

INTRODUCTION

Cider is increasing in popularity and most production is in the West of the UK. Cider apples are a crop that could do well in many parts of Wales and these notes are for growers considering starting up a cider orchard.

Cider is made from apples. Perry is made from pears. For cider, a blend of specialist cider apple varieties is usually used, although single variety cider is available. Ordinary eating and cooking apples can be used but to make a good cider at least 25% of the juice should be from cider varieties which have higher concentrations of tannins.

There are hundreds of local cider apple varieties. Many farms made cider in the past and residual orchards can still be found. These orchards may be good enough to propagate from and it may also be possible to beg or buy surplus fruit to help get started while your own trees are developing. When a good local tree has been located, it could be budded or grafted to propagate sufficient trees for a new orchard.

The main commercial cider varieties are Dabinett and Michelin but some research is needed to find suitable local varieties. Usually resistance to scab and canker are the most valuable characteristics, especially in wetter areas. Search locally for suppliers, but trees can be ordered from the following, although forward ordering may be needed:

- F P Mathews enquiries@fpmathews.co.uk contact Nick Dunn
- Adams Apples www.talatonplants.co.uk contact Adam Powell
- Dolau Hirion <http://users.tinyonline.co.uk/applewise>

There is a thriving Welsh Perry and Cider Society in Wales www.welshcider.co.uk. It is worth joining as they offer advice and run events including an International Cider Festival.

PLANTING DENSITY

Aim at 606 trees per hectare [spacing is 5.5m x 3m]. Traditional cider orchards have a lower planting density, around 300 trees per hectare.

CIDER PRODUCTION

There are rules and regulations to be adhered to regarding cider making. It is advisable to check with HM Customs on the quantity that can be made without incurring Excise Duty and about registration procedures.

Cider is normally made from 25-30% cider apples, the rest can be cull fruit, *i.e.* outgrade eaters and cookers, but the fruit needs to be sound.

Cider making involves two processes: scratting and pressing. Firstly the apples are "scratting", which means minced up. They are then pressed to extract the juice. At this stage of the process, cider and apple juice are exactly the same. If the required end product was apple juice, it would now be pasteurised, whereas cider is allowed to ferment. Fermentation usually takes place in used spirit barrels and continues until fermenting stops. This produces traditional still cider. The wild yeast on the fruit will ferment naturally, nothing has to be added.



Fig 1: Claygate Pearmain apple tree



Fig 2: Apple Orchard

Simple or more elaborate equipment is available both to scrat and press. This can be improvised, but on a larger scale good equipment saves time and can give a better product. Vigo Ltd has a good range see www.vigold.com

CIDER APPLES - AN OUTLINE GUIDE TO COSTS

Table 1 provides an indication of the costs associated with establishing a managing a cider orchard. These costs are for a modern cider orchard system. All figures quoted are per hectare. They ignore opportunity costs, *i.e.* the potential loss of other crops during establishment

Table 1: Indicative establishment costs and expected yields from cider orchards

YEAR	COST	ACTUAL COST (£)	YIELD (tonnes/ha)
1	Cider apple trees 606 @ £4.50	£2727.00	
	Stakes 606 @ £0.60	£363.60	
	Rabbit Guards 606 @ £0.50	£303.00	
	Fertiliser 500kg @ £150 / tonne	£75.00	
	Weed Control (estimate)	£200.00	
	Pest & Disease Control (estimate)	£350.00	0
2	Annual Maintenance Costs	£600.00	0
3	Annual Maintenance Costs	£600.00	1
4	Annual Maintenance Costs	£600.00	3
5	Annual Maintenance Costs	£600.00	4
6	Annual Maintenance Costs	£600.00	6
7	Annual Maintenance Costs	£600.00	10
8 onwards	Annual Maintenance Costs	£600.00	15

Notes:

- From year 8, biennial bearing is likely to start to occur. Yields may vary from 30 tonnes / ha one year to 15 / ha tonnes the next.
- On a good site expect an average annual yield of 20 tonnes / ha on a poorer site 12 tonnes / ha.
- 1 tonne of apples yields 600 litres cider with ordinary equipment.
- LABOUR REQUIREMENT
The above costs do not include labour. As a guideline, 125hrs / ha will be required in year one; 45hrs / ha in years two, three and four, and 105hrs / ha thereafter to manage and maintain the orchard.
Picking the fruit will cost approximately 5p / kg if done by hand (£1,000 / ha on a good site).
Mechanical picking will cost around £350 / ha provided a machine is available in the area.
Additional time will need to be allocated for the production process if making the cider on-farm.

MARKETING

Farm gate prices for cider range from £1.00 - £ 2.00 per litre. Prices are probably at the higher end in Wales especially if marketed well, for example with Open Days and other promotions. Involving the public during the production process can be an invaluable aid to sales. The key to success is to produce a quality product and make sure your customers know about it.

Commercial makers pay about £80 / tonne of apples delivered to Hereford, but only when they are short of fruit.