

Facilitating the development of Vegetable Industry in South Australia

Craig Feutrill
SA Farmers Federation

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HAL final Report VG97080

**Facilitating the development of the
Vegetable Industry in South Australia**

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**South Australian Farmers Federation
& ARRIS Pty Ltd**

June 2004

HAL Project VG97080

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This report is the brief overview and summary of a 5 year technology transfer and facilitation project (from 1998 to 2003) conducted in South Australia. This project is linked to other state vegetable 'Industry Development Officer' projects in Australia, and to the continuation project VG03076 Facilitating communication and development of the South Australian vegetable industry - Stage 2

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June 2004

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Media Summary

The introduction of the Vegetable Industry Research & Development levy with matched federal funds via the Horticultural Research and Development Corporation (now HAL) occurred in 1996. The need to have effective extension of the outcomes of research was partially hampered by the gradual withdrawal of extension services from many of the state Departments of Agriculture.

AUSVEG, the national peak body representing the state vegetable peak bodies identified the need for technology transfer specialists to facilitate the extension and adoption of the industry funded research. The South Australian Farmers Federation (SAFF) were successful in their application for a Vegetable Industry Technology Coordinator (VITC) and the position was established early in 1998, based at the SAFF offices in Adelaide.

A survey of industry needs and resources and the establishment of a state industry database were initially undertaken. As a result the quarterly VegLink newsletter in the Grower magazine and the monthly Vegetable Platter column in Good Fruit and Vegetables were initiated.

Working closely with the Production Industry Development Officer, Robert Kennedy at the Virginia Horticulture Centre, training needs for the growers on the Northern Adelaide Plains (NAP) were identified, and with the assistance of Farmbis funding and Recognition of Current Competencies (RCC) assessment, 140 growers (out of approximately 1200 on the NAP) were put through various levels of training with many gaining their Diploma of Horticulture.

Western Flower Thrips (WFT) were identified in SA in the late 90's and by the summer of 1999/2000 were causing as much as \$90M (AUD) damage to crops, predominantly greenhouse and leafy field vegetables (Dr. H. Hollows, pers. comm.. 2000). A grower based working group was established to assess pathways to manage the pest incursion. The group, through the VITC worked with growers successfully for a national WFT workshop to be held in Adelaide and as an outcome, for the WFT training pilot project to be established, which has now been extended to a national training and facilitation project.

A grower tour to Israel in 2000, to study greenhouse technology, irrigation and WFT management techniques resulted in the donation of a greenhouse from AZROM and the subsequent establishment and funding of the Greenhouse Modernisation Project (GMP). The project located just north of the Virginia Horticulture Centre (VHC) has evolved into an effective training and demonstration site.

A second tour, studying reclaimed water visited Israel and California in 2001 took an ABC Landline film crew and subsequently 5 Landline programs were produced of which 4 went to air.

Facilitating communication and development of the South Australian vegetable industry (Project VG03076) is continuing until 2008, based from Arris Pty Ltd, an agricultural communication company situated at the University of Adelaide, Waite Campus.

Introduction

Prior to 1998, technology transfer to the South Australian Vegetable industry was fragmented with many state, federal, industry and private agencies providing information of varying quality to growers. Grower forums held in each State in 1996/7 confirmed that there was a need to facilitate and coordinate delivery of technology transfer programs and packages.

This pilot project for what was to become the Vegetable Industry Development Officer Network was initially managed by the South Australian Farmers Federation Horticulture Section who appointed Craig Feutrill as the Vegetable Industry Technology Coordinator (VITC), (renamed during the life of the project to South Australian Vegetable Industry Officer (SAVIDO)), who commenced State coordination of technology transfer for the South Australian Vegetable industries from April 1998.

Aside from establishing communication networks with "change agents" in the South Australian Vegetable industry, auditing technology transfer information and assets, the VITC developed a technology transfer strategy which was implemented from mid 1998 onwards, with continual review and reallocation of energies (with input from the Management Committee). The VITC has also provided specialist skills in technology transfer project and extension/adoption methodology, and assisted with design of technology transfer components of other research and development projects. Also the VITC has facilitated R&D priority setting functions, as well as regional and commodity technology transfer strategies.

The VITC is a key resource to the South Australian Vegetable industries and has a key role in:

- making recommendations to the Vegetable R&D Committees (Commodity and key Investment Areas (KIAs) on key technology transfer needs of the South Australian Vegetable industries (developed from current R&D projects or existing world wide information that requires more effective packaging and delivery). This was better facilitated after the establishment of the Agricultural Research Advisory Committees (ARAC) in 2002.
- facilitating development and delivery (under guidance of the SA Vegetable Management Committee) of strategically identified technology transfer projects (including identification and contracting of appropriately skilled teams or individuals) examples are the Greenhouse Modernisation Project, the Western Flower Thrips Pilot Project and the extension of the Carrot Virus Y project from WA to include SA and Information on the Lettuce Aphid.
- developing policies and guidelines for delivery of technology transfer projects (eg outcome oriented, dollar impact of technology adoption, formats for most effective delivery of information).
- liaison with key national researchers and technology transfer agents.

This project designed and developed technology transfer solutions on issues relevant to SA growers and utilise regional change agents (district extension officers where available, consultants, IDO's, agribusiness personnel and chemical resellers) as a first step in fostering adoption of "world's best practices" by South Australia's vegetable growers. Key issues were addressed via the State and regional forums held on an annual basis. One of the first projects was the transfer of data on the club root project for brassica that was being undertaken in Victoria. This linked to IPM techniques being

introduced to SA growers via other brassica projects such as the Diamondback Moth (DBM) project and White Blister Rust project from Victoria.

A key activity during the life of the project was to assess the effectiveness and impact of coordination on adoption of technology; the information was utilised to decide the value of the VITC and future development strategies and projects.

Technology transfer to the Australian Vegetable industry has been and in some instances continues to be fragmented and poorly coordinated. Duplication of effort, inefficient use of limited resources and poor packaging of information have been identified as barriers in getting the latest research findings adopted by growers. The national Vegetable IDO Network has worked as a team to identify methodologies and implement them to address this – outcomes such as the VEGEnote series which have been very well received by the growing community.

