In this Issue:

- Water Allocations for the Central Lockyer
  - Korean Free Trade Agreement
  - Diamondback moth Management
Lockyer Valley Growers Inc. Committee

President
Michael Sippel
e: president@lockyervalleygrowers.com.au
m: 0418 479 062

Treasurer
Sharee Parchert
e: creekside@gmail.com
m: 0407 678 343

Secretary
Keyestine Gehrke
e: campseyashfarms@bigpond.com
m: 0421 738 446

Industry Development Officer
Zara Hall
e: ido@lockyervalleygrowers.com.au
m: 0456 956 340

Committee Members
- Anthony Staatz
- Brock Sutton
- David Simon
- Justin Vanstone
- Kerry Hauser
- Sharron Windolf
- Tammy Litzow
- Troy Qualischefski

Connect with Us
Post: PO Box 322 Gatton, QLD, 4343
Email: admin@lockyervalleygrowers.com.au
Website: www.lockyervalleygrowers.com.au
Twitter: @LVGrowers_Inc
Facebook: Lockyer Valley Growers Inc

print date: 9 September 2019
In this Issue—Spring 2019

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presidents report</td>
<td>4</td>
</tr>
<tr>
<td>Queensland growers sow export seeds in South Korea</td>
<td>6</td>
</tr>
<tr>
<td>Precision planter—challenging seed</td>
<td>7</td>
</tr>
<tr>
<td>The Export Facilitators Project</td>
<td>11</td>
</tr>
<tr>
<td>Precision agriculture in vegetables</td>
<td>12</td>
</tr>
<tr>
<td>Vegetable farmers at the Ekka</td>
<td>12</td>
</tr>
<tr>
<td>Do broccolini residues have soil-borne disease suppression potential?</td>
<td>13</td>
</tr>
<tr>
<td>Business is about People</td>
<td>14</td>
</tr>
<tr>
<td>What’s new in cauliflower?</td>
<td>15</td>
</tr>
<tr>
<td>Strip tillage trials commence for vegetables</td>
<td>16</td>
</tr>
<tr>
<td>Impact of pesticides on beneficial arthropods of importance in Australian vegetables</td>
<td>17</td>
</tr>
<tr>
<td>Diamondback moth Insecticide Resistance Management Strategy for the Lockyer valley</td>
<td>18</td>
</tr>
<tr>
<td>Greg Baker discusses diamondback moth management and Insecticide resistance</td>
<td>20</td>
</tr>
<tr>
<td>New Moreton Draft Water Plan for the Central Lockyer Valley Water Supply Schemes</td>
<td>21</td>
</tr>
<tr>
<td>New Zealand grower tour to the Lockyer valley</td>
<td>22</td>
</tr>
<tr>
<td>Grants and funding calls</td>
<td>23</td>
</tr>
<tr>
<td>Date claimers</td>
<td>23</td>
</tr>
</tbody>
</table>

---

Introducing—Zara Hall

**Lockyer Valley Growers Inc. Industry Development Officer – Southern Queensland**

The Lockyer Valley Growers Inc, committee has recently appointed me as the Industry Development Officer for Southern Queensland.

Thank you to everyone who I have spoken to so far since starting in the role and I will touch base with growers and industry over the coming weeks to familiarise myself with your businesses and the industry as a whole. I will be working with the Lockyer valley growers Inc. committee members and Bronwyn Ford to develop extension plans for HIA vegetable levy funded RD&E for Southern Queensland. If you have an idea or a question or if there is something that would be beneficial to industry that I am not aware of, I would love to hear from you. I want to thank the Lockyer Valley Growers Inc, committee for giving me this opportunity and I look forward to working with you all.

Zara
As much as it was a welcome relief to jump off the plane last Sunday after our trip to Korea, I was soon welcomed by the familiar view of the parched, brown land, on our trip back to Gatton. Myself, and 7 other delegates as part of the Lockyer Growers tour to Korea, felt a world away from the Lockyer Valley as we travelled around the beautiful green country side of South Korea. As I write this article, the odd shower is passing over the roof of my house, but sadly, if the forecasters have got it right, the dry weather will soon return. I am eagerly anticipating the phone calls from various media outlets, rejoicing that the “Drought” is over. Sadly, I think we are all aware that this drought is one for the ages, and it will take something extra special, or even catastrophic to get us out the other side. My message is to have belief. It will rain again. In the meantime, don’t be frightened to put your head over the fence and check on your neighbour.

