

# Kiwifruit Winter Pruning – Day 1 of 5

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**NZKGI**  
NEW ZEALAND KIWIFRUIT GROWERS

Ministry for Primary Industries  
Manatū Ahu Matua

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# Aim of the course

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- Extend knowledge of kiwifruit winter pruning including:
  - Aims of Winter Pruning
  - Vine structure and types of wood
  - Health and Safety
  - Vine response to cuts
  - Tool maintenance
  - Pests & Disease and Biosecurity

# Today's Topics

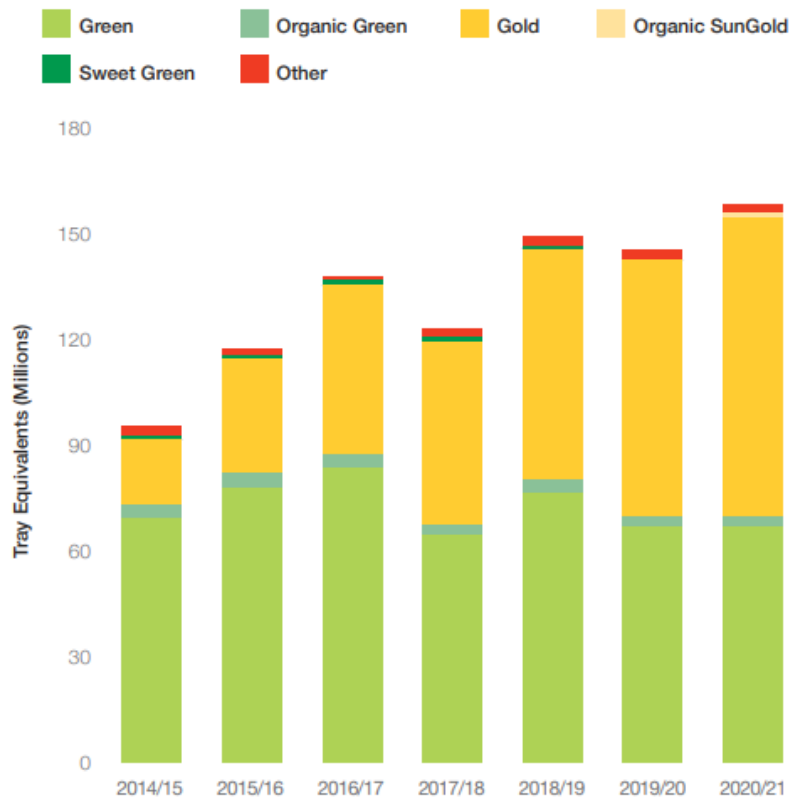
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- Aim of the course
- Industry overview
- Aims of winter pruning – revision
- Parts of a kiwifruit vine - revision
- Practical Demonstration – opportunity to watch and ask questions of workers in the field

# The Kiwifruit Industry

## TOTAL VOLUME SOLD – 7 YEARS

New Zealand-grown kiwifruit



- A growing industry
- 2,800 growers
- 13,334 ha producing
- 158 million trays 2021
- 400+ labour contractors
- 23,000 seasonal workers over harvest
- 8,250 seasonal workers over winter pruning

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# The Kiwifruit Industry – Overview



Source: 2019 Kiwifruit Book, NZKGI

# The Kiwifruit Industry – Who's who?

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**Zespri** – owned by kiwifruit growers. Responsible for the marketing of all kiwifruit internationally (except into Australia).