While the prime function of this project is to facilitate improved technology transfer to the South Australian Vegetable industry, also undertaken was a specific project to evaluate the effectiveness of this position (see Appendix 1).

Technology transfer strategy and methodology/activities

This project initiated coordination of technology transfer to the South Australian Vegetable industry. The project was implemented in 3 key steps:

1 Project establishment and management

The project will be established and managed by the State industry organisation, the Horticulture Section of the SA Farmers Federation. To ensure maximum effectiveness and close coordination with national industry objectives, the project will be managed at 2 levels:

Day to day management of the project will be the responsibility of an operational group comprising:

- Vegetable Chairman - Horticulture Section, SA Farmers Federation
- Executive Officer, Horticulture Section, SA Farmers Federation
- Primary Industries SA Vegetables representative
- SARDI Vegetables representative

Overall direction and strategy development for the project will be managed by a Steering group consisting of:

- 4 Committee representatives
- 1 HAL representative

2 Establishing a South Australian Vegetable Industry Technology Transfer Network

A network of key industry service personnel from government agencies, consultants, media, agribusiness service staff, industry development officers, processors and other industry sectors were developed. This was achieved through personal contact with people and visits to each of the major vegetable production districts by the VITC.

This network will be used to channel the latest technology information, seasonal information, promotion of information packages and facilitate exchange of information between "front line" industry personnel. In addition, a database of vegetable growers was developed for information distribution.

The VITC is primarily an information "broker" linking technology transfer staff, industry leaders, service personnel, and media outlets with research information.

It will also be necessary to undertake an audit of technology transfer materials available internationally and nationally, active projects and provide information on these resources to regional extension staff and others in the network. This process may identify specific growing regions where there is a lack of technology transfer resources. The VITC will have a role in encouraging projects and attracting resources to these regions.

The VITC will facilitate development of regional grower forums for strategy development of technology transfer projects. Key growers on these forums may choose to be early adopters of new technology.

3 Develop a long term technology transfer strategy for the South Australian Vegetable industry

Experience gained in running the project provided valuable information for development of a State and national technology transfer strategies. Some of the issues addressed in this strategy are:

- effective use of a VITC
- future role and support requirements
- most appropriate locations
- priority list of topics for development of technology transfer programs
- role of the VITC in provision of specialist expertise to other projects
- production and marketing systems for technology transfer packages
- development of a business plan
- evaluate benefit cost of the technology transfer strategy

Evaluation and measurement of outcomes - impact and adoption

Regional Analysis: What is the analysis of the vegetable industry in your area? Discuss crops, types of businesses, locality and numbers of producers?

The SA Vegetable Industry comprises approximately 1,200 active growers in 2 main and 2 lesser regions.

When the project was commenced in 1998 a survey of the production regions showed approximately 1,700 active growers, but a number of issues, not the least Western Flower Thrips (WFT) in the 1999/2000 summer caused a number of growers, predominantly Northern Adelaide Plains (NAP) greenhouse producers, to leave the industry.

Approximately 900 growers are 30kms north of Adelaide, on the NAP, 200 in the next major region 90km south of Adelaide at Murray Bridge and the remainder in the Adelaide Hills, SA's Riverland, the South East and a few at Port Pirie. Of the growers on the NAP, it is estimated that half are of Vietnamese descent with about 40 Khmer (Cambodian) growers.

A database of growers (and other stakeholders) has been developed during the lifetime of the project. This database is regularly updated due to grower contacts and return from state industry mailouts. A problem with the database which is yet to be adequately addressed is the extremely fluid nature of the Vietnamese growers on the NAP. In 2000 there were approximately 500 Vietnamese in the database, and over the next 4 years, the number dropped to 150 – yet we 'know' that numbers have not significantly dropped in the greenhouse industry. The influx of new farmers, or growers that have moved residence has not been adequately captured. One way of countering this lack of information has been to send information directly to the Vietnamese Farmers Association (VFA), or produce Vietnamese newsletters which have been distributed directly from the Virginia Horticulture Centre (VHC).

The NAP production region is one of the major horticulture regions of the state comprising predominantly small to medium size properties. The largest concentration of protected cropping in Australia.

Approaching 90% of South Australia's greenhouses for vegetable production are reported to be located in the Virginia region of the North Adelaide Plains. This is estimated to be about 500 hectares. Virtually all the remaining area is in the Murray Bridge area (about 60 hectares) and there are a few hectares in the mid North region of the state.

Greenhouses are predominantly in the low technology or medium technology categories although recently there have been investments in high technology greenhouses. It is estimated that there are presently about 20 hectares of this type of structure although there have been reports of further possible investments, notably the proposal for a 35 hectare, \$75 million greenhouse precinct adjacent to the Torrens Island power station. Currently, there are a few growers with production units in the 1 – 2 hectare size category.

Historically, the Virginia region has low technology, basic glasshouse and shadehouses dating back more than 50 years. Ventilation and other components of environmental control are extremely primitive and, consequently, crops can only be grown when the outdoor climate does not create extreme conditions in the houses.

More sophisticated houses are now being built with polythene covers and high gutters. It is expected that the trend will continue towards relative large units (one hectare plus) of high technology houses equipped with sophisticated environmental control equipment.

The North Adelaide Plain has ideal conditions for greenhouse vegetable production. Light conditions are good and any soil-linked problems are avoided with the use of soil-less growing systems. Proximity to Adelaide has influenced land value increases, making greenhouse horticulture and other intensive production systems more attractive. Older greenhouses in and around Virginia are available for lease with water rights. The area is close to the Adelaide wholesale market and is well serviced by a road network to other states.

The greenhouses around Murray Bridge are also predominantly in the low or medium technology category but, over the years groups of growers have engaged in types of cluster marketing. Although there is favourable climates, cheap land and reasonable water supplies, there is declining in importance as a greenhouse vegetable location.

Tomatoes, capsicum and cucumber are the major crops grown although a group of growers is exploring the possibility of developing a multi-million dollar herb production unit on the North Adelaide Plains. There is also interest in greenhouse production of Asian vegetables, such as bok choy. Growers generally will produce 2 or 3 different crops, such as tomatoes and capsicums, or capsicums and zucchini, or cucumber and capsicums, although there are a significant number of single crop producers – these tend mainly to be tomato crops.

