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Tree Fruit

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ClickSales—ads with feedback!

Cripps Pink fruit that meet marketing specifications for colour can be sold under the trademark name Pink Lady™ but they must have a minimum 40% blush (bright pink) surface coverage.

Achieving sufficient blush for Cripps Pink to meet these Pink Lady marketing specifications can be difficult because synthesis of red anthocyanin pigments in the skin is reduced by shading and high temperature.

To improve colour, there has sometimes been a tendency to delay harvest but this means picking can take place when fruit are over-mature.

Shafiq et al. (2011) showed that delaying harvest of Cripps Pink for up to six weeks after commercial harvest maturity did promote blush development through accumulation of anthocyanins in the skin

but this was at the expense of fruit firmness and titratable acidity—both of which were reduced.

Also, later pick, over-mature fruit tend to lose quality faster in storage and can present maturity related physiological disorders like internal browning.

Light and temperature affect blush

Recently, a considerable amount of new information has been gathered on how the environment around fruit affects production of anthocyanin in the skin.

Light and to a lesser extent temperature are the main environmental elements that determine blush development.

Like most red apple varieties, blush on Cripps Pink fruit is promoted by good light exposure, low night temperatures and avoidance of extreme daytime heat during the final weeks of fruit development leading to harvest.

Countering rising global temperatures

With rises in global temperature expected to continue, growers need practical approaches to mitigate negative temperature impacts and maintain or increase current levels of blush.

Over-tree sprinkler cooling can directly counteract high temperatures and has been shown to benefit blush development under some circumstances. ▶

Managing blush on Cripps Pink apples

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Managing blush on Cripps Pink apples

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Use of colour enhancing chemical growth regulators is another option. However, tailoring orchard practices to increase fruit exposure to light is an easy and manageable way to overcome the red pigment losses that might be caused by elevated temperatures.

Integrated approach needed for greatest colour development

Various orchard management systems have been shown to increase red blush of red apple varieties by increasing fruit exposure to light.

However, some routine on-farm practices may also have negative influences on blush development, while being essential for orchard productivity in other respects.

Growers need to prioritise and balance potentially counter-productive activities.

In order to produce fruit that meets market demands, an integrated approach to colour development using several approaches may be required.

Good canopy management

Good canopy management is probably the most important factor in improving colour.

Correct style and level of pruning is needed to open up the canopy to allow sufficient light penetration for fruit colouration.

Enough wood needs to be removed to achieve high light levels without reducing yield excessively and without exposing fruit to direct sunlight during summer that may cause sunburn.

Apples require a minimum of 50% full sunlight on fruits and leaves in order to achieve adequate red colour with superior colouring occurring at levels around 70% full sun (Gurnsey & Lawes 2014).

Summer and winter pruning

Good canopy management can sometimes be achieved through winter pruning alone, although summer pruning may be required with some growing systems and high vigour trees.

Branch structure

For Cripps Pink trees, branch structure needs to be simple in middle and upper parts without significant sub-branches and arranged to allow light to pass between branches into the lower fruiting arms (Wilton & Hornblow 2003).

Water shoots

During late spring to early summer, water shoot growth should be pruned or plucked out to promote good light penetration into the fruit bearing zones.

This should be done before temperatures reach the level at which sunburn could occur because fruit that have been previously shaded can be more vulnerable to burning.

Leaf plucking/pruning

Later in the season (20 days prior to harvest), excessively shaded Cripps Pink fruit need to be exposed to light by leaf plucking or pruning back any shading laterals to 2 or 3 leaves (Wilton & Hornblow 2003).

Crop load

continued next month

Organic matter makes up only a small part of a soil (at best 5%), yet the organic matter packs a mighty punch in the orchard.

When orchardists build up organic matter in soil, they contribute more in the long-term to healthy soil and trees than does any other resource—far greater than the 2–5% of organic matter suggests.

Here, we show why organic matter is important, what it is, where it comes from, and how the orchardist can build it up in soil.

Continued from May 2015

Organic matter and supply of nutrients

There is a significant correlation between the percent organic matter in soil and soil fertility.

Most well-managed soils should have 2–4% organic matter, depending on the texture of the soil. Less than 1.5% is usually low and can lead to waterlogged or dehydrated soil and imbalanced nutrients.

Judith Tisdall* and Bas van den Ende

Importance of soil organic matter (part 2)

*Dr Judith Tisdall is a soil scientist and a former Senior Lecturer in Soil Science at La Trobe University, Melbourne, Australia.