**Growers** – owners of kiwifruit orchards.

**Management Companies** – companies who manage orchards on behalf of growers or packhouses

**Packhouses** – companies who manage orchards, pack and store kiwifruit.

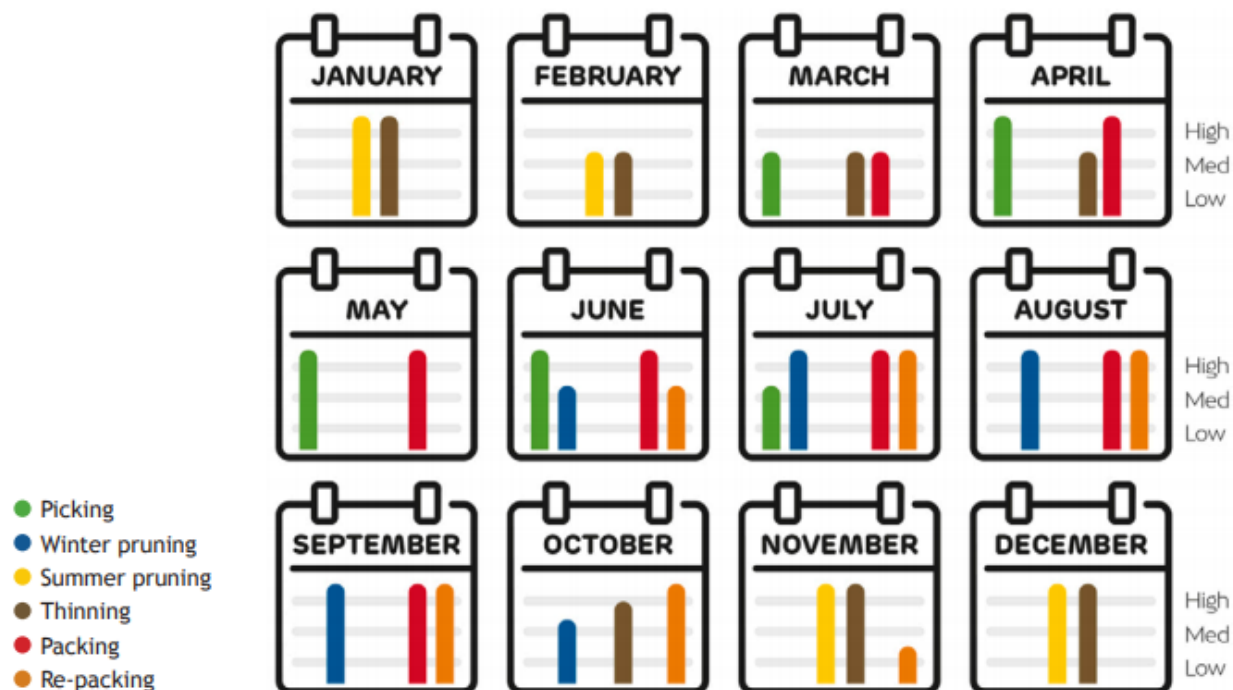
**Contractors** – contracted by growers, management companies or packhouses to manage vines and harvest fruit.

# Contractors

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- Must be registered with Zespri to work on kiwifruit orchards
- Must comply with industry Good Agricultural Practice (GAP) and Global Risk Assessment on Social Practice (GRASP)
- Must hold a CAV (Compliance Assessment Verification)
- <https://industry.zespri.com/contractors/gap-grasp-contractor-list>

# Seasonal Kiwifruit Work



Source: The little green and gold book, NZKGI



# YOUR CAREER PATH IN HORTICULTURE

Pick a career in horticulture



## START HERE FOR AN ORCHARD CAREER

Begin cadetship or apprenticeship

Tractor Driver; Agrichemical Spray Application and Forklift

Tractor Driver Operate Mower & Mulcher

Orchard Worker - Harvesting, Plant Care and Construction

Orchard Technician, Specialised Plant Husbandry, Grafting & Frost Protection

Team Leader Machinery Operations

Leading Hand Supervisor

Orchard Manager/Contractor

Senior Manager

Quality Control Manager

Packhouse Manager

Logistics Manager

Coolstore Manager

Quality Control Supervisor

Grade Supervisor

Packing Line Supervisor

Coolstore Supervisor

Post Harvest Worker

Grader

Packer

Quality Controller

Grower Adviser

Grower Liaison

Grower Liaison Manager

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Orchard Technician, Specialised Plant Husbandry, Grafting & Frost Protection

Tractor Driver Operate Mower & Mulcher

Tractor Driver; Agrichemical Spray Application and Forklift

Begin cadetship or apprenticeship



GROWER DIRECTOR CEO



## START HERE FOR AN ENGINEERING CAREER

OBTAIN A ENGINEERING DEGREE: ROBOTICS/AUTOMATION SOFTWARE DEVELOPMENT PRODUCT DEVELOPMENT

Research & Development Engineer

Junior Engineer

Software Development

Senior Manager

Office Manager

Executive Assistant

Administrative Assistant

Junior Accountant

Business Analyst

Marketing/Sales Executive

Marketing/Sales Coordinator

Senior Business Analyst

Senior Accountant

Financial Manager

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# Kiwifruit Annual Production Cycle