Sadly, I can recall writing a similar article to this last year and reflecting on another season of poor prices. With a feeling of history repeating itself, it seems nothing has changed. The general feeling at the start of the season was one of opportunity. When there is drought, less is grown, everyone makes more money. Not so...... We all feel the Southern season has continued to impact our leafy vegetable markets and overall demand by consumers across Australia has decreased. Whilst there are many opportunities in terms of supplying consumers across Australia, my eyes were opened on the recent trip to South Korea.

With a population in the greater Seoul region of over 25 million people, opportunities can seem endless. I say this with bated breath as those who have been in the game know, exporting can have as many or more challenges as dealing in domestic markets. This was my first trip to Korea, and going with an open mind, I was excited to see the scale of operations and the professionalism of the businesses we were dealing with. We met some of the biggest

Monica Lee (Austrade), Bree Grima (Bundaberg Fruit and Vegetable Growers), Michael Sippel (Lockyer Valley Growers), Mick Maguire (Rugby Farms), Darren Howard (Lake Howard Farm), Mr Lee (SPC – Food Service, Seoul), Mr Kim and Son (Myungil Nongsan, Seoul) and Legend Lin (One Harvest).
importers of fresh produce into Korea who service both Supermarket chains and Food service sectors. It was clear that the high-end chains, servicing the wealthier consumers in Korea, are where we need to target our efforts. Over the course of the last 12 months, local growers have experimented with shipments of Broccoli, but there seem to be other opportunities in the form of various lettuce lines, particularly during the months of July, August and September. With Tariffs into Korea at 30%, it’s not without some resistance, but the future reduction in the tariff will make exporting lettuce to Korea a viable option in the years ahead. The takeaway message for our crew was the Korean consumer is prepared to pay for quality Australian grown produce, we just need to better understand the logistics and look at targeting certain key markets at the right times of year.

Recently, the Lockyer Growers hosted Federal Treasurer, The Hon. Josh Frydenberg. Whilst Josh did not come with cheque in hand to fix our water issues, he at least came with an open mind, happily discussing the potential of the region. A gathering of over 100 people met at the Lockyer Valley Cultural Centre to grab his attention and share their ideas on solving the regions irrigation water crisis. I would like to thank the efforts of Gordon Van Der Est for briefing the Treasurer whilst he visited the region.

In more recent news, the Lockyer Growers would like to welcome Zara Hall to the position of Southern Queensland Industry Development Officer. Based in the back office at the Gatton Research Station, I encourage our growers and sponsors to familiarise themselves with Zara as she brings a wealth of Agricultural knowledge to the position. The committee is very excited about her appointment as we look forward to the continuation of the Vegnet IDO Program into the future.

Our next official engagement will be on Wednesday 11th September as we play host to State Opposition Leader, Ms Deb Frecklington. This is sure to be a good night as it will provide an opportunity to share our thoughts on the future needs of the region. 

Looking forward to seeing everyone there.

Michael
Queensland Vegetable Growers Sow Export Seeds in South Korea

A delegation of Queensland vegetable growers and industry representatives have just returned from a trade mission to South Korea.

South Korea imports more than 70% of its food and agricultural products. The Korea-Australia Free Trade Agreement (KAFTA) which started in December 2014 reduces trade and investment barriers and helps level the playing field for Australian exporters competing with those from the USA, Europe, Chile and ASEAN countries.

Market access for broccoli was obtained by Lockyer Valley Growers in July 2017 and the first trial shipment of Broccoli to Seoul occurred in August of that year. Since then, Lockyer Valley Growers have secured market access to South Korea for a large variety of vegetables including lettuce, spinach, kale, cauliflower, cabbages, radicchio and other leafy green vegetables.