It is estimated that there are around 420 growers of greenhouse tomatoes in South Australia and the figure appears to be relatively static. As well as improvements in greenhouse structures and environmental control, soil-less growing systems are being rapidly adopted and a wide range of varieties are now being grown.

Capsicums are declining in popularity, influenced by difficulties associated with controlling Western Flower Thrips and the associated Tomato Spotted Wilt virus. The number of growers is estimated at 400 but the number is decreasing.

Cucumber importance remains relatively static, with about 300 growers, but there is a trend towards growing Lebanese types rather than the traditional long-fruited European types.

Broad-acre production occurs on the NAP, with some at Murray Bridge, the Adelaide Hills and the Riverland. Grower numbers in all of these regions have dropped over the period of the project. The two largest field (mainly Iceberg) lettuce growers are 120km apart, with one on the NAP and the other at Murray Bridge. Between these 2 properties about 80% of the state's production is grown.

What have been significant outcomes from the project?

The most significant outcome of the project to date has been the increase two-way communication between growers and researchers.

The Vegetable IDO has developed communication channels throughout the vegetable industry. These channels have been developed to the stage where considerable benefit can be gained by industry utilisation. These channels include direct mail out to all vegetable growers, targeted commodity mail outs, email services, organizing/facilitating meetings, workshops and the establishment and support of Agricultural Research and Advisory Committees (ARACs), to identify and communicating R&D priorities. production of newsletters

ARACs

Agricultural Research & Advisory Committees (ARAC's) were established last season for the SA potato and vegetable industries and may soon be adopted by some other horticulture industry groups.

ARAC's are an extremely effective way for industry to identify its needs and to establish strong industry direction of research, development and extension activities. ARAC's are a valuable forum; where growers, consultants and other industry representatives can get together with PIRSA, SARDI, SAFF and other organisations to ensure the relevance of support programs.

The process is mainly designed to access matched levy funds through Horticulture Australia Ltd (HAL) for the major industry priorities.

The role of ARAC's in SA can, and probably will, go beyond the procedures for accessing HA Ltd funded programs. They are already proving to be a valuable forum for interaction between industry, industry bodies and the government agencies where issues can be debated and proposals generated to resolve them by any means of funding.

The principle objective is that issues should be identified by industry itself who then seek a suitable provider to solve them, rather than having projects put up by a provider - who then seeks industry endorsement. The latter can still occur but the emphasis remains on the ideal that industry must prioritise its needs.

The important thing about ARAC's is that they are industry driven. The ARAC membership generally includes a state representative of Horticulture Australia's Industry Advisory Committee. This ensures that the state IAC member is very familiar with a proposal prior to entering the decision process that is done at national level. This process also shows that the submitted proposals have strong industry support and are relevant. The SA IAC members for potatoes and vegetables found the ARAC process to be very helpful to them when preparing for the last national meeting.

On a national basis the IDOs facilitate the HAL commodity groups used when reviewing R&D project proposals. The six groups are Brassica vegetables, leafy vegetables, root vegetables, other vegetables, export, and processing.

Vegetable IDO newsletters are sent to all registered vegetable growers and many other stakeholders in the Industry throughout Australia and most are published quarterly (Tasmania bi-monthly).

The IDOs can offer advice and assistance when planning meetings and/or workshops with growers and other stakeholders. Meetings can be targeted to crops, location, areas of interest, etc. depending on the research project.

As electronic communication is efficient and effective, the Vegetable IDOs have been developing this communication medium. Growers with email are generally considered early adopters and targeting research outcomes to this group may greatly assist research providers with communication, technical transfer and adoption of outcomes.

Vegetable Industry Website

In conjunction with the Potato Industry Development Manager, the SA Vegetable IDO spent a large amount of time interviewing growers and industry stakeholders regarding their needs and developing a business plan for the Vegetable Internet Website. Unfortunately due to changes in the Industry, this project was put on hold. A State Vegetable Industry website was developed as an interim (See Appendix 5 for usage statistics)

The password protected National Vegetable Industry Website internet site will provide technical information to growers and the service industry. It has been designed so that each crop (eg. potatoes) or crop group (eg. brassicas) has its own home page and site. Initially information for ten crops or crop groups will be included - potatoes, brassicas, carrots, lettuce, beans, pumpkin, celery, sweet corn, marrow & zucchini and green peas.

For each site, information is provided on contact details for technical specialists, outcomes from completed research funded by the levies, current research activities, publications, links to other relevant internet sites, coming events, news, local weather, training and industry issues. There is also the facility to receive updates on a range of topics, newsletters and industry alerts via email.

The purpose of the internet site is to provide high value information and services that are difficult to provide through other means in a timely and cost effective manner. The internet offers the advantage of being open 24 hours a day to anyone who has a computer and internet connection. Useful information can also be forwarded cheaply and quickly to users by email.

A major reason for considering the internet was the need to gain greater value from our investment in research and development. The internet provides the means to more effectively use the intellectual resource that has been generated.

To facilitate the operation of the internet site it is likely a company will need to be established and this will contract the services required. Due to the time frame for completing the plan the form of company structure could not be finalised.

A Site Manager will be contracted to support the Industry Development Officers (Vegetables) - IDO, Industry Development Manager (Vegetables) - IDM (or delegate) and the Technology Transfer Manager (Potatoes) –TTM to develop and maintain the site. The TTM and IDM in conjunction with the Site Manager will form the Management Team for the internet site. The TTM and IDM will report back to their respective R&D Committees.

In order to ensure the internet site is useful to growers, extensive research has been done both in Australia and overseas. A prototype internet site was developed and tested with farmers and the service

industry in all states. The prototype was further modified through feedback from the state groups and members of the R&D Committees. The prototype provided the basis for the development of the Business Plan.

The proposed internet site offers the opportunity to gain greater value from the knowledgebase generated from levy funded work and therefore provide a greater return on investment made by vegetable farmers, potato processors and government.

Western Flower Thrips, Small Pest – Big Problem.

The following is from an article written early in 2000 when Western Flower Thrips had been identified as a pest causing major damage to crops on the NAP.

Fifty growers attended a public meeting at the Virginia Horticulture Centre to evaluate and comment on the Western Flower Thrips (WFT) Management Strategy, put together by the WFT Grower Working Group.

