing.

On-farm sorting, packing and cold storage should also be factored in. Other equipment includes a hopper to transfer the compost from the lorry to sheds, shelving and beds, and machinery to fill the shelving with compost.

*Peak season for fruit picking is between May and October. Summer fruiting and autumn fruiting varieties can extend the production season.*

### Further information

- Red Tractor Crop Modules
- Agricultural Budgeting Costing Book
- SAC's Farm Management Handbook

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