The extensive seven day itinerary, coordinated with support from Austrade and Trade and Investment Queensland, involved the following:

- Retail and wet market quality and price competitor assessment - Emart, Lotte and HomePlus in Busan and Hanaro Mart (run by Korea National Federation of Agriculture Cooperative), Lotte, Lotte Super and Shinsaegae in Seoul
- Busan wholesale market tour and tour of Daemyung warehouse and packing facility
- Busan Port tour (5th largest shipping port in the world)
- Meetings at Australian Centre, Seoul with Jemma Martin (Agriculture Counsellor) and Rodney Commerford (Senior Trade Commissioner)
- Farm visit
- Visit to Myungil Nongsan warehouse and packing facility (viewed the unpacking of Australian broccoli from the Lockyer Valley)
- Meetings with buyers from Lotte Super, SPC (largest bakery company in Korea with significant interest in iceberg lettuce), Onsem Community fresh produce buyer and a buyer from Taihan International.
- Visited Muji Fresh warehouse and packing facility and inspected first trial shipment of a variety of fresh product samples from Queensland and met with Owner and key importer.

The Queensland vegetable industry is valued at about $1.3 Billion and has the opportunity to capitalise on the reduction of import tariffs across many vegetable crops as a result of the KAFTA.

A key factor for success was exporting samples of a variety of vegetables that were then showcased during the meetings with retail and wholesale buyers and importers.

Following the market access amendments that were made by the Lockyer Valley Growers in 2017, broccoli has continued to be exported to South Korea by some growers. There is also significant future growth potential for lettuce as well as other vegetables such as radicchio, spinach and other leafy green vegetables.
It is brilliant that the three Queensland vegetable grower groups have continued to work together to deliver greater export opportunities for vegetable growers in Queensland. Securing market access and tariff reductions enables the Queensland vegetable industry to continue to gain market entry and greater market share.

South Korea has a population of 51.4 million people and the capital Seoul is home to 26 million people. Australia continues to have a reputation for clean, green and safe vegetable production which has helped drive the growth of broccoli exports to date.

The tour was part of project managed by Lockyer Valley Growers Inc, funded by Austrade through the Free Trade Agreement Market Entry Program and titled “Enhancing in-roads to export Queensland vegetables to South Korea”. The project was also supported by Bowen Gumlu Growers Association and Bundaberg Fruit and Vegetables Growers. This project follows the successful implementation of the Free Trade Agreement – Training Provider project that was developed and implemented by Lockyer Valley Growers in 2017/18.
Vanderfield searches the world for better solutions from innovative manufacturers... that are much more than mere manufacturers.

We look for passionate partners that are equally driven to develop machines and techniques that underpin a better business case for your business.

Talk to Dave and his team at Vanderfield Gatton today on 1300 VANDER

World Leading Solutions for:

- Field Horticulture
- Greenhouse Horticulture
- Hay and Silage Production
- Material Handling
- Crop Protection & Nutrition
- Soil preparation and improvement
- Precision seeding and fertilising
- Property development / maintenance
- Precision Ag consultancy for Data Retrieval and Analysis, Strategy, Implementation and Review.

1300 VANDER  VANDERFIELD.COM.AU
Reg Kluck’s great-great-grandfather arrived in Mt Tarampa, east of Gatton in the Lockyer Valley, from Prussia around 1874. Those were early days for settlers, who had only started entering the fertile valley in 1841. To keep the land, settlers had to develop and improve it: the area was naturally semi-cleared, and within about six years Mr Kluck had found a good spot and established a dairy farm and a citrus orchard.

Subsequent generations in the family built on the initial work, and when Reg’s father joined his own father and grandfather they also accessed underground water. ‘In more recent times there have been changes, mainly to do with the crops we grow, and also with technology’, says Reg.

The Kluck family only retain lucerne from the original farming crops, and for two generations they also grew brassicas and melons. Reg and his brothers Mike and Joe worked together in the family business until establishing their own in 2007, with Reg, his wife Veronica and now their sons, Joe and Frank, harvesting mainly onions and lucerne, which they rotate with some cereal.

Reg has a good relationship with Vanderfield Gatton, and is a John Deere user. His first John Deere tractor was bought second-hand from one of his nephews, but Reg’s fleet has increased over time and now includes a John Deere 8120 tractor.
plus a JD 6340, a JD 6120 and a favourite JD 6110R that he purchased new.

‘With the Deeres, I’ve grown used to doing my job in comfort’, says Reg. ‘I love those cabins!’

Reg found out about Monosem planters through Vanderfield. ‘We’d used air planters and other precision planters, but have found the Monosem MS one to be very, very good.’ Vanderfield Precision Planter Specialist, Stephen Frahm, adds:

‘The Monosem MS range of planters has been designed specifically for planting both raw and pelleted small seed crops, reducing seed cost and thinning labour.’