The meeting was the first of three, and the attendance signifies the damage the pest is causing to vegetable crops in South Australia. The next 2 meetings are targeted at the Vietnamese and Cambodian growers and a translator will be utilised at the meeting.

The WFT Grower Working Group have been regularly meeting since November 1999 to address the pest problem in the Northern Adelaide Plains region in SA. The growers who attended the meeting reviewed the management strategy and put forward several options and prioritised the 'needs' to help the strategy be implemented.

The strategies/options are as follows:

- Clean Farm Programme – with assistance from the local council to maintain roadside verges and keep proclaimed weeds under control.
- Information nights to be held regularly to keep growers up-to-date with the latest findings and methods of pest management.
- Extension Entomologist to be employed to advise growers – and get field adoption of best management practices.
- Access Interstate and Overseas information on best practices for control/management of the pest as well as Tomato Spotted Wilt Virus (TSWV).
- Bio-Control methods to be further investigated.
- Training courses identified and implemented – Management and Identification.
- Seed Company trials to provide thrips/disease resistant varieties.
-

The Management Strategy is to be finalised by the end of May 2000 for implementation by the end of August this year for the Spring/Summer season.

Local growers were impressed that the 'growers working for growers' strategy has paid off, and 10 more growers were drafted into the Working Group to help implementation and coordination of the strategy.

The WFT Grower Working Group achieved, with assistance from the IDO, a successful project proposal for a WFT Pilot Project in SA. This project which was run through SARDI, employed Tony Burfield who has successfully trained many growers in IPM and IRM strategies that have minimised the impact of WFT on the NAP and Murray Bridge regions.

This project has developed further to 2 other states QLD and NSW where local coordinators have been employed.

Recognition of Current Competencies/Recognition of Prior Learning

Working closely with the Production Industry Development Officer, Robert Kennedy at the Virginia Horticulture Centre, training needs for the growers on the Northern Adelaide Plains (NAP) were identified through a series of on-farm grower meetings.

Further meetings occurred with training providers to review the training needs analysis and TAFE to provide the learning assessment on-farm

With the assistance of Farmbis funding and Recognition of Current Competencies (RCC) assessment, 140 growers (out of approximately 1200 on the NAP) were put through various levels of training with many gaining their Diploma of Horticulture

The certificates were awarded at a Black Tie function at Ayer's House Adelaide, with the awards and Diplomas being conferred by the Hon. Malcolm Buckby.

Diamondback Moth, Clubroot and Carrot Virus Y

Diamondback Moth (DBM) is still identified as a major problem for Brassica growers just as Carrot Virus Y (CVY) is for carrot growers. Clubroot is now less of a problem in the Brassica industry in SA.

For all of these projects an enormous amount of information has been forthcoming from projects, directly mailed to growers or delivered in a series of meetings/workshops, usually held on-farm.

Anecdotal evidence, particularly in the area of DBM, shows that growers have minimized pesticide application (up to \$100,000 per farm per season) by the simple adoption of the monitoring protocols developed by the DBM project.

Minor Use Chemicals

Ask any grower what his major problem is in the production of the crop. Invariably the answer will be chemicals. Horticulture Australia (HRDC) and AUSVEG responded to this and with vegetable industry funding established Crop Protection Approvals Ltd in 1999/2000.

The urgent need of the vegetable industry for a national program for minor uses of pesticides was highlighted recently.

AUSVEG Industry Development Officers (IDOs), including SAFF based Vegetable IDO, Craig Feutrill collected requests for minor use approvals from vegetable growers in their regions. The resulting 'Wish List' for minor use chemicals numbers 240 requests and is still growing rapidly. The requests involve about 29 crops and 80 plus crop protection compounds. Greenhouse growers from the Murray Bridge region and field crop growers from the Northern Adelaide Plains were the most recently surveyed, adding many crops and chemicals to the minor use application system.

The recently established Crop Protection Approvals Ltd. (CPA) company, under the guidance of Dr Peter Taylor reviews the applications for permits and possible registration and closely liaises with the National Registration Authority. CPA was initiated via funds from the HRDC grower levy, after minor chemical use issues were identified by the AusVeg R&D committee.

The chemicals put up for minor use registration are analysed for duplication in other states, and cross checked against current registrations. Some chemicals will only require a 'desktop' study and permits will be allocated without the need for costly residue trials. Others may require expenditure on residue trials, and funding will be sought from industry where possible.

The applications were assessed in order of priority, as set out by the vegetable growers.

Growers embraced this use of their levy funds and attended many meetings in the state to have their needs identified and hopefully addressed.

Unfortunately management problems with CPA Ltd led to a reduced program via Agaware Pty Ltd which is only now beginning to fully address grower requirements.

Tours

The SA Vegetable IDO has led two tours during the life of the project:

1. 2000 Greenhouse Investigative Tour to Israel
2. 2001 Reclaimed Water Tour to Israel and California

Both of these were written up as separate projects. Outcomes from both tours led to changes in the industry, both local and national (growers from most states participated). Israel, Dutch and French greenhouse designs are now being used on the NAP, as well as management techniques view overseas.

What are the strategic issues facing the industry in your area?

The previous South Australian Vegetable Industry Strategic Development Plan 1995 – 2000 was initiated and undertaken by Primary Industries South Australia and the South Australian Farmers Federation.

PIRSA Rural Solutions were contracted to provide facilitation for developing the revised SA Vegetable Industry Strategic Plan (2004 – 2009).

Much information was generated from meetings, SWOT analyses and Key Strategic Issues facing the industry are in presented in the plan appendices. The SA Horticulture Industry Scorecard is an incredibly valuable resource produced by the PIRSA Food South Australia ScoreCard team and is included in Appendix 4 (of the plan) as a snapshot of the industry and reference for the plan.

From February 2004 through May 2004 a number of meetings were held with SA vegetable Industry participants to review, workshop and ultimately, through a sub-committee comprising key growers and industry representatives, develop goals, strategies and direction for the industry. These goals are listed with strategies, timelines and responsibilities whether IDO, National/State Peak Bodies or other organisations.

Distribution of the plan will be widespread throughout the vegetable production community, peak bodies and research providers, to ensure a clear understanding of the industry requirements

Issues

The following list of issues facing the SA Vegetable Industry was compiled from previous discussions and completed during the strategic planning workshop. Participants at the workshop prioritised these issues, and the top eight were selected for development of goals and objectives.