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Importance of soil organic matter

Cation exchange capacity

A soil's cation exchange capacity (CEC) is a measure of the net negative charge per kilogram of dry soil, and therefore is a measure of the amount of positive nutrients that can be stored.

Soils with a low CEC (less than 5) have a low net negative charge and do not hold positive nutrients in the soil as well as do soils with a high CEC (more than 5). Organic matter, with its negative charge, can help improve soils with low CEC.

Organic matter also decreases the fixation of phosphorus and potassium in the soil, and forms metal-organic complexes that stabilise the micro-nutrients that otherwise might not be available for plants.

Organic matter and stability of soil

Organic matter controls the stability of soil, so that the aggregates do not collapse or erode when wetted quickly.

Organic mulch or growing plants protect the soil from heavy rain, so a hard crust does not form when the soil dries.

Large aggregates (> 2 mm) are held together by a fine network of root and fungal hyphae, and fragments of plants and dead microbial cells become encrusted with clay particles to form stable smaller aggregates.

The organic matter also encourages soil animals to produce tunnels that enable soil, water and roots to move through soil.

Silt and clay soils with less than 1.5% organic matter have small, closely-packed aggregates, and many very small pores. When wetted, any poorly-structured large aggregates break down, i.e. slake, where large aggregates collapse into micro-aggregates. When dry, the micro-aggregates block pores which are too small for water to move through causing the soil to become poorly aerated when wet, and excessively hard when dry.

How should you increase organic matter in your soil?

As you prepare the soil in summer and autumn before you plant trees, till (rip and/or cultivate) the soil then grow ryegrass, but kill it in winter.

Once the trees are planted, do not till the soil again, as repeated tillage oxidises (burns) organic matter and decreases activity of beneficial organisms, worsening the soil structure, and the supply of water, air and nutrients.

Each year manage the soil carefully with a cover crop or organic mulch to:

- add organic residues
- protect the surface of the soil from heavy rain
- decrease loss of water by evaporation
- increase storage of water, and
- increase the activity of beneficial biota in soil.

In winter, allow weeds to grow. Throw the green residues of the weeds onto the tree rows when you slash.

In spring and summer, use herbicides to kill the weeds in the tree rows, so that the weeds do not compete with the trees for water and nutrients. The green and dead weeds on the soil surface protect the soil surface from heavy rain, and the dead roots add organic matter and maintain a soft, stable and porous surface soil.

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Peter Gray

CPA

The business of fruit growing

continued from May 2015

Screwing suppliers

In my time I've come across business people who delight in 'screwing suppliers' on price, or on other supply terms.

And there is nothing wrong with bargaining for the best deal for your business—better that money stays in your pocket than it goes to somebody else.

However, with this business style there is also potential over the long-term to not, in reality, achieve the best deal for the business.

The fact is that everyone needs to make some money in the supply chain, or parts of the chain will start to falter.

I previously worked for a large regional business which would be approached by farmer co-operatives each year to tender for their business. The owner of my business quickly gave up tendering to co-operatives. If the business was won, well and good, but if it was lost the business had to sell equipment and lay people off, and the owner didn't want to do business that way. So he didn't tender.

But what he did do was choose to work with large independent farming operations to the extent that they were receiving goods and prices below the co-operative tender price.

When co-operative members found out about this they began to have second thoughts about whether or not their approach would always produce the best result.

I work with a few rare businesses that have excellent negotiating strength. Their main attributes are that they:

- Are profitable and generate strong cash flows
- Pay their suppliers on time, every month
- Buy significant volumes of goods and services.

These businesses in my experience, don't 'work over' their suppliers, but they quietly expect that each supplier will do the right thing by them in return for selling large volumes and being paid on time. However, woe betide a supplier who takes this relationship for granted—they learn the hard lesson just once.

Most businesses I work with do not have that strength, but it is one that can be developed and is based on a sound integrity in the way one goes about doing business.

Conclusion

I know of customers who have never missed a monthly payment to a supplier; I know others who are at the opposite end of the scale.

The customer/supplier relationship is an important one for managing sound business cash flow. It works best for the customer when that relationship can be developed and improved over time to build a level of trust that will assist the cash flow needs of his business and provide him with attention and rewards that are better than others might receive.

On the other hand, the persistent occurrence of late payments of accounts should be a warning-bell for a business. When this happens regularly the customer needs to make a frank appraisal of his business and its future.

