Using fruit in Agroforestry

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Site and soil requirements

- A grass/clover ley on land which has not had previous fruit crops
- Gentle south – south-west facing slope
- A sheltered site (consider windbreaks early on)
- Frost free – important for early-flowering crops such as cherries and plums

- Ideal soils are deep, well-drained, clay-loam with organic matter content of 10 %
- Soil pH range 5.5 – 7.0 (6.5 is ideal)

Choosing varieties

1) Resistance or tolerance to pests and diseases

2) Fruit quality

appearance, size, texture, flavour

3) Yield performance

precocity, consistency of cropping

4) Harvest time

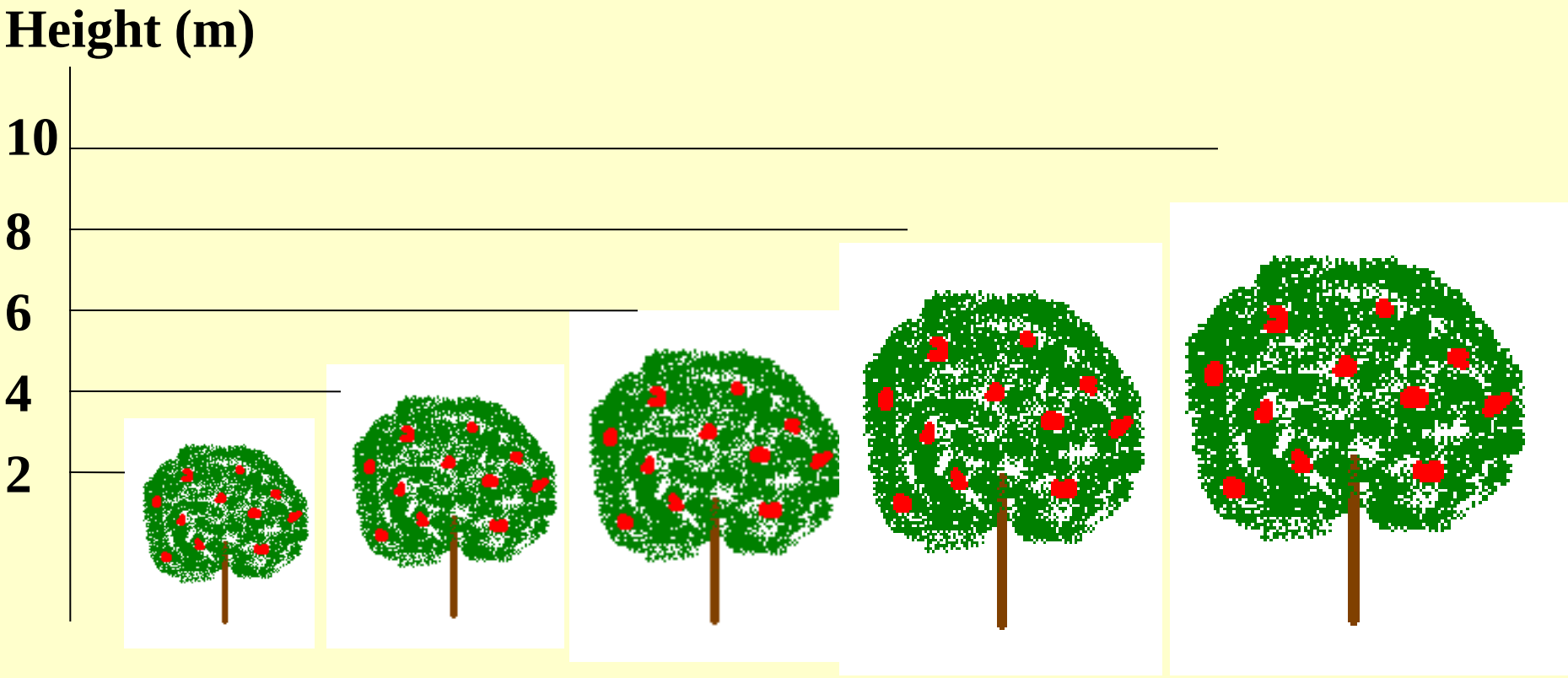
5) Storage potential

air and CA storage – short or long term

6) Markets and suitability for juicing / processing

dessert / culinary / dual-purpose

The Rootstock Effect

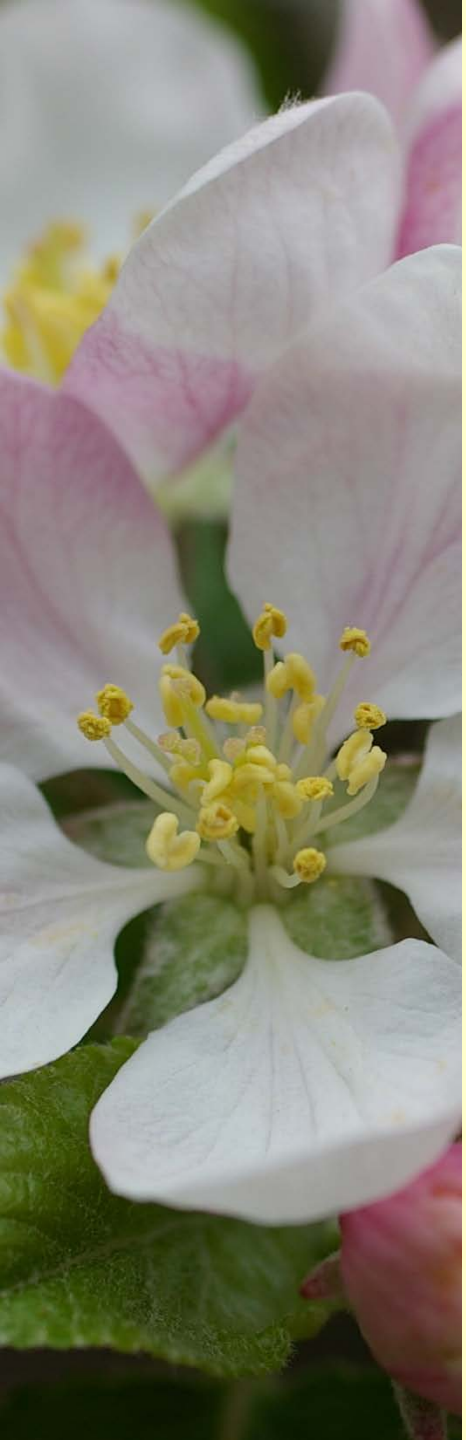


M9	M26	MM106	MM111	M25
	Jork 9	M116	M2	

1m x 3.2m (3000 trees / ha)

3.5m x 5m (570 trees / ha)

5 – 7.5m x 6m (200-300 trees / ha)



Pollination

• Provide at least one pollination partner, even if varieties are self-fertile.

• Compatibility – choose varieties which have the same, or adjacent flowering groups, and which are compatible.

• If growing a mixture of varieties, plant in rows or groups of each variety – this makes pruning, picking etc easier.

• Plant ‘pollinators’ either as whole rows or at intervals along a row e.g. ‘one in nine plant’ (every third tree in every third row is a pollinator).

• Bees are excellent pollinators – recommended honeybee hive density for top fruit orchards is 2.5 hives / ha.

• Cherries and plums may need more hives.

Planting material

• Order your chosen varieties (and rootstocks) early – most propagators graft to order.

