

Spring Onion and Radish growers Tour - United Kingdom and Holland 2009

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GT Tractors

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SPRING ONION AND RADISH GROWERS TOUR SEPTEMBER 2009

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SEPTEMBER 2009 VG09159**

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Purpose: The purpose of the project was to assess existing, new and emerging technologies to improve efficiency and effectiveness and how they may be integrated to existing systems in Australia.

Government priority: Maintaining and Improving Confidence in the Integrity of Australian Agriculture, Food, Fish & Forestry Products

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Tour Participants

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Joe Taranto, GT Tractors Pty Ltd, Mornington, Vic
Marg Lenders, GT Tractors Pty Ltd, Tooradin, Vic
Rocco Lamatina, A.D. & R. Lamatina Pty Ltd, Clyde, Vic
Craig Arnott, Arnott's Vegetable Farms, Clyde, Vic
Phillip Cochrane, P.J. & J Cochrane Pty Ltd, Clyde, Vic
Dave Simon, Simon Farms Pty Ltd, Gatton, Qld
Rodney Dunn, Upper Mt. Gravatt, Qld



Summary

From the onset, all participants were of a singular mindset to draw comparisons between conditions & practices that we were to be introduced to, & those currently local to us. Although farming employs practices that have remained unchanged for decades, it is overwhelmingly endorsed that there is a need to meet the rapidly changing demands of the public in which it supplies, and a diminishing labor force which can supply it. European growers have been at the forefront of technology based developments in growing and it was important to learn from that wealth of information.

There was an immense amount of planning that was required for arranging this study tour. For seven days out of the country, approximately seven weeks of work was involved in administrative preparation. We attempted to cover all matters pertaining to flights, transfers, accommodation, meals, local transport, international transport (within Europe), grower meetings & displays, etc. There is always something forgotten, but the hard work seemed to have paid off.

Upon sighting both UK & European farms, the Australian growers were quick to point out similarities & differences between conditions as these were obvious; soil type, plant varieties, ground preparation, seasonal limitations, growing without raised beds. There was then the things that could only be communicated. Local growers were introduced to European growing methods such as; longer rows to incorporate harvesting equipment & with this a higher dependence on land levels.

No matter what the differences, there were a number of global aims that rang true. These included reducing to excluding the use of fertilisers & chemical sprays. Employing crop rotation between paddocks and with the use of livestock to enrich & rejuvenate soil. Finally, the need to be able to employ the use of mechanical harvesters to ensure the longevity of the industry without sacrificing the quality of the produce.

Growers in UK & Europe were extremely interested in sharing information with Australian growers on the tour. Whether this was as a result of them not being a direct threat to one another's distributions, or that there was an overwhelming inspiration to communicate wasn't important. We believe that everyone on the tour was compelled to communicate for the betterment of growing in general & adoption of better growing methods.

As a result of the planning that went into this trip, there were a number of opportunities for growers to have short breaks from the outdoor side of the farms. At every offer for an additional activity, all participants were keen view either local surrounding areas, or processing plants that were employing a mix of both manual labor and ingenuities mechanical and electronic processing aids. This also provided addition time to talk amongst themselves in a relaxed atmosphere and digest what they had seen.

The success of the tour can be measured in two ways. Firstly, the knowledge that was shared amongst growers and therefore the strengthening of international relationships. Secondly the benefit that will come to the local participants that have already ordered the Spring Onion Harvester that was viewed on this tour.

Tour Itinerary

Friday 4th September

Depart Melbourne 15:50

Saturday 5th September

Arrive Heathrow Airport 05.55am

Continue on to Stratford Upon Avon by mini bus and check into Hotel

Overnight stay at Stratford Upon Avon Holiday Inn

Sunday 6th September

Rest day

Monday 7th September

Ludington Visited Sandfields Farms Pty Ltd, owned and managed by Derrick Wilkinson, which produces and packs spring onions. They are one of the biggest producers in the U.K.

Travel to Kent where the Robocrop company demonstrate their Robocrop inter row cultivator.

Travelled to Kassel in Holland by coach (approx. 5 hours) via Tunnel, France (near German border)

Tuesday 8th Sept. Kassel - Monster

Experience spring onion harvesting and processing under different soil types, climatic conditions, and varieties that may be relevant to Australia. (Approximately 3 hours)

Tour of the 1500 feed lot dairy

Lunch break, then travel to Monster (2 ½ hours)

Tour of one the largest farm machinery contracting operations in Holland.