Suppliers and credit (part 6)



Russell Fox

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IPM Practitioner

This is a series of articles about practical IPM—the IPM carried out by orchardists and advisors—those of us who walk the orchard, monitor, and see what is out there; and then advise on pest, disease and weed control.

Australia is probably the last country in the world not to have Varroa mite.

We are extremely fortunate being an island nation. However, with increased trade and travel and reduced biosecurity funding and resolution, it is a case of when and not if Varroa mite arrives.

Varroa mites—one of the most serious threats to honey bees worldwide—are infiltrating hives by smelling like bees, according to a new study appearing in *Biology Letters*.

The parasites were originally found on Asian honey bees (*Apis cerana*), but later began infesting and killing European honey bees (*Apis mellifera*).

European honey bee is a major pollinator for our pome and stone fruit crops. There are very significant wild honey bee colonies and a very important industry managing honey bee hives and pollination services.

The ongoing discussion world-wide about the effects of the chemical group 4A Neo-nicotinoids and bee health may be a case for, there is 'no perfect poison'.



Varroa mite on a honey bee.

The Asian honey bee in Australia

Unfortunately Asian honey bees were first detected in the Cairns region in 2007 and as of October 2012 was established across 500,000 hectares in far north Queensland.

Varroa mites naturally occur on Asian bees. *Varroa destructor* is considered the most damaging parasite of honey bees in the world today, but only occur on some strains of Asian bees.

The mite found on the strain of Asian bees to the immediate north of Australia is *Varroa jacobsonii* which was thought not to reproduce on European honey bees (*Apis mellifera*) and therefore not pose a threat.

Chemical camouflage

This new study shows that Varroa mites were able to switch honey bee hosts by switching their scents—a form of chemical camouflage.

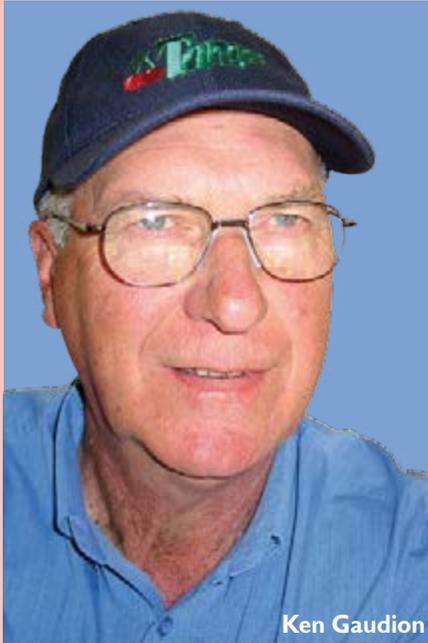
For chemical camouflage we think of squid and chameleons with their colour-changing camouflage. Sex pheromones used in mating disruption of codling moth and Oriental fruit moth are well known.

However, fooling socially sophisticated insects, such as honeybees, requires the faux scents to be incredibly accurate.

This is because the complex society of bees comprises tens of thousands of individuals divided by a sophisticated caste system.

continued next month

Varroa mites & honey bees



Ken Gaudion

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All about CHERRIES

Many cherry growing regions **have already experienced several ground frosts this winter.**

This suggests that sufficient chill hours, or chill portions, might be attained in order to help set a good cherry crop this season.

Californian experience

California last season (2014) had the lowest cherry crop since 1998. It is interesting to note there was a lack of chill hours last season.

This coming season while much improved, also shows signs of poor set in some areas, but this time related to record heat during blossoming.

The ongoing drought in California has reduced water allocations by 25 per cent.

Plan for changing weather

For future plantings here, it may be worthwhile considering planting cherry varieties with a lower chill requirement.

Your bank manager might be pleased that you are hedging against some risk in order to return a guaranteed portion of your crop in seasons that may be affected by climate shift.

Check with your nursery supplier or on the web and find out which cultivars might suit your area and climate.

Considerations when planning

When planning future cherry blocks, assess your needs in relation to trees per hectare, training systems and the likelihood for netting or rain covers.

Each microclimate has a differing requirement in terms of risk.

Take a look at the years when there was significant crop damage, how frequently did they occur? Work out a probable cost–benefit analysis of an annual hire charge for installation of nets and/or rain covers to help you make decisions.

The year you delay could be the one that does the greatest financial damage.