The Monosem metering units feature brass housing for excellent durability, and they are precision engineered and precision manufactured to ensure accurate seed singulation every time. Monosem also pride themselves in building custom planters to order, with a configuration that works best for each customer’s situation.

Reg’s planter of choice is the Version C, which features a twin line unit that allows for minimum row spacing of 8 inches (about 20cm) and can plant two lines 2 to 4 inches apart with each row unit. ‘This is our second season with the Monosem planter, and one of the most valuable benefits it has brought us is cutting our maintenance costs in half, because, thanks to the double row plates, we now need only 3 row units instead of 6’, explains Reg.

Stephen adds: ‘The MS metering unit has several other great features that improve efficiency. One of them is the easy and quick way to switch between single and double line planting. To change the unit from single to double, for instance, the operator simply has to replace the single line shoe with a double line shoe and the seed disc with one line of holes with a seed disc with two lines of holes.’

Vanderfield understands that the planter is the most critical farm implement, since a strong start enables a strong finish. Stephen Frahm is available to discuss what planter options would best suit your operations and can be contacted on 1300 VANDER.

Frank (Left) and Joey (Right) having just planted onion trial plots with the Monosem MS Planter.
The Export Facilitators Project provides resources and support to vegetable growers interested in exploring export opportunities, and to assist them in becoming ‘export ready’.

Peter Hockings, Queensland’s contact for the Hort Innovation funded ‘Export Facilitators’ project, recently shared some insights with Lockyer Valley Growers Inc. on the core principles of exporting:

**Commitment**

“Exporting is quite intricate and requires understanding many aspects including regulatory compliance, logistics, even awareness of cultural sensitivities. Developing an export market takes time and commitment, but it can lead to real benefits in profit and risk mitigation.”

**Buyer Relationship and Trust**

“It’s important to develop strong, committed and trusted relationships with your customer. In many cases you will initially be promoting your business as a trusted trading partner ahead of your product – the product is bait, your business is ‘the hook’ that can secure the deal. And when you find buyers you trust – be loyal to them and don’t change buyers purely on small price fluctuations, try re-negotiating.”

**Market access**

“Identifying countries you have market access to for your commodity is critical. Do not waste valuable time and money chasing business in countries you will not be able to send to now. Always check market access requirements before pursuing unsolicited leads. Unfortunately market access is not always clear-cut, but help is available if you need it.”

**Price point**

“Exporters must do due diligence in determining if the price point makes exporting feasible. Import Tariffs alone vary widely from one commodity to another, and from country to country. A solid understanding of price points, costs of production, and consumer trends goes a long way toward short-term profits and successful long-term export strategies.”

**What is you Unique Selling Point, Value Proposition and Core Offer?**

“Once you start exploring Export Markets, you are in competition with the rest of the world and other Australian exporters for business. What is it about your product and businesses that will set you apart? Do not let this discourage you though, it can be a work in progress.”

**Scale – myth versus reality**

“Do not think that you cannot export because you are not big enough! Sure, scale may get you that first deal faster. There are however niche markets which can often be more profitable than large volume deals – you might just have to work harder to find them.”

Any vegetable producers wishing to learn more about their potential export opportunities, please contact Peter Hockings on +61 427 118 953 or by emailing phockings@growcom.com.au.

More information on the Export Facilitators project can be found at: https://www.growcom.com.au/projects/export-facilitator-project/
Jack Abbott from Aratula is working with DAF to understand the impact of variable soil types on his crop. EM38 soil mapping has identified different soil types with different irrigation requirements. Jack has been working with this variability by altering his irrigator speed across the field in order to account for differences in water holding. DAF is planning to install soil moisture monitoring equipment in order to assess how well the readings match soil water holding capacities and crop requirements.

For more information contact Gaya on 07 53469514.

This work was jointly funded through the Department of Agriculture, Fisheries and Forestry and Horticulture Innovation Australia, “adoption of precision systems technology in vegetable production” project VG16009.

As part of the Ekka, DAF organised and facilitated Meet the Producer segments each day with agricultural producers from around the state.

Michael and Tracey Rieck, from Rieck Farming in the Fassifern Valley were one of the vegetable producers involved in these segments.
Do broccolini Residues have Soil-borne Disease Suppression Potential?