Tour of Koppert factory including world first development by Koppert - microwave soil purification

Overnight Accommodation at Monster

Wednesday 9th Sept. Monster – Schiphol

Visited the Largest Flower Auctioning centre in the Northern Hemisphere.

Travel to nearby radish producing hot houses where the radish harvester was in operation.

Travel to another radish producer, where the radish harvester also bunched the radishes.

Travel to radish processing factory.

Tour of Piet Zwinkles radish processing operations

Transfer to Schipol accommodation

Thursday 10th Sept

Transfer to Schipol and check in for international flight. **SQ 323** leaving at 11:30.

Arrive Changi International airport , Singapore Friday 11th September 6:00

Depart Changi International airport , Singapore Friday 11th 9:55 **Flight SQ 217**

Arrive Melbourne airport 11th Sept. 19:15

(Stop over in Singapore 3.55 hours)

Sandfield Farms

Sandfield Farms produce 50% of the United Kingdom's total spring onion production. They employ 700 people for manual labour. Spring onions are grown for 10 months of the year.



The United Kingdom adapts to the highest level of Occupational Health and Safety and hygiene levels to which we have not seen outside of Britain.



Left



Greg Arnott inspecting similarities to Australian Spring Onion crops in Germany. All European Spring Onions are topped and the majority are presented sleeved.

Robocrop – Kent



The Robo Cop inter-plant cultivator is very new technology. It has mounted cameras that send a message back to a computer which adjusts the cultivation tynes accordingly, eliminating human error and compensating any “misses” in the crop.

Farming in Germany

Spring onions are harvested mechanically and transported to packing shed to be peeled and bunched in environmentally controlled situation



Above

These Australian growers are impressed by the efficiency and accuracy of the harvesting of spring onions.





Right

Feed lot milking 1500 cows in computerized shed. This German feed lot is extremely well run. The computerized system automatically sorts cows by their production and regulates when each cow will enter the 40 head rotary milking shed. Manure is stored in large containers, 3 stories high, and the gases emitted are used to convert to energy to run the operation.



Contractor Machinery in Holland



This company has in excess of twenty Million Euros invested in contracting machinery and are one of the largest farm machinery contract operators in Holland. They own and operate five Koppert Spring Onion Harvesters and are used to harvest leek seedlings to be distributed throughout Holland and Germany.

The sugar beet harvester (below) can hold in excess of 40 tonnes and during harvest season operates 24 hours per day.



Our tour group are making a “bee line” to the Koppert Spring Onion Harvester



Right;
Phillip Cochrane showing interest in leading sensors in front of Koppert Spring Onion Harvester



Left;
Arie Koppert discusses the operational functions.

Holland Glass House Production

Glass houses in Holland continue on for as far as the eye can see.



Below;The Dutch Flower Auction in operation. Fully automated



Right; Purchasers bid on the moving crates of flowers as they pass in front. Bids are made by the computerized system at the desk.



Radish Technology



Left: Radish grown in hot house, seeder is in 18 rows drillings to suit harvester

Right;

Koppert Radish harvester. This machine has auto top removal and feeds into (Mega) bulk bins. This unit is 18 rows but 9 and 12 rows are available. A nine row unit would suit Australian conditions.



Left;

Koppert auto harvester in operation, one man operating can fill a Mega Bin with radishes in less than two minutes.



Above; Radishes sown using Koppert Air Seeder giving great uniformity of crop.