Adapt to changing climate



Graeme Sait



CEO, Co-Founder
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The ability to monitor your progress is integral to the Nutrition Farming® approach.

When you can clearly track benefits, you are inspired to continue on the sustainable path. Here are some things you need to know about the refractometer.

Brix tips

You are measuring the light refracting through the dissolved solids on the screen of this sawn-off little telescope.

You are literally measuring nutrient density or more accurately, your skills as a chlorophyll manager. In fact, you are monitoring your growing skills!

Continued from May 2015

Humus

How important is this magical substance called humus?

Not only does it positively impact soil structure, gas exchange, water retention, mineral delivery and plant resilience; it also determines how quickly a lack of sunshine will crash a good season.

If your soil contained 2% organic matter and your neighbour's soil featured 4% organic matter, and you were both impacted by a prolonged period of cloudy weather, here's what will happen:

After about two days of cloud, your brix levels will begin to fall and pest pressure will begin to

increase. By contrast, your neighbour's crop will not decline.

It may be as long as a week before his crop begins to suffer from a lack of photosynthesis. This phenomenon is partially linked to the fact that humus contains fulvic acid—a natural substance that seems to substitute for a lack of sunlight.

In fact, fulvic acid is often called, 'the second sun', in relation to this factor.

Protection against frost

Good brix levels can confer enhanced protection against frost.

Kelp is often used for this purpose, as it is a primary brix-building tool.

Studies in Tasmania several years ago revealed that kelp applications before frost events could provide up to 3C of frost protection.

Of course the most dramatic frost protection strategy involves removing the cause of the problem. Frost crystals are created by a group of organisms called ice-nucleating bacteria. If you can remove these creatures from the leaf surface, you can minimise frost damage.

Thankfully, there is a solution. Nutri-Life Sudo-Shield™ from NTS features massive numbers of a leaf-dwelling organism called *Pseudomonas fluorescens*. When applied to the leaf, this organism will improve the leaf population of non-ice-nucleating bacteria and subsequently decrease the likelihood of frost damage; these organisms can continue that invaluable service for around four weeks.

We have had tremendous feedback from growers around the world who have escaped the frost damage that has decimated their neighbours, following a foliar application of Nutri-Life Sudo-Shield.

Foliar formulation to lift Brix

An appropriate foliar formulation will rapidly lift brix levels in your crop.

continued next month

The beauty of Brix (part 2)

Protect apples from alternaria with Dragon 700WG

An emerging disease in Australian apple orchards—affecting apple leaves and fruit mid to late season in high spring/summer rainfall areas—Alternaria can cause significant yield and fruit loss, with the disease progressing from leaf infection and premature defoliation to fruit spotting.

Rated alongside apple scab as the most significant apple diseases in Queensland, Alternaria has also been a problem in NSW orchards around the Sydney basin and Orange, and in Western Australia when warm, wet weather favours the disease.

There have been reports of Alternaria-like symptoms in both South Australia and Victoria.

Research to control Alternaria

The increasing incidence of Alternaria—and limited registered fungicides for its control—led Horticulture Australia and the apple and pear growers organisation, APAL, to fund research in 2001 into the disease and its potential control with existing orchard fungicides.

Research by Qld Dept of Agriculture, Fisheries & Forestry plant pathologist, Christine Horlock and colleagues, reported that the Alternaria species impacting on Qld, NSW and WA orchards were also widespread in all major Australian apple-production areas.

The research confirmed that Alternaria leaf blotch caused significant premature leaf defoliation as early as January, with the majority of Alternaria fruit spots appearing two to four weeks prior to harvest.

A Qld-gov/Uni Qld/HAL-backed PhD study by Dalphy Harteveld, confirmed symptoms of leaf blotch developing from November to February, with fruit spot peaking in January and ongoing up to harvest in February.



Alternaria fruit spot has been a developing problem in Australian and overseas orchards for more than 10 years, particularly in warm, high-rainfall growing seasons and in higher-value varieties.

Dragon 700WG for management of Alternaria

Data from QDAFF and private research-company field trials on susceptible varieties demonstrated that the multi-site protectant fungicide Dragon 700WG would be effective in reducing the number of infected leaves later in the season, preventing premature defoliation and reducing the number of fruit spots.

On the basis of this research, Crop Care applied to the APVMA for Alternaria to be added to the label of Dragon 700WG—which was already used by Australian orchardists against black spot/apple scab and bitter rot.