Julie O’halloran, Department of Agriculture and Fisheries, Gatton

Broccolini samples from Justin and Zac Vanstone at Vanstone Produce, Crowley Vale were collected and analysed for biofumigant compounds (glucosinolates). This was compared with data from commercial biofumigant cover crops grown in both winter and summer.

The broccolini had similar total amounts and types of glucosinolates (data not shown) as other brassica biofumigants during a winter planting. For most biofumigant cover crops greater levels of these compounds are produced during summer. DAF is currently waiting on glucosinolate analysis data for broccolini.

For more information contact John Duff on 5346 9513.

This work was jointly funded through the Department of Agriculture, Fisheries and Forestry, the Department of Environment and Science, ‘Investing in Our Environment for the Future’ and ‘Horticulture Innovation Australia Optimising cover cropping in vegetables’ VG16068 projects.

Comparison of biofumigant compounds (glucosinolates) in broccolini and biofumigant cover crops.

Julie O’Halloran, Senior Development Horticulturist with DAF, Gatton conducted the interview with Michael.

The discussion covered the Rieck’s goals in providing quality produce, some of the technology the Rieck’s are implementing on farm to become more efficient with crop inputs, value adding to minimise waste and some of the challenges associated with farming.

Michael and Tracey Rieck share insights into farming with audiences at the Ekka as part of ‘meet the producer’.
Business is about People

Located in the Lockyer Valley, Withcott Seedlings is a major commercial supplier of vegetable seedlings to the East coast of Australia and forms an integral link in the supply of fresh food throughout Australia.

The family-owned business which was established in 1983 by Graham and Wendy Erhart and later in 2014 forming a business partnership with Mike and Anita Hindle, the company is renowned for its innovative quality management systems, superior customer service and most importantly, product quality.

Given its history, Withcott Seedlings is very family-oriented with a strong team environment where there is a genuine passion for production of quality product and doing all we can for our customers and staff.

A large number of our customers have been dealing with us for many years and this strength of relationships and transparency of information which has been a major contributor to the business’ success and listening to our customers is “front of mind” for everyone in the business.

Sourcing inputs locally and employing a large number of local people as well as backpacker labour strengthens the local economy as well as making what we do very real and meaningful for everyone.

Diversity of our workforce is also critical and although Mike, Graham, and Anita are heavily involved in the running of the business having a strong senior management team with significant experience both at Withcott Seedlings and in other workplaces rounds off the structure and diversity of thinking and problem solving required.

We have an equal blend of male and female managers across all age groups to ensure the management team remains balanced and open to new ideas and also how we approach challenges in the business.

One of the more interesting groups employed at Withcott Seedlings is the team from the Endeavour Foundation. The team of up to 10 assisted employees have been working on the site since 2013 and are an integral part of our broader team and can always be relied on for a happy face, quick wit and commitment to their allocated task.
The Narromine based cauliflower program (under the guidance of Stephen Kammholz) is entering a very exciting period for our local growers. Stephen has worked extremely hard in his time with the program to develop varieties with the resilience required to meet the challenges of our changing environment.

Last years summer breeding nursery highlighted variety TCF8146. With relentless summer temperatures making cauliflower growing very difficult on the Downs and early Lockyer plantings, TCF8146 was a standout. Proving to be a week quicker in maturity compared to industry standards Moonshine and Littoral, TCF8146 has adequate curd cover and improved tolerance to internal tip burn under warm growing conditions. Curd quality and uniformity of harvest is exceptional for such an early variety.

For more information please contact:
Michael Sippel
Mobile: 0418479062  Email: michael.sippel@tnseeds.com
Strip Tillage Trials commence for Vegetables
Julie O’halloran, Department of Agriculture and Fisheries, Gatton

The Department of Agriculture and Fisheries, Gatton Research Facility, is currently working with local growers trialling strip tillage in vegetable systems.

Initial comparisons of strip tillage with conventional tillage has indicated 6-7 fold savings in fuel, 75% reduction in time for field preparation operations and 60-75% reduction in the number of operations undertaken for field preparation.

DAF has not yet been able to collect yield data to compare between these tillage systems due to weather damage which has confounded all sites monitored to date. Sites so far have generally been coming out of cover crop rotations and into sweet corn, pumpkins and green beans.

Differences between tillage systems in yield, soil moisture status and water use and agronomic factors i.e. weeds, pest and diseases will be assessed.