1. Lack Of Strong Industry Organisation
2. Chemical Use
3. Marketing
4. Supply Chain
5. Quality Assurance
6. Training And Education
7. Labour Availability
8. Land And Water Resources
9. Profitability/Future Viability Of Industry
10. Communication
11. Consumer Education
12. Western Flower Thrips Control
13. Quarantine And Biosecurity
14. Competition From Imports
15. Value Adding

These 15 issues were then regrouped into the following 5 key strategic areas. These issues are listed in order of priority and described below:

1. Industry leadership

- Lack of a strong industry organisation
 - To respond politically
 - To Horticulture Australia for funding
 - Not seen as representative
 - Individuals not strong
- Lack of strong links between industry and government
- Lack of unity among growers

2. Production

- Chemical use
 - Minor off-label chemical use permits difficult to get
 - Technical information
 - Future legislation = major threat
 - Link to QA and food safety
 - Very slow
 - Critical products have been removed from market
- Quality assurance
 - Increased requirements
 - OHSW, EMS, EPA
 - No extra money for implementing

- Inconsistent requirements when produce in short supply
- Land and water resources
 - Limited resources
 - Need larger scale production (lack of area and water)
 - Soil degradation and salinity
- Profitability/future viability of the industry
 - No effective political voice
 - Competition from imports
 - Keeping youth interested
 - Do not make enough money
 - Branding opportunity
 - More focus on triple bottom line
 - Lack of true cost information and critical factors for industry growth
 - Future registered cooperative marketing strategy/enough trained people
- Value adding
 - Currently supported by government
 - Market dependent
 - More information required

3. Markets

- Marketing
 - We do not market strengths to customers
 - Consumer education needed
- Supply chain
 - Controlled by small percent of customers
 - Lack of cooperation – need to work together
 - Market manipulation / cross border issues
- Consumer education
 - Need to educate growers about taste quality as well as aesthetic quality
- Competition from imports
 - Local growers can supply when high quality imports not available
 - Encourages local growers by providing free advertising via displays

4. People

- Training and education
 - Skills development – especially of smaller growers without levy
 - Need career paths
- Labour availability
 - Can not get enough labourers
 - Also need skilled labourers
- Communication
 - Growers/wholesalers/retailers
 - Between growers and consumers
 - Lack of transparency with supply chain
 - Not enough support from supplier to grower

5. Biosecurity

- Quarantine and biosecurity
 - Increased costs associated with complying

- Bigger issue now more than ever (Lettuce Aphid)
- Western Flower Thrips control

What are the impediments to the development of the industry in your area?

There are two major impediments:

1. In the vegetable industry, growers are time-poor. Most crops grown in SA require long hours in the greenhouse or field and production in most cases is year-round. This means that having time to find information, attend meetings or implement changes are driven only on an as-needed basis. Usually when the problems are hurting their business financially.
2. Language barriers. With approximately 50% of the grower population on the NAP being of Vietnamese descent, often there are not enough funds available in projects to have the information translated.

Any measurements to show growers access info through the results of the project?

Measurement of information access or use is notoriously difficult in projects such as these. There are a number of mailouts to all growers in the state each year, and specific mailouts to target groups such as Brassica, lettuce, bunching onion or carrot.

How much of the information is actually read or utilised?

The SA Vegetable IDO website has a measurement program attached so that usage can be accurately monitored. (See Appendix 5).

IDO Network

The National Vegetable IDO Network is a very valuable resource that should be used to its full potential. Each IDO works in isolation in his or her state to some extent and the ability to interact and bounce ideas off each other is vital to the success of the state projects.

The Australian Vegetable Industry Development Network was established by State Vegetable Industry Peak Bodies to assist the Australian vegetable industry in maximising the benefits of its investment in research and development (R&D).

This is achieved by enhancing communication and information flow between growers, researchers and other members of the vegetable industry.

The network began in 1998 and now comprises six Industry Development Officers (IDOs), with one officer in each state.

The IDOs' primary goal is to work closely with growers to determine the industry's R&D priorities, and then they pass this information on to researchers to ensure their future R&D work meets these priorities.

The IDOs also play a major role in coordinating the extension of information out from R&D programs, so that growers receive the information they need in a timely and useful manner.

In addition to regularly communicating with members of the vegetable industry, the IDOs also maintain frequent contact with the many other IDOs in horticultural industries throughout Australia.

The key objectives of the network are:

- *Facilitate transfer and adoption of new technologies and practices that increase sustainability and profitability*
- *Increase grower awareness of and access to information sources and services*
- *Identify impediments to the progress of the industry and suggest potential solutions*
- *Assist industry in identifying and accessing opportunities locally, nationally and internationally*
- *To assist implementation of the Australian Vegetable Industry Strategic Development Plan and develop further strategies for the industry*
- *Encourage and facilitate communication throughout the vegetable industry, with particular emphasis on improving linkages between researchers and growers.*

The IDOs undertake a diverse array of activities to help them achieve these objectives, however as the Australian vegetable industry varies significantly from state to state, each of the IDOs tailor their activities to the individual needs of their state. These activities include:

- Production and distribution of information through a variety of media, such as newsletters, magazine articles, targeted mail outs, web pages, email broadcasts, fax streams and numerous industry publications.
- Assisting the national R&D approval process, including facilitating commodity and key investment area groups.
- Assisting in the determination of state and national R&D priorities, and communicating these throughout the industry.
- Organising, facilitating and assisting with workshops, field days, conferences, seminars and other industry events which contribute to the effective transfer of R&D outcomes
Acting as a central point in their own state for coordinating and distributing information from interstate and overseas R&D programs

Project Reviews

The project was reviewed twice during its lifetime- once at year three by an independent assessor (Scholefield Robinson Horticultural Services - see Appendix 1) and a further time as part of the general Vegetable IDO network review – conducted by Horticulture Australia in 2003.

Recommendations

My primary recommendation is that the industry identifies clearly the roles, responsibilities and 'ownership' of the Vegetable IDO projects. The IDOs consistently receive conflicting messages regarding these points.