Crop Care regulatory affairs manager Bronwyn Vorpapel said the application had been successful, and that Australian growers could use Dragon 700WG for Alternaria management this season at the same registered rate as for apple scab and bitter rot: 18g/100L with a WHP of 21 days.

“It is the only dithianon (Group M9) fungicide registered in Australia for Alternaria.”

Combined with the critical strategy of good orchard hygiene to reduce accumulation of Alternaria-infected leaf litter, Ms Vorpapel said researchers had concluded that:

- The primary infection occurred in spring, with the number of infections increasing rapidly in warm, wet weather.
- A disease-management strategy could save the apple industry between 15 to 25 per cent in lost production of high-value varieties.
- An effective, registered fungicide remained the most important factor in symptom reduction.
- Timing fungicide applications to reduce the progression of Alternaria leaf blotch can prevent extensive defoliation and remove the source of fruit infection.
- The best timing for applying fungicide to control Alternaria leaf blotch and fruit spot in apples was during flowering and early fruit development stages, before any symptoms appeared.

Preventative measures

Ms Vorpapel encouraged Qld and NSW apple growers with significant Alternaria infection last season to use preventative measures this season.

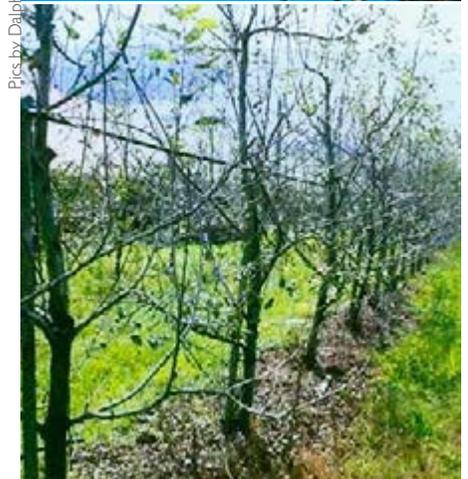
“Using a broad-spectrum fungicide like Dragon 700WG several times during early-mid growing season for apple scab/black spot will also reduce Alternaria in the orchard.

“After the black spot season, growers are advised to make further approved fungicide applications to manage Alternaria fruit spot in Gala, Pink Lady™ and Red Delicious varieties—especially from eight weeks prior to harvest up to the recommended WHP.”

In WA, Alternaria outbreaks have been associated with higher than average spring/summer



Pics by Dalphy Harteveld



Alternaria leaf blotch can lead to significant premature leaf defoliation, loss of potential yield and fruit spot.

rainfall, so she advised WA growers to make fungicide applications on the basis of weather.

“Even with average rainfall, WA orchards with a history of Alternaria infection should also be treated with Dragon 700 WG in a protectant program.”

Similarly, she advised growers in other states to monitor for leaf blotch if spring/summer rainfall occurred, and to begin a preventative fungicide program at the earliest sign of leaf infection to protect fruit.

Contact Bronwyn Vorpapel, Regulatory Affairs Manager, Crop Care Australasia
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New biological insecticide for Codling & Oriental fruit moth



Organic Crop Protectants Pty Ltd (OCP) has just announced that their long awaited product, Grandex® Biological Insecticide, will be APVMA registered this season.

Apple and pear growers

IPM-focused apple and pear growers, and organic producers will be happy to hear that Grandex Granulosis virus will soon be in reseller fridges as a *new* and *improved* biological control tool for the management of not just Codling Moth but also Oriental Fruit Moth.

This is great news for producers who encounter both highly damaging pest species.

Stone fruit growers

Stone fruit growers will also be happy to know that they will be able to use Grandex as an IPM-friendly tool to manage OFM, so combined it makes Grandex a utility product to have on hand and in stock.

Insect virus technology

Grandex is from the same stable as Madex®—developed by the world leader in insect virus technology—Swiss company, Andermatt Biocontrol.

Grandex was developed in response to reduced sensitivity of CM to Madex in Europe. Andermatt were able to screen for and isolate a more virulent strain of the *Cydia Pomonella* Granulosis Virus which successfully dealt with the resistance problem and opened up the efficacy window to include OFM.

Application

Like all biological products, Grandex requires the user to closely monitor for flights using OCP's lures, and apply the product at the first signs of egg laying.

This is done in an attempt to infect the larvae with Grandex as they chew through the egg casing and when they first feed.