# The Aim of Winter Pruning

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- Aim is to get the right number of high-quality one-year-old buds, evenly spaced and tied down across the canopy



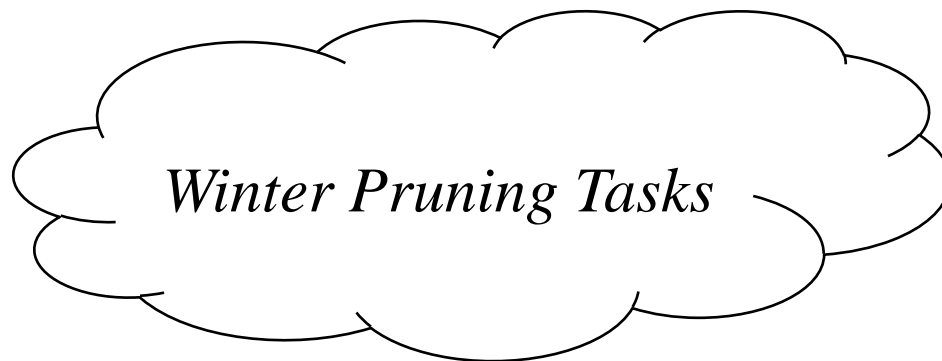
# Aims of Winter Pruning

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- Renewal of fruiting wood
- Prevention of shading and overcrowding
- Removal of diseased and broken wood
- Maintenance of vine form and size
- Maintenance of plant health