- HAL
 - Communication is a problem - there is no communication officer at the moment. The issue is one of keeping in touch (eg with problems with projects; what has been approved etc). Need regular (3 monthly) communication (eg approved list) – proactive rather than reactive.
 - Staff changes have major impacts
- IDO Network
 - The value of the IDO network should be established so that the commitment can be clear to all. Issue of balance – link to state benefits.
- Industry tours
 - Take up a lot of time to organise/participate
- State Management Committees
 - Links are needed between state management committees so that can see what happens in other states. If R&D commodity group representatives are suitable (as in WA), they meet 2 times per year.
 - Guidelines are needed for Management Committees regarding how to manage IDOs.
- Political Pressures
 - There is a strong pull on IDOs to become involved in political matters – this requires firm guidelines and a stated strategy.

Appendices

Appendix 1 – Independent Review of VG97080

Introduction

Scholefield Robinson Horticultural Services Pty Ltd (SRHS) was retained to provide a brief overview and assessment of the Project VG97080. Prue McMichael, Plant Pathologist and Senior Consultant, SRHS undertook this brief. It encompassed review of the provided examples of technology transfer outputs, assessment from our perspective as consultants in horticulture including vegetable crops, and discussion with vegetable growers in SA (stakeholders) and one key researcher.

Project background

This project was initiated after acknowledgement of the existing fragmented approach to information delivery, for vegetable growers in South Australia. The position of VITC has been held by Craig Feutrill since it was first funded in 1998. The position is funded jointly by grower levy funds (AusVeg) and the Commonwealth (through HRDC, now HA Ltd). It is managed by the South Australian Farmers Federation.

A Steering Committee and a Management Committee have, respectively, overseen the strategic development and the operations of the project. The available information suggests the stated milestones have been met. This review is part of Milestone 9.

Key Aims of the Project

- Coordinate technology transfer within and to the SA vegetable industry.
- Establish communication networks.
- Develop a technology transfer strategy; targeted delivery of relevant information.
- Research and development priority setting.

Project framework

The vegetable industry in South Australia is diverse in all respects. The commodity range is wide, but dominated by potatoes, onions, carrots, lettuce, Brassicas, bunchlines, nursery (transplants) and hydroponic crop. Potatoes and mushrooms are levied independently of the AUSVEG levy.

Production methods for vegetables in SA include field and protected systems, irrigated, hydroponic and few dryland operations. Small field operations are found throughout the southern half of the state, but commercial foci are on the Northern Adelaide Plains, in the Adelaide Hills, the cooler Fleurieu region around Mt Compass, the Riverland/lower Murray regions and in the Mallee. The SA protected vegetable crop production (especially tomatoes, *Capsicum spp.*, cucumbers) is focussed around Virginia and Murray Bridge.

The industry in SA has, to a great degree, been traditional and conservative - in their production methods, use of family labour, adoption of training and information collection opportunities and new technology, responsiveness to change. Many in the industry are not native English speakers.

The industry environment in which this project was initiated was one in which concerns over profitability, sustainability, and limited awareness of consumer needs, dominated. A new pest (Western Flower thrips) established in the Virginia area in 1997/8. Its potential effect (in combination with Tomato Spotted Wilt Virus) on the future viability of some crops and nursery production in the Virginia area was noted and served to focus attention also on the industry's need for information, industry-wide training, cooperation between growers, and improved farm management practices.

Since this time, growers have continued to feel pressured by chain store retail outlets, uncertainty over returns for produce, and by the adjustments necessary to accommodate the new tax system.

Summary of Outputs

Craig Feutrill has developed a range of skills and methods for delivering relevant information to the wider vegetable industry and to targeted commodity groups.

On review of the information provided it is clear that all milestones, as stated in the project proposal have been met. This overview is a component of Milestone 9.

Technology transfer methods

Printed matter

Newsletters, news alerts, contributions to national and state horticulture publications. *VegLink SA* is published in *The Grower* and Vietnamese translations are distributed to more than 400 growers.

The messages delivered by this method have frequently included: alerts about pests and diseases; chemicals – changed regulatory or registration status, new permits for minor use; research updates from local, national and international sources; seasonal crop and market updates.

Strategic Plans and Project (R&D) development; Working Parties

Industry and specific commodity group workshops to prioritise R&D needs, gaps and proposals have been initiated and coordinated by the VITC. The outcomes from these meetings have been circulated to potential research providers.

Focus forums such as these are on-going for specific crops (Brassicas, bunchlines, carrots, Brussels sprouts, celery etc); specific problems (Diamondback moth, chemical resistance management, minor use permit applications, Western Flower thrips) and for industry sector development (Implementation of the Vegetable Industry Strategic Plan; Greenhouse Modernisation Program; Industry Sustainability).

In developing these groups, the VITC has demonstrated his responsiveness to the industry concerns, ability to improve and promote industry awareness, harness cooperation between growers, and implement industry development strategies over which growers have some ownership and motivation to promote and support.

A most important development in this area was the project development and appointment of Tony Burfield, the WFT –IPM Specialist. The VITC recognised the sustained effort needed to overcome the problems of WFT in Virginia. Efforts to carry out research and deliver the results to growers had in the past been intermittent and frustrating. The coordinated efforts of Dr Peter Bailey, Craig

Feutrill and Tony Burfield have resulted in an effective WFT program with the growers and researchers both benefiting.

Video; CD Rom

These have been effectively utilised by the VITC as adjunct technology transfer methods for specific programs that required wider audiences than just growers and 'change agents'. (Vegetable Industry Strategic Plan; Tour to Israel and California – Water Recycling).

Electronic information

The vegetable industry database has been created and validated as a means to achieve more comprehensive and efficient direct deliveries of both printed and electronic matter. This is the most comprehensive record of vegetable growers, areas of interest and contact details, in SA. It has been validated and its true benefit to this industry, which is not yet widely computer literate, is yet to be seen. As a resource for the VITC however it has already proved essential. Its development, by the VITC, deserves particular recognition.

The Vegetable and Potato Industry Website and Virginia Telecentre, are in the refining and grower trial stage of development. They are appropriate and suitable for growers comfortable with computers, or committed to developing computer skills. The coordinated scoping and planning efforts of the VITC, Leigh Walters and other Industry Development Officers in these technology transfer packages highlight the ability of the VITC to network widely to achieve outstanding results for SA growers, and to maximise the returns on the dollar inputs to such projects.