Grandex has very good rainfastness and is pH stable up to pH 8.5 making it a utility biological tank mix with other conventional chemistry.

Dose rates are low at only 100mL/ha and the product comes in two convenient pack sizes of 200mL and 1L to meet both ends of the market.

Precision IPM & Insect Tech™

OCP have been working for some time on developing what they call a *Precision IPM* approach to CM, OFM and LBAM control in pome and stone fruit.

They are calling the package Insect Tech™. The Insect Tech offering is precision based IPM including Open Scout® and MyTraps® software that allows users to easily log, record and report scouting trips and keep cumulative recording of trap data on a geo-grid.

The software is supported by the Z-Trap® smart trap technology that detects and records moths remotely, allowing users to know exactly when flights are taking place rather than waiting days, sometimes weeks before a physical scouting report hits the desk.

“We are very focused on adding precision to the scouting function,” said Gary Leeson, Managing Director of OCP.

“It will allow growers and IPM practitioners to spend less time in the field logging data and reporting results.

“This allows more time to focus on precision decision making in the area of spray timing and better spray selection.

“Automating part of the IPM scouting and reporting function makes a lot of sense in areas where frequent monitoring of pest populations is critical to minimise pest damage and for the use of products like Grandex where timing of application is important.”



*For information on Grandex and Precision IPM, call your nearest OCP representative
Freecall 1800 634 204
visit www.ocp.com.au*

Well-maintained secateurs improve productivity

by Felco Australia Pty Ltd.

Secateurs are subject to considerable mechanical stresses. Their performance is therefore greatly influenced by how well they are looked after.

A poorly-maintained pair of secateurs requires more effort, cuts poorly, and wears faster than a well-maintained tool.

The golden rule for all types of pruning tools, including Felco electric and pneumatic secateurs, is to keep them clean, sharp and well-oiled.

This article is focused on hand tools. Operators can maximise performance by following these simple and easy maintenance steps:

Daily blade clean-up

This protects against dirt build-up, preventing hardened particles from wedging between the cutting blade and the anvil-blade.

- Clean the blades daily, using a dry cloth or a wire brush. Sap build-up can be removed beforehand with warm soapy water.
- In addition, it is recommended to dismantle the secateurs a few times each season in order to be able to clean and dry all parts thoroughly.

Daily lubrication

Lubrication reduces friction, cleans impurities, avoids corrosion and prevents premature wear.

Most light oils such as sewing machine oil are suitable for secateurs. Thicker oils are less

desirable. The recommended daily routine is as follows:

- After cleaning the blades, oil the inside of the blade near the central bolt, and operate the secateurs several times to ensure that the oil penetrates into the central bolt area.
- Oil the coils of the spring, also followed by a repeated action of the tool.
- Felco rotating handles only: pull out the rotating handle and apply a few oil drops into the handle. The rotating handle must always swivel freely.

Blade sharpening

A sharp blade reduces effort and causes less damage to plant tissue.

Sharpen the blade as soon as cutting requires more effort, or when the tool stops cutting small twigs cleanly.

A Felco diamond-coated sharpening tool or ceramic stone, permit sharpening without dismantling the secateurs, as follows:

- Open the secateurs, remove the spring. Work on the outside bevel of the blade first, holding the stone at a 23° angle, (as per the original blade bevel) in short motions going from the inside to the extremity of the blade. *Maintain the curve (radius) of the blade!* Failing to do this will result in a 'flat spot', which could ruin the blade.
- Turn to the inside of the blade to remove burring, holding the stone at a 5° angle.



Secateurs adjustment

The small gap between blade and anvil-blade must be re-adjusted when sharpened secateurs fail to cut small twigs.

Although secateurs can be quickly tightened up in the field, a precise adjustment is best performed at a bench, as follows:

- Dismantle and clean the secateurs. Oil the contact parts including the central bolt.
- Re-assemble without the spring. Put the handles in an open position and tighten the central bolt until the handles are locked.
- Slowly loosen the central bolt until the handles move freely—to a point where the blade rubs against the anvil blade for the last two-thirds of its length. Lock the centre nut and refit the spring. Test by making sure that the secateurs operate smoothly and cuts small twigs cleanly. Adjust the tightening nut if necessary.

Replace worn parts

If the above steps are not enough to provide an easy and clean cut, it means that parts are deformed or worn and require replacement.

The bolt, central bush, springs and blades are the most commonly required spares.

Good secateurs brands have a complete set of spare parts that can be obtained from selling outlets.