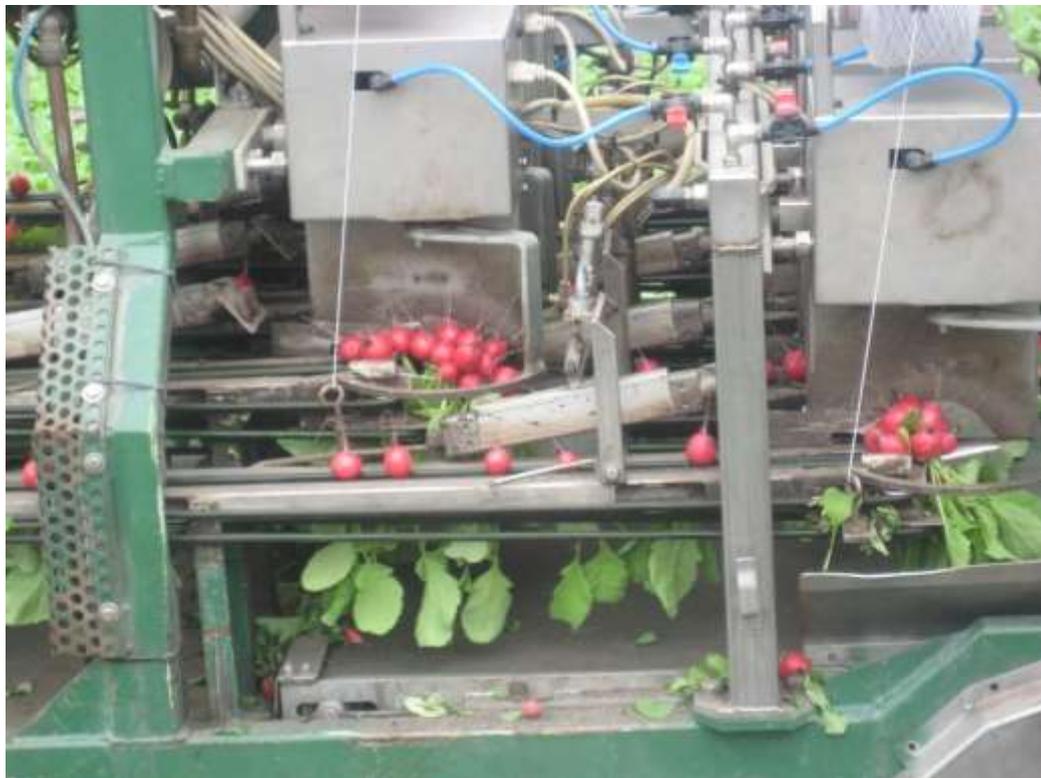
Below;



Radish Bunching

Below;

Koppert Machines Auto Radish Harvester Self Propelled. This machine can grade and bunch 4,000 bunches per hour with one operator. These machines are in operation in Holland, England, Italy, Spain and U.S.A



Air Seeder

Right;
The Koppert air seeder is self propelled (walk behind)
This style is not yet used to any extent in Australia, as most units are tractor mounted.



Radish processing and packaging



Above;
Radishes are washed, sized, sorted and packaged in extremely efficient conditions

Left;
The final result

Orchid Production

Holland's largest and most modern orchid producer of (Spider) Phalepnosis Orchids. 28,000 plants are sold weekly with a staff of 50 persons.

This farm is completely automated and total climate control to avoid excess use of chemical sprays.



Tour Outcomes

Every day, the participants shared their experiences and what ‘take-home’ message they had discovered and would implement in their own farms.

Group discussions enhanced their learning experience and improved the quality of their tour experience.

The Australian cropping industry suffers an acute shortage of opportunities for professional training and education in a range of technologies that are unique to the industry.

Overseas study is mandatory if we are to match production standards with overseas competitors as well as up-skilling the industry resulting in enhanced productivity and farm viability.

Despite the Australian growers ability to produce the product, they are restricted by supply and demand as we do not have the population to supply to, unlike the U.K. and European countries.

As a result of this tour, four Spring Onion Harvesters have been ordered for immediate production, with more orders in the near future.

Technology Transfer

The outcome of this tour will be presented at the industry association meetings;
Victorian Vegetable Growers Association – Periodical meetings
By Rocky Lamattina or Craig Arnott

Dave Simon will be speak at the industry meetings in Queensland.

Articles will be placed in the “Ausveg” publication and also in the Vegetables Australia subscription

Recommendations

The future of horticulture in Australia is developing, adopting, adapting and sharing information and technology to suit our unique circumstances.

The future is also equipping ourselves with knowledge. This can come from industry conferences, recognised training, short courses, industry focus groups or study tours.

It’s important that we look at what’s happening in other countries and learn. The Spring onion and Radish Study Tour provided us with that opportunity. Thanks to the foresight of Greg Taranto and for funding from Horticulture Australia Ltd, several growers had an enlightening and educational experience that will be invaluable to them.

Suggestions for Tour Leaders

Do your homework before you travel.

Whilst European distances are relatively short (compared to Australia), larger traffic volumes greatly affect road travel times and reasonable allowances should be made when planning routes. Growers are happy to welcome us into their properties (provided prior arrangement made), but do not appreciate late arrivals as each & every day is a busy one.

International phone charges (i.e. roaming) can be substantial as charges are applied both to & from Australia and even received calls are charged at a premium rate. (inc data rates)

Vehicle parking & rates in Europe are substantial and can be as much as €35 per night per vehicle (even when parking at the hotel you are staying at). Also allow for parking a significant distance away from your hotel (i.e. larger centers like Amsterdam, etc). Best to ask about parking availability & costs when booking rooms.

