

The background of the slide is a close-up photograph of several green avocado leaves. Some of the leaves show signs of insect damage, with small, irregular holes and brownish, necrotic spots visible on their surfaces. The lighting is bright, highlighting the texture of the leaves.

# Using the Tree Growth Cycle to Make Cultural Management Decisions

February 2011



# Introduction

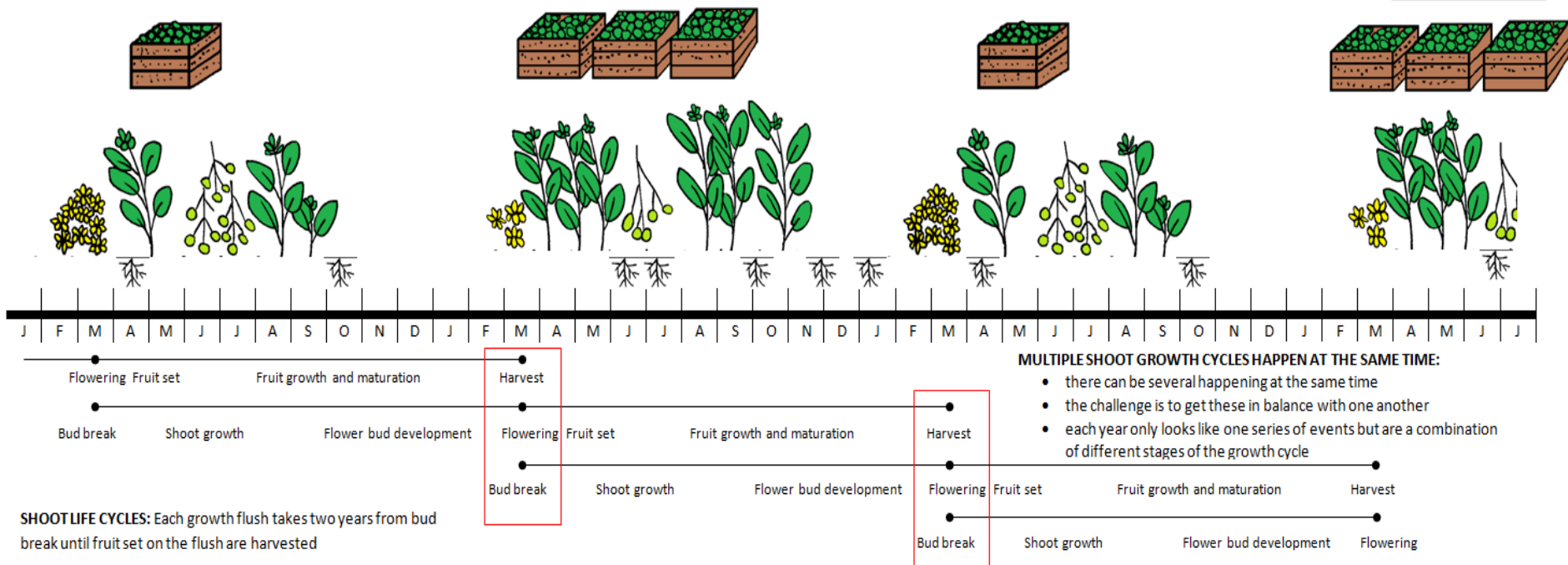
- What is the tree growth cycle?
- The importance of understanding what the tree is telling you
- Using the tree growth cycle and not the calendar for cultural management decisions



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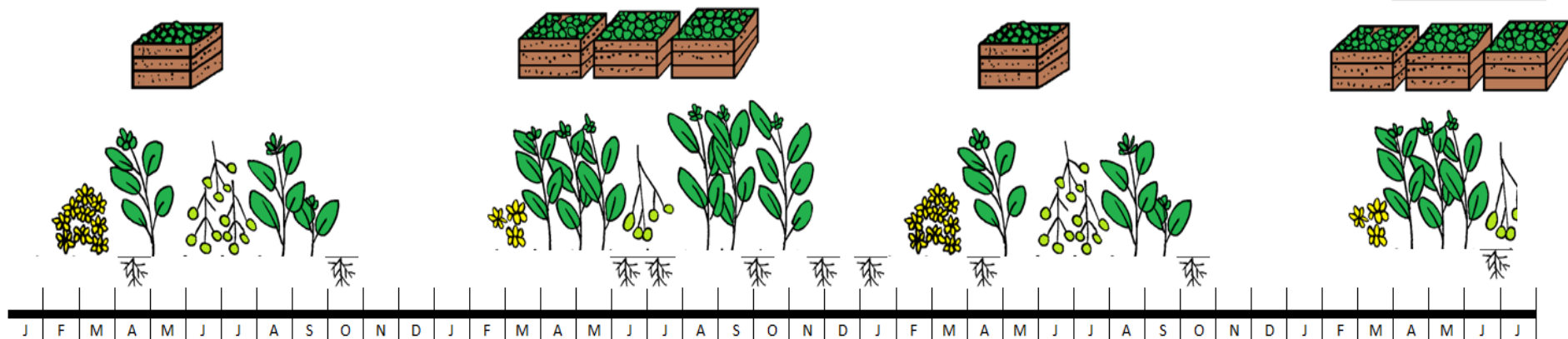
## THE TWO YEAR ALTERNATE BEARING CYCLE:

sink strength changes each year, in an "off-crop" year it is mostly to flowers and fruit, in an "on-crop" year it is mostly to growth