It is a matter of great pride for Felco that we still service tools that were sold more than 30 years ago!



phone 1800 730 257
www.felco.com.au

Quantum Mist™ — a quantum leap in horticultural application



Croplands began working with the South Australian Research and Development Institute (SARDI) in 2002 to develop the Quantum Mist™ fan for horticulture.

Today over 14,000 Quantum Mist fan heads have been sold worldwide.

More growers are discovering the financial and time saving benefits gained from the Quantum Mist's ability to spray large areas precisely, at faster travel speeds, all while using less energy.

The Quantum Mist technology is ideal for a variety of applications and the system can easily match grower needs across all growing conditions.

Perfect for tree crops

It is widely used in vineyards in single, two and three-row combinations. A linkage unit with horizontal boom is suited for ground crops and the Quantum Mist Tower and Ultra Tower units are perfect for tree crops.

Fluorescent dye tests have proven that the Quantum Mist penetrates deeper within the canopy and spray reaches its intended target.

Fans easily adjusted to suit the crop

The lightweight axial Quantum Mist fans are easily set to the angle, size and height of the crop, minimising chemical drift and chemical waste.

“The advantage with this technology is that we can adjust fan speeds to reduce drift, match the spray heads to the height of the bushes, and



get chemical spray straight to the leaf area”, said George Jessett, the BerryExchange Horticultural Manager who introduced the single row Quantum Mist sprayer to Australia’s largest commercial blueberry farm.

Greater coverage

Offering flexibility with fan speed and spray application rates, the Quantum Mist fan heads deliver high volume, turbulent, directional air that provide up to thirty percent more coverage than traditional sprayers, resulting in optimum plant protection and disease control.

Mr Jessett added that flexibility with spray volume and improved efficacy are major advantages in using Quantum Mist as part of his plant protection program.

Award winning innovation

The Quantum Mist technology has revolutionised the way vineyard and orchards are now sprayed and has won Croplands the 2009 Innovation Award from Wine Industry Suppliers Australia Inc.

It continues to advance with a new Cable-drive System for increased savings in power requirements and fuel use.

For more information on the Quantum Mist range of horticultural sprayers contact Croplands today

Freecall: 1800 999 162

e-mail: sales@croplands.com.au

www.croplands.com.au

Reach great heights with new air-blast fan

Croplands have just released a new 1060 mm fan to meet the spraying demands of tall tree growers.

This will be the largest air-blast fan within the Croplands Horticultural range and is now available as an option for their Cropliner XL 4000 litre trailed sprayer.

The 1060 mm fan was designed and constructed in Italy by Fieni, a brand well known for its quality and innovation in agricultural air-blast fans.

The nine blades of the 1060 mm fan can be set at three different angles, giving it the directional air advantage.

It features a metal centrifugal clutch for soft start up and shut down, while its fixed straightening vane reduces noise which is important given its considerable size.

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Rivulis irrigation

Rivulis (previously Plastro) is an industry leading manufacturer of drip and micro products.

Rivulis Australia is based in Brisbane and manufactures in numerous locations around the world.

Rivulis offers a full range of irrigation products including drip lines, drip tapes, filters, hose and tubing, sprinklers, sprays and valves.

Rivulis products are helping growers Australia-wide in multiple industries including agriculture, horticulture, landscape and mining.

What our technology does

It's about applying the right amount of water at the right time throughout the whole season.

An irrigation system comprised of Rivulis products can generate greater yields using the same—or even less—water and nutrients than with previous water distribution systems.

With advanced product features and built-in reliability, we provide solutions for above ground or subsurface application of water and nutrients directly to the root zone of each plant.

phone 1800 558 009
e-mail salesaustralia@rivulis.com
www.rivulis.com.au



Fruit bin carriers

The Transtak® fruit bin carriers range will transport 3–6 bins at a time from the orchard to packhouse or shed.



Transtak 1500L bin carrier

The Transtak 1500L bin carrier has the capacity to load and carry three 1200mm x 1200mm bins at a time.

This registered design of low-lift bin carrier simply slides the 3.65 metre forks under the bins, lifts and carries the load, then lowers the bins to off-load. Very easy to operate by any tractor driver. It has rubber load-cushioning suspension.

Transtak 1500LE

The Transtak 1500LE bin carrier has the capacity to load and carry three bins; or four bins at a time with the plug-in extension forks. It has rubber load-cushioning suspension.