• Trees are available as bare-root plants from November – March.

• One-year-old trees (maidens) available with ‘feathers’ (a few developed side shoots) or ‘un-feathered’

• Two-year trees will establish better, but are more expensive. Part-trained.

Planting

• Make sure soil conditions are good. Not too wet, dry or frozen.

• Quicker with two people. Dig a hole (or stringfellow) – position tree, firm in.

• Ensure graft union is not buried! Staking usually required.

• Protect from rabbits. Keep tree bases weed-free – critical during establishment!

Weed Control….?

Crop covers…..?

Using fruit for windbreaks and shelterbelts

e.g. blackthorn (sloes), bullaces, damsons, cherry plums, wild plum, crab apples etc.

- Plant in advance if possible.
- Choose a vigorous rootstock.
- Plant 3.5-4.5m apart in a staggered double row.
- Leave a gap of 9m between windbreak and first orchard tree row.

Advantages and disadvantages

- Fruits can be utilised e.g. made into liqueurs, preserves etc.
- Increased biodiversity.
- Use a mixed hedge / windbreak of native species – points towards environment stewardship.
- Pests and diseases

Agroforestry opportunities for orchards:

• Livestock; e.g. poultry (chickens, ducks, guinea fowl, turkeys, geese etc)

sheep / pigs / cows grazing (alpacas, goats, deer etc are probably too damaging!)

• Other crops, e.g. soft fruit (gooseberries), short-term vegetable crops e.g. potatoes, butternut squash, brassicas, cut flowers, arable crops etc…

• Other trees; nuts (e.g.hazel), willow, timber and fuel crops etc –for interplanting in extensive orchards. Norway spruce?

• Wildlife strips, beetle banks, ponds and other wildlife havens

• Bees

• Mistletoe

• Lakes for coarse fishing! e.g. (www.hartleylands.co.uk)

• If all else fails…...logs!!