Holistic pruning for agroforestry and forest gardens in temperate climates

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Who is this presentation aimed at?

- Fruit tree growers in forest garden or agroforestry context
  - interested in findings from research literature?
- Forest garden designers, educators or consultants
  - For whom pruning a blindspot?

Why should we care about pruning?

- Consistent, good-practice can enhance yields
- Overpruning can harm fruit trees
- Stems and branches can easily be cut but can’t be put back again!

Frustrating Effects of inappropriate pruning of fruit trees

Reduced fruiting potential

- Slower fruiting maturity
- Wound risk from pathogens
- sends confusing signals to the tree
- More work! pruning and harvesting

Suggested methodology: Research based

A common lesson from divergent research (Jean-Marie Lespinasse et al) (Natural England):

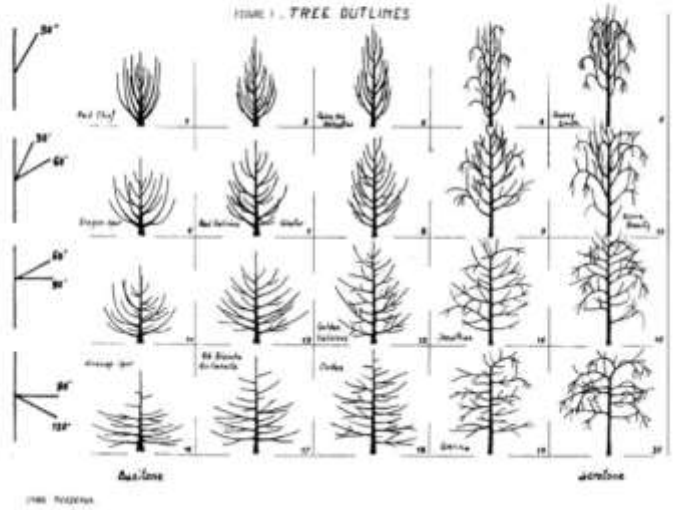
Every tree should be considered as an individual.

Implication:

- return to first principles
- field research in context
- local knowledge

Extracted from Lespinasse and Delort (1996)

1. Ramification (Branching) Organisation determined by (a) basitonic versus acritonic tendency and (b) the size of angle between branches and trunk.



Toward a holistic pruning methodology

- Choose techniques to enable easier maintenance of desired form
- Work alongside natural behaviour where possible
- Encourage natural form within 3d space

Why?

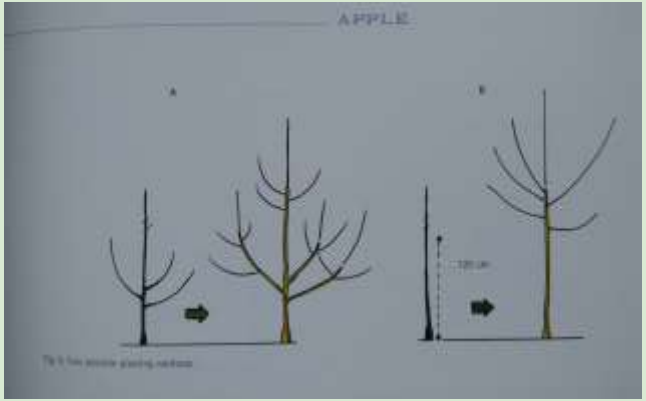
- Less muddle eg Fewer epicormic, crossing branches and competing axial leaders
- Simpler decision making in the field = Less work

Why prefer a central leader preferred vs open forms?

Consider maintaining central leader

Why?