Transtak 3500N

The Transtak 3500N has the capacity to load, carry and stack bins; with the capacity to carry two layers of three bins (six bins at a time).

A recent development for this model is the side-shifting of the forks to assist with stacking the plastic megabins.

This carrier when front mounted to a 4-wheel drive orchard tractor will move 200–250 bins a day on larger orchards.

Contact

Contact Peter Guy at Transtak Engineering and Equipment for further information, or a quotation to supply to your orchard.

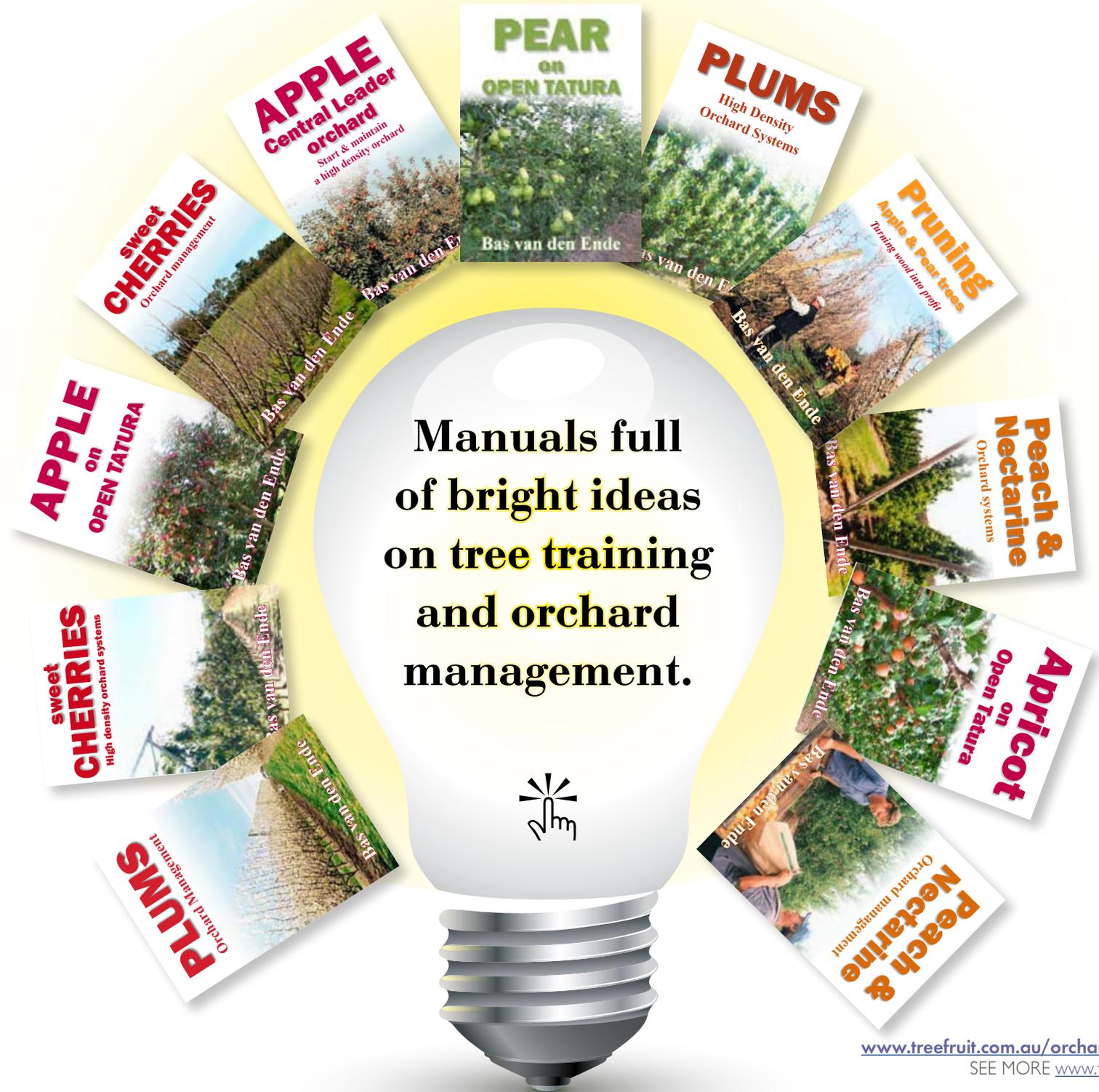
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