Foreign Currency transaction fees add up to substantial figures when using credit cards, though these are considered desirable as they offer a full financial audit trail for tour costs. Credit cards can be quickly exhausted by hoteliers or hire-car companies, as they typically hold against your card the full rate for accommodation and car hire, then charge the actual rate on top when paying the bill. The booking fees are not released for around 7 days and can be substantial if paying for several people!

Travelex card is not advisable as the exchange rate can be a costly exercise. Most businesses would not take the card for payments. You can only take out cash. This does not help document expenses.

Keep Excess baggage to a minimum.

Best to weigh suitcases at hotels and share around group if possible.

It was very clear from the start of the tour that obtaining access to the best European growers was almost impossible unless you had an appointment that only major companies (like seed and equipment suppliers) could facilitate.

Budget

Flight Centre Economy flights Melbourne to Heathrow, Return from Schipol to Melbourne		16,558.00
Accommodation and meals		10,897.88
Johnston Buses		435.64
Travel around England and Europe in Bus with Driver		6,514.00
Misc Fees, Security parking, Stationary, Gifts to Hosts, T-shirt printing, Foreign exchange rates commission, Report writing and accounting, etc		6,535.79
		\$40,941.31

Participants Survey & Results

Evaluation form

Overall rating of the study tour:

1=Poor, 2=Needs Improvement, 3=Adequate, 4=Good, 5= Excellent

3 EXCELLENT 1 GOOD

Comments:

Phillip; Learned a heck of a lot which I will implement onto the farm. Opened my eyes on how to mechanise our operation. Would or need to go on this type of tour on a regular basis so long as it is organised properly.

Rocky; Informative and interesting

Dave; Exactly what I needed to look at for my farming needs.

Greg; Culmination of five years of refinement of harvesting spring onion and radishes.

Value of the study tour to your business/industry:

1=Poor, 2=Needs Improvement, 3=Adequate, 4=Good, 5= Excellent

1 EXCELLENT 3 GOOD

Comments:

Phillip; Realising our real potential to become more efficient

Rocky; Have seen some very innovative technologies at work. Keen to implement some on our operations

Dave It was very interesting to see what other growers in different countries had to do to sell their produce.

Greg; Having our local growers talk to overseas growers currently using new technology gives them the confidence to move on.

Value of the study tour to you professionally:

1=Poor, 2=Needs Improvement, 3=Adequate, 4=Good, 5= Excellent

1 EXCELLENT 3 GOOD

Comments:

Phillip; I was very impressed with the whole tour and what we saw at each property we visited. Greg Taranto has done an excellent job in organising the tour to suit the growers.

Rocky; Met some very professional and astute growers who were very open and helpful.

Dave The tour gave me a lot of ideas to introduce into my business

Greg; Visiting professional growers and viewing their chosen machinery eliminates many wrong choices.

Participant interactivity:

1=Poor, 2=Needs Improvement, 3=Adequate, 4=Good, 5= Excellent

4 Excellent

Comments:

Phillip; Got on really well with all the guys on the tour.

Rocky; Felt very welcome and all questions asked were answered. Very educational experience

Craig; Great Experience to learn more

Greg; We have been negotiating for five years with manufacturers and growers and hence visitors were well received and all had questions openly answered.

Learning Log / Notes

Day/Date: 7-9-09

Activities:

Phillip; Visited a farm in the U.K. which supplies around 50% of the market for spring onions in that country. Toured a farm packing sheds then onto Kent to view an automated weeder.

Rocky; Went to visit Sandfields Spring onion operation

Craig; Visited a spring onion farm who supplies 50% of the spring onion in the U.K. Had a presentation from company manager. Toured Farm and packing sheds. Then went to Kent and viewed a mechanical weeder.

Reflection – what did I see, hear, feel, etc?

Phillip; Saw how they grew, harvested by machine, washed, graded and bunched spring onions. I was very impressed by how efficient they were in presenting their product for market and the technology they used.

Rocky; Saw very big spring onion bunching, washing and packing operation.

Craig; The production of spring onions from harvesting to bunching in the shed. Growing conditions environmental issues customer based issues.

GENERALISE – what have I learnt, what are the opportunities, threats, etc?

Phillip; There are huge opportunities for our business to adapt some of their practises. Availability of a labour force that want to work is a huge advantage over us.