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Flowering Fruit set Fruit growth and maturation

Bud break Shoot growth Flower bud development

Harvest

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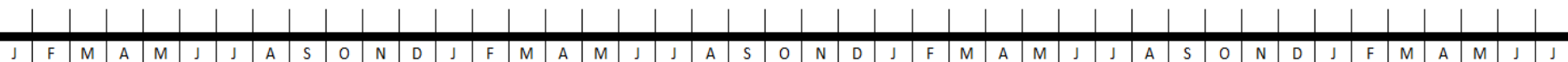
### MULTIPLE SHOOT GROWTH CYCLES HAPPEN AT THE SAME TIME:

- there can be several happening at the same time
- the challenge is to get these in balance with one another
- each year only looks like one series of events but are a combination of different stages of the growth cycle

**SHOOT LIFE CYCLES:** Each growth flush takes two years from bud break until fruit set on the flush are harvested

### EXAMPLES OF CRITICAL TIMES FOR:

**Phytophthora** control: apply control measures when the roots are the primary sink; the best application times are indicated by the arrows

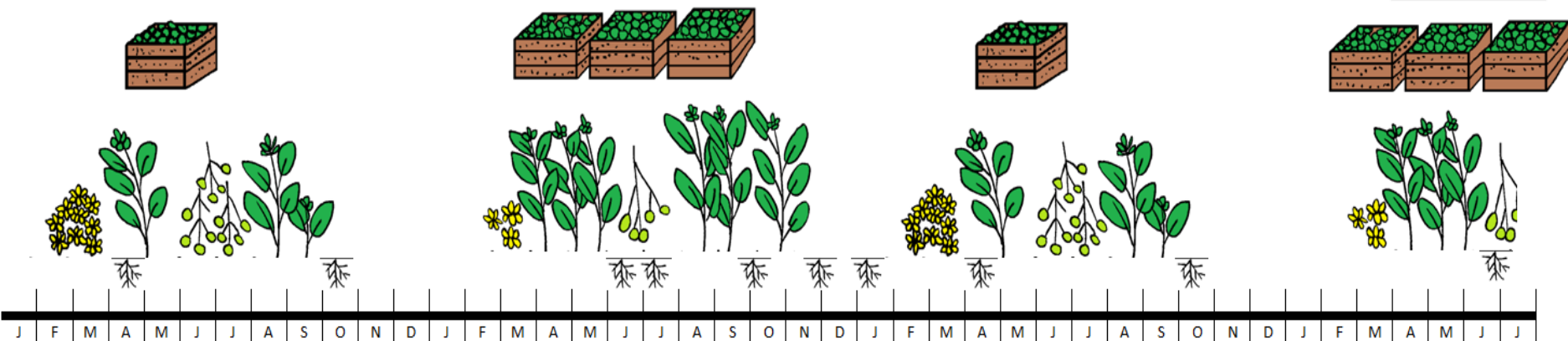


Calcium accumulation in the fruit: make sure calcium is available in the soil water in the first 6-8 weeks after fruit set as indicated by the arrows.



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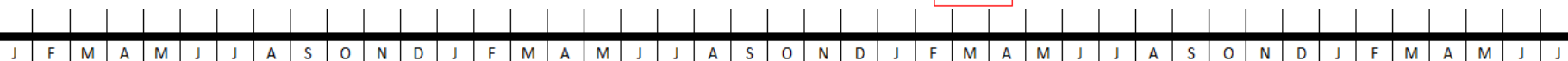
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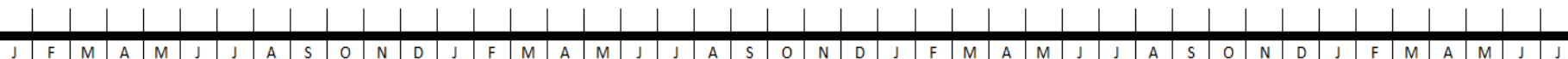
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Roots

Bud break

Shoot growth

Flower development

Flowering and shoot growth

Fruit set

Fruit ready to harvest



# What do you expect will happen if the following happens?

- There is a freeze in the middle of winter?
- You hang fruit very late?
- Flowering is very heavy and there is very little new shoot flush?
- The trees set a very large crop (3-4 times the average production)?