This work is ongoing over the next couple of years so if any growers are interested in trialling this system, DAF is happy to assist in monitoring and comparison with conventional tillage practices.

For more information please contact Julie O’Halloran at DAF, Gatton on 0409054263.

This work was jointly funded through the Department of Agriculture, Fisheries and Forestry and the Department of Environment and Science, ‘Investing in Our Environment for the Future’.

Strip tillage (left) and conventional tillage (right) field preparation prior to sweet corn.
Diadegma is an important and effective parasitoid of Diamondback moth. Diamondback moth pupae (from left to right): healthy Diamondback moth pupa; parasitised Diamondback moth pupa and empty pupal case with exit hole from Diadegma parasitic wasp. Image credit: Queensland Department of Agriculture and Fisheries.

Impact of Pesticides on Beneficial Arthropods of Importance in Australian Vegetable Production
Lara Senior, Department of Agriculture and Fisheries

A team of entomologists, led by Jessica Page (IPM Technologies) and in collaboration with Maarten van Helden (SARDI), Lara Senior (DAF) and Zara Hall (formerly DAF) is carrying out trials on key parasitoids and predators important for control of pests of vegetable crops, including brassicas.

There are few effective insecticides available to brassica growers, particularly for the key pest diamondback moth (DBM). Resistance issues also make this pest difficult to control with pesticides. However, beneficial insects can provide very good control of DBM and other vegetable pests.

A key beneficial in brassicas is Diadegma, a wasp which parasitises the DBM grub. Although parasitised DBM can be hard to spot, Diadegma has been shown to provide excellent control of this pest. Other beneficials important in brassicas include Aphidius (a wasp which parasitises aphids) and Trichogramma (which parasitises moth eggs, including those of DBM).

The results of the current project have shown that beneficial species react very differently to different insecticides. Once trial work is finished, results will be summarised in a series of grower information sheets for vegetable crops, including brassicas. These will summarise the effects of pesticides on key beneficials in an easy to read format. This will help growers and advisors to select beneficial-compatible insecticides for their crop, helping to conserve beneficial insects. The guides will be available in April 2020.

For more information, contact Jessica Page at jessica@ipmtechnologies.com.au

Project VG16067 is funded by Hort Innovation using the vegetable industry levy and matched funds from the Australian Government and IPM Technologies.
Sound IPM strategies for DBM control in brassica vegetable crops.

**Beneficials-**
- Focus on preserving naturally occurring and commercially released beneficial insects in the crop eg. supply nectar sources and harbouring sites for wasps.
- Use insecticides that have minimal impact on key beneficial insects such as *Diadegma semiclausum*, *Micromus tasmaniae* (brown lacewing) and predatory bugs. *Bt* sprays are the ultimate here for safety to beneficials however the horticultural industry will soon be releasing scientific data indicating the short and long term impacts of currently registered insecticides on a range of beneficial insects. Stay tuned.

**Cultural-**
- Control and destroy volunteer brassica weeds, harvested crop areas and abandoned brassica vegetable and brassica leafy vegetable crops in a timely manner so as not to breed up DBM populations.
- Transplant DBM free seedlings from commercial nurseries.
- Regularly (at least weekly) monitor the crop and document pest incidence and developmental stages.
- Be mindful of the rate of development of DBM based on prevailing weather conditions. Warmer growing conditions means faster developing insects, so shorter spray intervals may be required for all products. This is particularly the case for *Bt* sprays.

**Chemical (last resort)-**
- Only apply an insecticide if economic spray thresholds are reached. Target insecticides to the earlier instar stages as they are more susceptible particularly if tolerance levels to insecticides are increasing. Always document effectiveness of each insecticide application and never re-spray a failure with the same mode of action insecticide. Inform your local reseller or agronomist of any spray failures and try and understand why it has happened.
- Ensure spraying equipment is properly calibrated and in good working order so as to achieve good spray coverage. Refer to product labels for required spray quality (droplet size) and water volumes for particular crop stages. There is a lot of industry knowledge available regarding application technology and environmental conditions required at the time of application to optimise insecticide performance.
- Within the nominated IRMS windows, use a single Mode of Action insecticide in a “block” eg. could be two or three sequential applications, so as to coincide with a single pest generation and then rotate to a different Mode of Action insecticide.
- DO NOT apply any Mode of Action group to more than 50% of the life of the crop.
- Abide by the legal maximum allowable number of applications of a particular insecticide per crop per season. These restrictions are in place for sound insecticide resistance management and MRL compliance reasons.
- Use registered insecticides at the recommended label rates and adjuvants. DO NOT reduce label rates.
- DO NOT use mixtures of insecticides for controlling DBM.
- Avoid broad spectrum insecticides eg. OP’s, carbamates and synthetic pyrethroids or only use strategically. There are known high levels of DBM resistance to these products and they are also highly disruptive to beneficial insects.