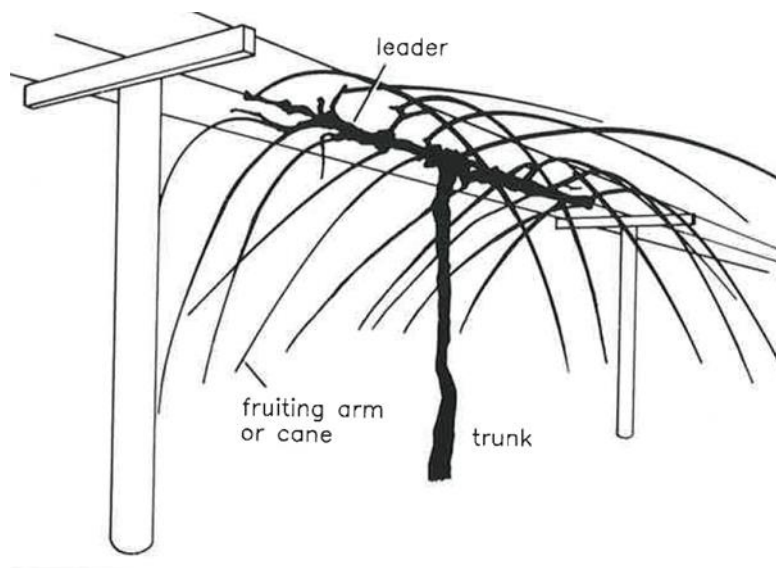
# Winter Pruning Tasks

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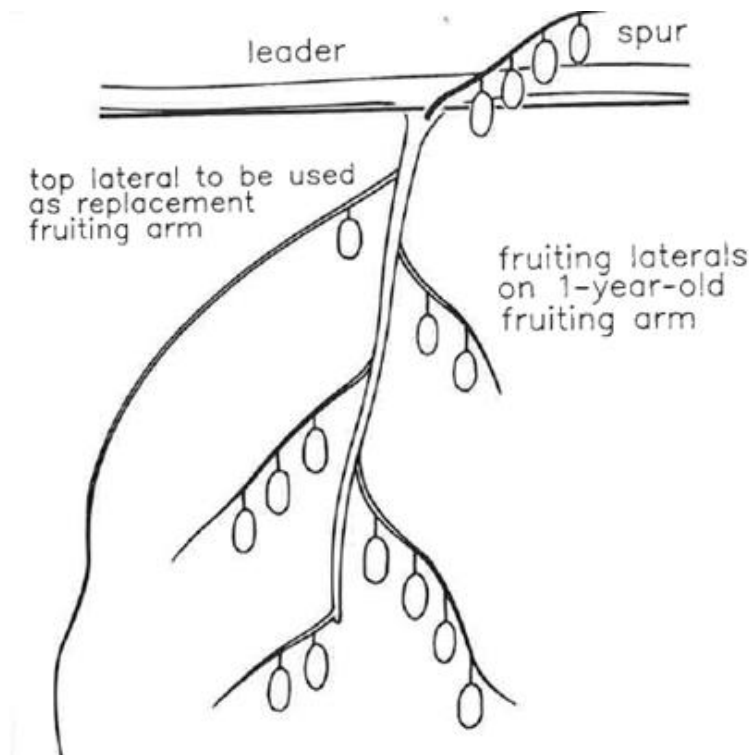
# The Kiwifruit Vine

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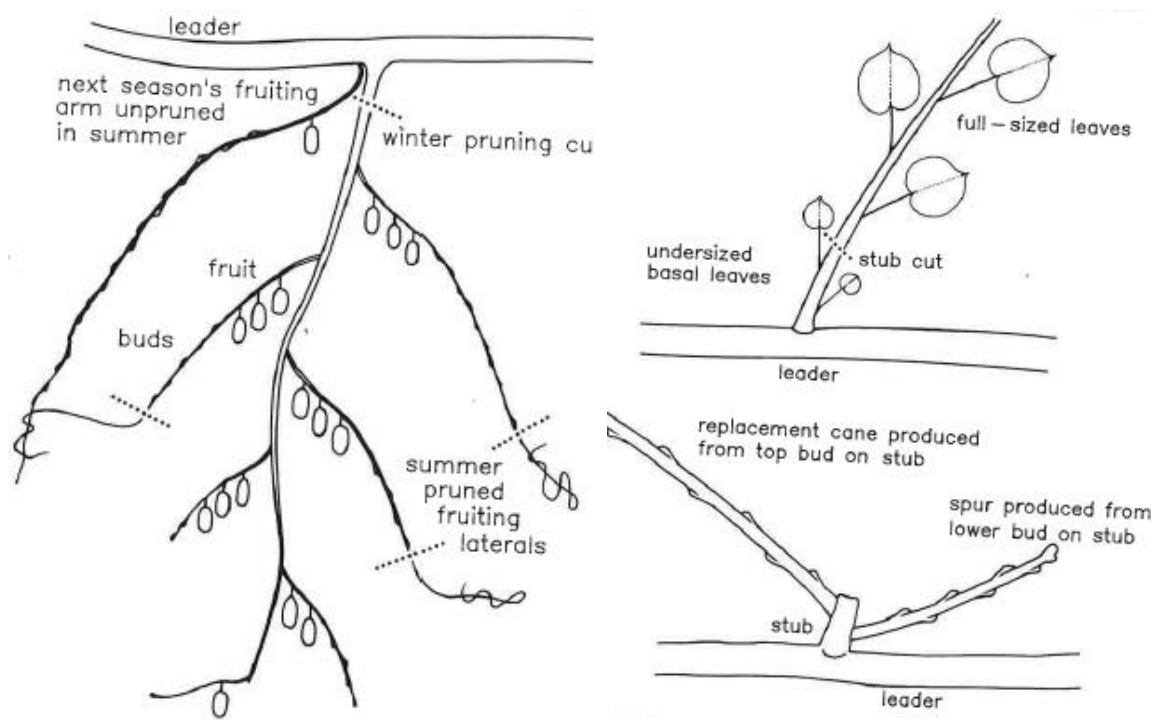
# Kiwifruit Wood Types

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# Kiwifruit Pruning Cuts



Parts of the kiwifruit vine and various pruning cuts



# Kiwifruit Varieties

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Source: Plant and Food Research

Each variety has its own unique growing features and pruning styles differ accordingly

# Male and Female Kiwifruit Vines

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- The kiwifruit plant is dioecious – i.e. it has separate female and male vines
- The female vines carry fruit
- The male vines are there to provide pollen to pollinate the fruit
- Female vines occupy around 90% of the canopy area
- Male vines are contained in a small space