E-mail – Electronic mail has been the most effective means of communicating with researchers, and many change agents who regularly, in the course of a day, access computers. The VITC has acknowledged that many growers still prefer to receive hard copies of important information, but some commodity groups with specific problems are receiving regular crop alerts, and pest information in this manner. The numbers of growers comfortable with this method of frequent communication is increasing each year and the database will allow their inclusion on electronic 'mailouts' very easily.

Tours/ Field Days/ On-site visits

Organised tours: The VITC has organised relevant tours for growers, researchers and change agents: Protected Cropping tour (Israel); Reclaimed Water tour (Israel and California). Demand for such apparently exists, if judged by the number and expertise composition of tour participants. Participants in each tour included growers, researchers, and agri-business operators. The success of these tours may be judged by participant comments, but more importantly by the reportedly observed response of participants on their return to SA, to trial new technology, cropping systems and pest management ideas.

The interest in these tours and the acquired information, shown by the wider media is beneficial. Their coverage (Landline programmes; CD Rom) has provided important additional transfer of the acquired information.

Field days and on-site visits: These have been utilised as a mechanism for delivery of information when appropriate, but they are recognised as inefficient methods of delivering information, given the schedules of most growers today. For this reason, they have been limited. In recognising this the VITC has frequently made himself available, and adapted the majority of technology transfer

packages to be available, outside what is considered 'normal' working hours. This is to be commended.

Stakeholder Survey

Prue McMichael has discussed the project, its relevance, and its benefits with a number of growers and a researcher. It is notable that all spoke enthusiastically of both the project and the chief investigator (VITC), Craig Feutrill.

The key comments, are noted below to illustrate the wide ranging value seen in the project.

- The range of information sources is very valuable.
- Options exist for whole range of growers (in terms of computer skills and type of crop interests) to get information. It's up to the growers now to use it.
- Some growers will never take advantage of information made available, no matter what method, and these people hurt the industry.
- Vertical integration of research effort 'down the line', is now working.
- Problems are now getting solved.
- Growers are happy to see their money spent this way, because it's working.
- We are now benefiting from projects going on in other places, as well.
- The programme is encouraging older growers to gain computer skills and that is a good thing.
- R&D priority setting is now more organised.
- Still frustrating making the NRA, and HA bureaucrats understand the grower environment, but processes are working much better thanks to this project.
- This project has achieved very good foundations; now they have to be built on if the industries are to prosper once again.
- The project has been carried out enthusiastically and the VITC is very responsive to industry; is available.
- The VITC has been successful in uniting growers in some commodity groups. He has also fostered some younger growers to take on industry policy roles, and has included them in some interstate industry meetings.
- The VITC has 'saved' some industries by taking charge of applications for minor use chemical permits.

- The VITC has given growers every opportunity to be more responsible in finding out information and operating more professionally and efficiently, because the information (and help) is available if you take the time to read.
- The VITC's networking in the grower community, with researchers and government departments has benefited SA growers.

Areas of Concern expressed by stakeholders

- The VITC should not be spread too thin. It is important that the Management and Steering Committees keep the project and VITC's activities focussed on the demands of growers, for information. (*This comment was made particularly in relation to the organisation of overseas tours, for which industry demand was considered not to have been evident*).
- The VITC is not appropriately placed within SAFF. Neither the office location, nor the support structure in SAFF, are considered best for this type of project, the chief investigator, or stakeholders. The Management Committee needs to consider this.

Future Directions

- **Project Directions.** The project must continue to allow VITC flexibility in the choice of and development of technology transfer mechanisms, for different sectors of the industry. This has been valued by the stakeholders, and demonstrates the VITCs understanding of these sectors.
 - Noted by growers: Growers are still not good at marketing, human resource management and business management. We may need more information on these things soon.
- **Internet options and computer training.** Such mechanisms should continue to be encouraged and used, as all aspects of business in the future will demand some level of computer literacy and access to electronic information.
- **Grower cooperation.** Cooperation within industries will enhance the uptake of new technology and information within that industry. Ultimately, a unified and well-informed industry gains strength. Industry 'champions' may be identified to assist the VITC in unifying more sectors of the vegetable industry, and thus expanding the networking within them.
- **Research and development priorities.** Some areas are repeatedly mentioned. This suggests that either researchers have been ineffective in developing appropriate projects or have failed to deliver useful results to stakeholders. This Project may consider the need to commission work that is critical for SA growers, once potential researchers have been made aware of the stakeholders needs and expectations.

Continued effort from growers, researchers and the VITC, is required to ensure that a disproportionate amount of AusVeg funding is not consistently assigned to other states for vegetable research that could directly benefit SA if performed here.

The grower concerns that have repeatedly been rated as high research priorities across commodities, appear to be: identification of consumer demands and preferences; entire cool chain QA systems.

The foundations laid by this project must be capitalised upon. The technology transfer components of project proposals should be seriously reviewed on a case-by-case basis, and brought into line with the methods now known to be effective within the vegetable industry.

Conclusions

This project and its chief investigator have successfully achieved all noted milestones.

The VITC (Project) has been effective in recognising and fulfilling the demand for delivery of a range of coordinated vegetable information to the wider vegetable industry.

The delivery methods developed and used, and the format of information delivered, have illustrated an understanding of the sectors, their specific needs and their capacity to interpret the information, and self-educate.

Technology transfer has been used as a unifying mechanism in several industry sectors.

Several major problems within specific commodity groups have been managed, addressed or overcome as a direct result of the VITC's efforts, and this project.

The vegetable industry in SA is now capable of quick response, frequent, electronic communication. The database prepared is a major development.

Ethnic growers, and growers preferring the traditional methods of information sharing, have been reached and will continue to be, under this project.

Liaison within industry, networking between industries, researchers and government departments has benefited the SA industry, in terms of improved access to other project information and outputs, shared input costs with other projects, increased awareness of the concerns of SA growers and agri-businesses, and the capabilities of SA researchers.

It is the view of SRHS that this project has been effective, and that the vegetable industry in SA has benefited.