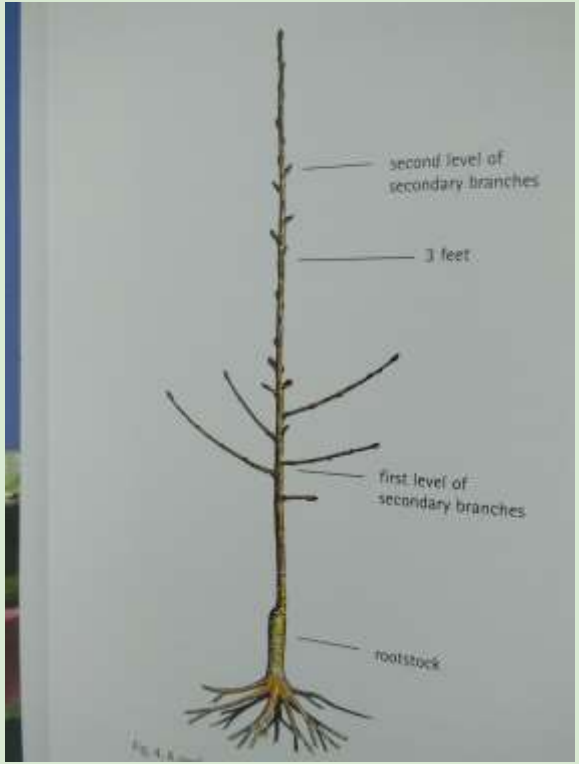
- Simpler pruning decisions - KEY POINT
- Natural form
- A taller tree



Suggested method: side shoots

- Select side shoots according to (1) vigour, (2) insertion and (3) aspect

  - **Vigour**: Accelerate natural redundancy of less vigorous stems
  - **Insertion**: Create tiered branching structure
  - **Aspect**: More fruiting potential facing the south, less toward the north

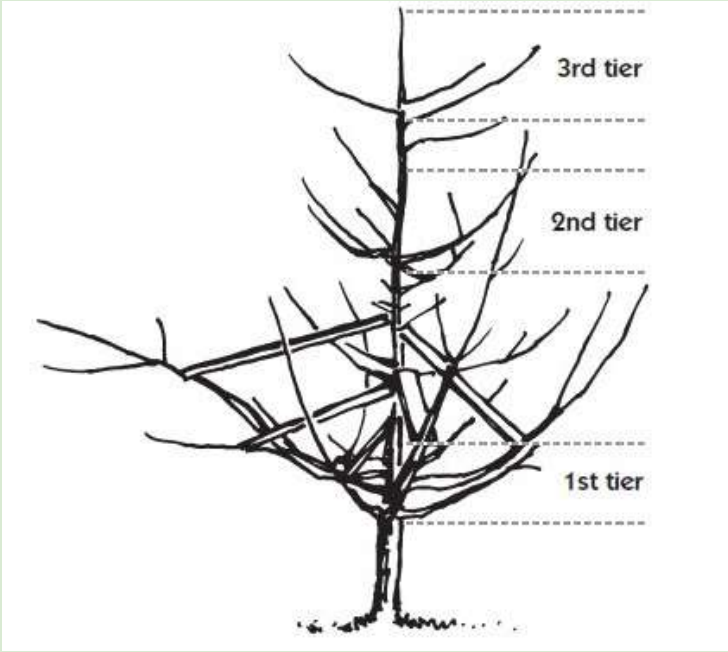


Suggested technique: bend or tie Side Shoots

Look into bending or tieing young shoots

Why?

- Increase crotch angles
- Optimise aspect of shoots
- Minimal pruning means shorter duration to maturity
- Less need to sterilise tools



Some maintenance pruning techniques to apply

1/ Maintain vertical ‘light chimney’ around main stem, through centre of tree:

- Advantage of central leader trees
- Low fruiting zone
- More light and air

2/ Accelerate natural redundancy of:

- Less vigorous fruiting spurs
- Stems growing from buds facing groundward

Somewhat More complex:

3/ Minimise competition for light between fruiting branches:

- akin to solar arrays

Summary

- My focus here is on apples in temperate climates but some principles are common
- Questions:

  1/ Is there a potential conversation about pruning and training systems in forest gardens and agroforestry?

  2/ Can we borrow from the experiences of others to design good research?
- Understanding our trees and using simple and effective go-to techniques can help keep workload down
- Thanks for listening

Interested in exchanging ideas, participating in future research or a project consultation?

Please send an email to sign up to my mailing list:

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Images from “Growing Fruit Trees” by Lespinasse/Leterme (Norton, London)