# Male and Female Kiwifruit Vines



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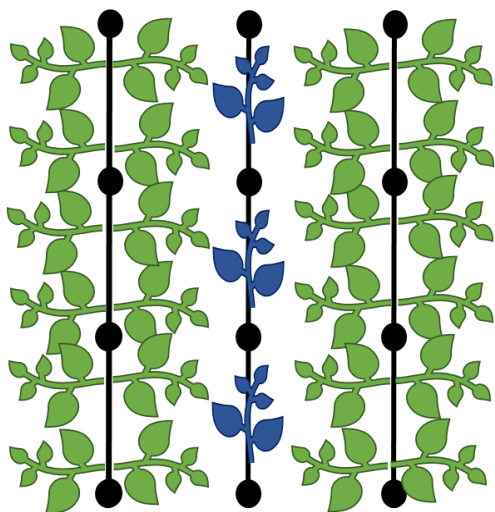
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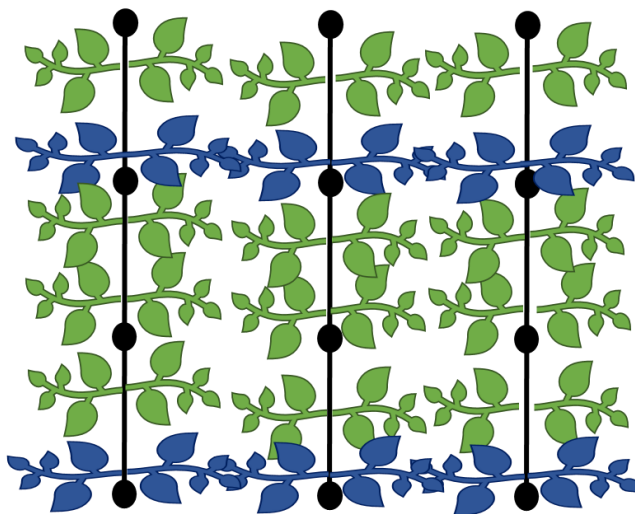
# Male Layout

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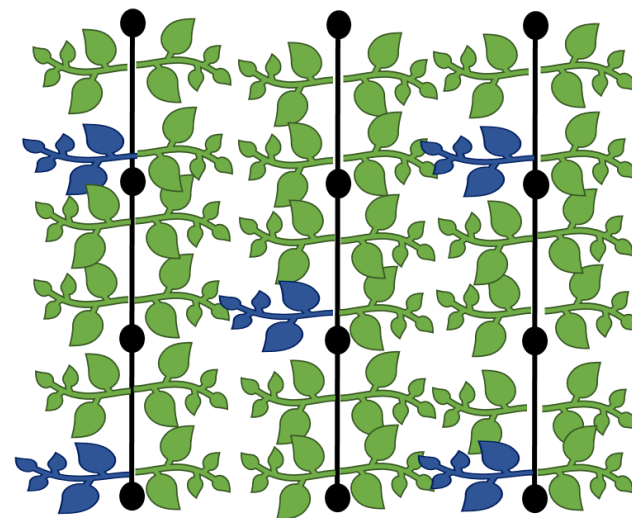
Strip Male



East-West Males



Grid Layout



# Pruning Specifications

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- Each grower will have their own targets and their winter pruning specifications will differ accordingly
- Growers may specify:
  - Cane spacing
  - Cane quality
  - Winter bud number
  - Special instructions re: leader development, young vine training, winter male management



# Gold Kiwifruit Vine – Before & After Winter Pruning

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# Green Kiwifruit Vine – Before & After Winter Pruning

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# Kiwifruit Winter Pruning



# Tying Down

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- A key activity
- A chance to finetune pruning
- Aim to spread wood across the bay evenly and hold it there
- Use clips and ties (great to reuse clips)



# Tools

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- Secateurs
- Loppers
- Saw
- Pouch
- Belt
- Paint Bottle
- Spray Bottle
- Eye Protection

# On Orchard

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- Health and Safety Briefing
- Pruning Specifications
- Assess male layout
- Buddy up with pruner and observe/question them
- Opportunity to do some cuts or tie down