---


---

**Plutella xylostella control in brassica vegetable and brassica leafy vegetable crops: Best Management Practice.**

Within constraints of each window based on current DBM/IRMS.

<table>
<thead>
<tr>
<th>Crop growth stage</th>
<th>Seeding</th>
<th>Early vegetative</th>
<th>Mid vegetative</th>
<th>Protection of susceptible commodity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>Rotate R’s &amp; Aunts (eg. Dose®) and a Xant® (Xentari®) in conjunction with weekly crop monitoring and focus on sound IPM principles.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td>Select: Neo, Proclaim®</td>
<td>Avatar®</td>
<td>Movendo®</td>
<td>Durino®</td>
</tr>
<tr>
<td>Step 3</td>
<td>If DBM population becomes too mixed in size, then knockdown population using a strategic application of Regent® and then resume using more selective options as in Step 2.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The “2-window” Rotation Strategy for Brassica vegetable and Brassica leafy vegetable crops.

Diamondback Moth (DBM) Insecticide Resistance Management Strategy (IRMS) For the **Lockyer Valley, QLD.**

A *Production Break* is recommended from November to January.

**First window (February-April):**
Durivo® use recommended from February to March.
Belt®/Coragen®, Proclaim® and Regent® use recommended from February to April.

If Durivo® is used at crop transplant, then foliar Group 28 not to be used in that crop.

**Second window (May-October):**
Avatar®, Movento® and Success® Neo use recommended from May to October.

**Note:** The use of Regent® is permitted in September and October only as a “clean up” spray if needed. Disruptive to natural enemies

“For any one mode of action group within a window, block the applications to coincide with a single insect generation and then rotate to a different mode of action group.”

The detailed information within this document has the support of the Lockyer Valley Inc. committee, industry specialist and CropLife.
Greg Baker, SARDI, discusses
Diamondback moth Management and
Insecticide Resistance in the Lockyer Valley

Recent pesticide testing has confirmed anecdotal field observations from growers and agronomists that pesticide applications are not providing the level of control that had been seen in previous seasons.

The results from testing Diamondback moth field populations indicate resistance is emerging in the Lockyer Valley to the common Diamondback moth insecticides, and at a particularly high level to the group 28 insecticides such as Belt®, Coragen® and Durivo®.

Earlier resistance testing conducted by Greg Baker’s team at SARDI had revealed moderate levels of group 28 resistance which is associated with a type of resistance known as ‘metabolic resistance’.

This more recent testing in the last 8 months funded by CropLife Australia shows high order resistance, orders of magnitude higher than what was previously recorded in Australia and likely to be associated with a different type of resistance, ‘target site resistance’. This new resistance mechanism is of real concern because it renders the group 28 chemicals ineffective.

It is possible that this new target site resistance in group 28 chemicals will spread by Diamondback moth movement through the Australian population and render the group 28 insecticides ineffective.

The loss of the group 28 insecticides would put additional strain on the other registered Diamondback moth chemicals. South Australia Research and Development Institute’s resistance tests show that presently there are moderate levels of resistance to the other chemicals in Diamondback moth in Brassica vegetable production districts nationally.

It is very likely that industry will face similar challenges to what occurred in the 1980s and ‘90s when resistance issues developed to Diamondback moth in older chemistry. As part of the ‘Three valley resistance management strategy’ that was adopted back then, a production break was included in the strategy.

In addition to a resistance management ‘window strategy’, it is worth seriously considering all options to help reduce chemical usage to combat this resistance threat and preserve the efficacy of existing chemicals, including a summer production break for brassicas.

Greg Baker is a senior entomologist based at South Australia Research and Development Institute (SARDI) who researches Insecticide Resistance in Diamondback moth and has tested DBM populations collected in the Lockyer Valley and other brassica vegetable regions nationally through funding contributed by CropLife Australia.