Rocky; Have learnt that automation is a must as cheap labour is becoming harder and harder to source. (We) must remain competitive.

Craig; We saw both sides – manual and mechanical harvesting in 4 hours. We saw enough to prove that the mechanical way was financially worthwhile. We learnt how to put production up/labour down with better and quality.

Plan – how can I put this learning into practice? What would be the next step?

Phillip; We are looking at purchasing a spring onion harvester and also buying a bunching machine. This will improve our efficiency and also get the employees out of the weather and into a better environment.

Rocky; Have seen harvesting and washing machinery which I hope to use in our operations. The grower in England had very similar issues that we have in Australia.

Craig; Purchase a harvester, adapt procedures for more efficient production.

Learning Log / Notes

Day/Date:8-8-09

Activities:

Phillip; Visited a farm in Germany growing various crops. Also looked at a 1500 odd head dairy farm and what I consider a big contractor.

Rocky; Visited spring onion harvesting operation in Germany.

Craig; Visited a vegetable farm in Germany growing spring onions and various other crops. We also saw an agricultural contractor business.

Dave; Visited farm in Germany. Different processing line with newer Harvester (than the English Model)

Reflection – what did I see, hear, feel, etc?

Phillip; I was impressed with the spring onion harvester, but also the way the contractors work allowing the latest equipment to work their farms and not having to purchase it. This was the new spring onion harvester

Rocky; I saw spring onion harvester in field operation. Saw radishes harvested in field operation

Craig; The newer version of the spring onion harvester operating, the bunching line, new machinery with new technology.

Dave; I Felt that the German farmer was glad to have us as guests on his farm.

GENERALISE – what have I learnt, what are the opportunities, threats, etc?

Phillip; Labour saving techniques. Got on really well with the young farmer in Germany and hope to keep in contact with them in the future.

Rocky; Have learnt that Europe is more mechanised than we are. Some of this is due to much larger market available to them.

Craig; Have learnt new ideas that we can implement into our business with efficiency and labour saving.

Dave; Every farmer has got the same issues as we do in Australia.... Labour, Q.A. and marketing.

PLAN– how can I put this learning into practice? What would be the next step?

Phillip; As before – purchase harvester etc

Rocky; Need to adapt harvesting equipment to our needs. Different mindset needed to current way of thinking. The manufacturer that we visited in Holland had a very impressive factory set up.

Dave; I have noted that some of his procedures could be implemented to my farming business

NOTES; The trip was a great eye opener to other country farming practices (**DSimon**)

Learning Log / Notes

Day/Date: 9-9-09

Activities:

Phillip; visited the flower market, some hot houses, manufacturing plant and factory where spring onion harvesters are produced

Rocky; Visited radish operation in Holland

Craig; Holland – Saw hot houses, flower market, manufacturing plant.

Reflection – what did I see, hear, feel, etc?

Phillip; Very very impressed with the whole days activities, but not long enough at the hot houses and factory.

Craig; Saw operation of modern flower market, radish planter, harvester, washer and bunching machines

GENERALISE – what have I learnt, what are the opportunities, threats, etc?

Phillip; Also saw a radish harvester, bunching or topped and the whole processing line. I was very very impressed at how the machine bunches the radishes. –brilliant!!

Craig; I have learnt that technology is currently available.

PLAN– how can I put this learning into practice? What would be the next step?

Phillip; The radish bunching machine could bunch Australia's requirements for radishes in a day. It was brilliant. Should be more tours of this nature that was well organised and informative.

Notes: Craig; Tours like this need to become more available. After 32 years of being a vegetable grower I have learnt more about crops we grow than I have over the years of farming.

Acknowledgments

In my role as Project Leader, I wish to thank the tour participants (refer page 4) for their co-operation and punctuality. Their interest in all the agricultural aspects and the general spirit of togetherness was most satisfying. I thank them for their friendship. I specially thank them for their contribution to the information included in this report. Recognition and appreciation is also given to the following for their welcome contribution to ensuring a successful, informative and interesting tour:

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Mr. Phillip Garford for demonstrating the automated weeder at Kent.

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1500 lot dairy farm -
Agricultural Contractors – Maas BV of Kessels
Koppert Factory

Dutch Flower Market
Aarie Koppert
Radish producing hot houses
Radish producing hot houses – bunching operations

Piet Zwinkels -Radish processing and expert packaging

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Greg Taranto



Know-how for Horticulture™