2019 Diamondback moth Insecticide Resistance Management Strategy
Are you implementing the Diamondback moth insecticide resistance management strategy? CropLife Australia is currently coordinating a survey of growers to better understand levels of adoption and ways to improve the strategy.
The Lockyer Water Users Forum and Lockyer Valley Growers Industry Development Officer, Zara Hall have prepared an information grower update regarding the New Draft Water Plan for Central Lockyer water supply scheme.

The new amended draft water plan has been made available on the Department of Natural Resources, Mines and Energy (DNRME) website for consultation. The revised draft plan is based on grower submissions and discussions between the Queensland Government and Lockyer Valley water users following the rejection of the first draft plan.

The new draft plan has been prepared with extensive consultation and is sustainable, versatile and fair. The revised proposal has a 6ML per ha groundwater entitlement for landholders in the benefited zone comprised of 2ML per ha benefitted (Medium Priority) and 4 ML per ha unbenefitted (un-supplemented, or Low Priority). Irrigators only pay for the benefitted/Medium Priority component.

Seasonal allocation water sharing rules (previously called announced allocations) are currently being developed and were the focus of grower workshop sessions. The water year is also being changed for January to December to provide more versatility in planning for winter plantings.

After announcement of the new proposal, the water planning subcommittee met on 26 August 2019 to review the current changes. After initial agreement, the plan was also workshopped with growers in the Central Lockyer proclaimed benefitted area (workshop dates 2-4 September) for discussion before the plan can be implemented.

Water sharing options are yet to be finalised and will be formed in part from the information gained at the workshops. Water trading is also planned to be implemented and will include options for temporary transfer of benefitted (Medium Priority) and unbenefted (Low Priority) water.
New Zealand Grower Tour to the Lockyer Valley

Twenty eight Chinese New Zealand vegetable growers and industry members visited the Lockyer Valley in September as part of a study tour of vegetable production in Australia. The group was formalised over 70 years ago following the second world war and takes regular study tours to learn about agriculture in different farming systems.

This tour was organised by Howe Young with help from Belinda Adams, Coastal Hydroponics. Thank you to Sharron Windolf and Emily Houston of Windolf farms, Donna Durham and Clem Hodgman of Barden Produce and Troy Qualischefski of QualiPac for your time, insights and hospitality.

Zara Hall joined the group for the Lockyer valley field day component of their tour and had the opportunity to talk to them about farming in New Zealand. New Zealand growers face many of the same challenges affecting growers here (e.g. good labour, over supply etc.). There were also some differences and points of interest, for example:

- A record wet winter this year in NZ
- Good control of Diamondback moth using an Insecticide resistance management strategy (four window strategy)
- Increased plantings of avocados for the export market will start reaching production in the coming years
- Some growers are using ozone as a form of pest management and reportedly are achieving good results

Thank you to everyone who was involved in the tour. It was a lot of fun, informative, and there is the opportunity in the future for the hospitality to be returned with a tour to some NZ farms.
Grants and Funding Calls

Women’s leadership development: horticultural sector
https://www.wla.edu.au/horticulture.html

Food innovation Australia (FIAL)

Business development fund

Mazda Foundation

Back to Work

Energy efficient communities program

Date Claimers

8 September 2019
Toowoomba second range crossing opening – entire section. (No tolls for first 3 months)
https://www.tmr.qld.gov.au/Projects/Name/T/Toowoomba-Second-Range-Crossing/Tolling

11 September 2019
Lockyer valley growers Quarterly BBQ Meeting
Foundation building, University of Queensland, Gatton Campus, 6pm

12 September 2019
Webinar: Innovate Queensland, “Entering and succeeding in the Chinese market” 12pm – 1pm AEST
**Major Sponsors**

- Withcott Seedlings
- Perfection Fresh Australia Pty Ltd
- BoomaRoo
- Landmark
- Terranova Seeds
- Agricultural Requirements
- Boxes & More

---

**Minor Sponsors**

- EE Muir & Sons
- Fairbank Seeds
- Orora Fibre Packaging

---

**Lockyer Valley Growers Inc**

---

**Lockyer Farm Machinery**

1 Western Drive, Gatton | Ph: 5462 1988
www.lockyerfarmmachinery.com.au
sales@lockyerfm.com.au

---

**AustSafe Super**

**Nolan’s Interstate Transport**

**Vanderfield**

**Lockyer Valley Regional Council**