Yours sincerely

**SCHOLEFIELD ROBINSON
HORTICULTURAL SERVICES PTY LTD**



**PRUE McMICHAEL
Plant Pathologist/Senior Consultant**

Appendix 2 -SA Vegetable Industry Development Officer Communication Plan

Introduction

The transfer of information, derived from research projects and other information sources, within and external to the South Australian Vegetable Industry is vital to driving positive change, growth and prosperity in the industry. Likewise the identification and prioritisation of industry issues is essential to enabling research providers in South Australia to generate relevant and effective outcomes from their projects.

This Communication plan describes how the Vegetable Industry Development Officer will liaise with Stakeholders the industry to ensure the results of research and development, funded through Horticulture Australia Limited from levies raised from growers and voluntary contributions, achieve positive and measurable outcomes for the industry.

The Plan recognises the effectiveness of South Australia's Vegetable Industry Agricultural Research and Advisory Committees (ARACs) in enabling our Industry to work together effectively in identifying R&D issues and ultimately only quality projects from South Australia are put to HAL Industry Advisory Committees for funding, with an ensuing high success rate.

Monitoring and evaluation will be critical to the ongoing development of this Plan.

This Plan does not seek to be prescriptive and does not presume to dictate how other communicators and information managers should communicate. It does however seek to describe a framework for communication that others in the industry might wish to collaborate in.

Background

The initiation of the Industry Development Officer Project in South Australia, in April 1998, provided an opportunity to establish a communication network to link growers, grower groups, private R&D providers, agronomists, field officers, Primary Industry & Resources SA (PIRSA), SA Research & Development Institute (SARDI), and since 2002 including relevant Agricultural Research Advisory Committee's (ARAC's). Furthermore developing linkages and working relationships with Industry Development Officers in other States when they were employed, was seen to be important to widen the network nationally and understand issues of National importance.

Key roles of the Industry Development Officer were identified as being:

- To work closely with the Vegetable Industry, Virginia Horticulture Centre, PIRSA and SARDI to ensure that projects undertaken by South Australian research and development providers align with overall priorities set by industry and include well-developed strategies for the transfer of research results to industry.
- To maintain a database of vegetable growers and industry personnel and seek to improve the methods of message delivery to the target audience.
- To work within the guidelines of the South Australian vegetable industry strategic plan, also having regard for the national vegetable industry strategic plan and with particular attention to the formulation and implementation of further development strategies for the South Australian industry.
- To organise, facilitate and manage, as required, workshops, seminars, meetings and events which will contribute to the transfer of R&D results and contribute to the progress of the South Australian vegetable industry.
- To monitor and assess the effectiveness, over time, of all South Australian projects and report to the stakeholders.

Objectives

The aim of the IDO Project is to develop an efficient and effective industry communication network, in order to facilitate the exchange of information, within the South Australian Vegetables Industry, to maximize the benefits from industry driven research and development outcomes.

Given the need for effective communication within and external to the Vegetable industry the key objectives of this Communication Plan are:

- Increase understanding of Stakeholders of the levy collection and funding process
- Increase and improve access to information
- Enable Stakeholders to better utilise and manage information
- Enhance communication capabilities within the industry

No priorities are given to specific actions appropriate for the above strategies as many of them are in progress or ongoing and will run concurrently.

Goals

The 5 key measurable outcomes from this communication plan and the IDO project are:

1. Increased yields of, and profits from vegetable crops over time
2. Increased adoption of new techniques and technology recommended by research projects
3. Increased percentage of projects from South Australia being accepted for funding
4. Greater participation rates of key stakeholders
5. Increased number of issues presented to ARACs

What is this project trying to achieve in the South Australian Vegetable Industry?

<i>Increase understanding of the process</i>	Key messages	<i>Increase access to information</i>	Key messages
<ul style="list-style-type: none"> • Increased awareness of projects and levy investment (identify use of levy money) • Awareness of industry development officer • Improve understanding of levy – an investment • Improve understanding of R&D process 	<p>1, 2</p> <p>1, 5, 8</p> <p>1, 2</p> <p>1, 7, 8</p>	<ul style="list-style-type: none"> • Facilitate opportunities to increase awareness of where and how to access information • Create the desire to seek information • Facilitate uptake of new technologies 	<p>3, 5</p> <p>3, 4</p> <p>2, 4</p>
<i>Utilisation of information</i>	Key messages	<i>Enhance communication</i>	Key messages
<ul style="list-style-type: none"> • Identify and prioritise industry issues • Improve understanding of industry information • Improve opportunities to convert information to knowledge to allow better business decisions – thus increase business profitability (includes outcomes from R & D) 	<p>6, 7</p> <p>3, 4</p> <p>4, 5</p>	<ul style="list-style-type: none"> • Improve communication links • Promote active participation from growers • Promote pro-active participation by other Stakeholders 	<p>5, 6</p> <p>6, 7, 8</p> <p>5, 6</p>

Key Messages

What Key Messages need to be promoted?

The following key messages were identified at a National Vegetable IDO Meeting, November 2001. They are applicable to the South Australian vegetable industry.

1. Your levy is a worthwhile investment (potential for leverage)
2. Outcomes of direct benefit are produced from the R&D programs
3. Access to these outcomes is easy
4. Adoption may benefit your bottom line
5. There are many sources of information available
6. By working together you can achieve more
7. You can have your say
8. Program is available to all levy payers

Stakeholders

The stakeholders in the South Australian Vegetable Industry have been identified and divided into four groups. The first group is the primary and most important target, the fourth group is the least important target.

Group 1	Group 2	
Growers (Levy Payers)	Managers/Field officers Consultants/agronomists Researchers PIRSA SARDI SAFF VHC HAL Processors Other Vegetable IDO's	Exporters Wholesalers/Packers Rural suppliers Machinery contractors Seed companies Nurseries Industry associations (eg Ausveg, Women in Hort., Bunchlines, CPA, etc.)
Group 3	Group 4	
Education/training organisations Government departments Employment agencies (labour contractors) Machinery suppliers	Other horticultural industries Other agricultural industries Consumers Transport companies Media	Banks/financial institutions/other business support Federal Government Local Government State Government Regulatory authorities Retailers Community interest groups Rural communities Urban communities

Critical Success Factors

Success Factors (positives)	Critical Issues (negatives)
<ul style="list-style-type: none"> ✓ Enthusiastic growers ✓ Good existing communication channels ✓ Good network of Field Officers and Agronomists ✓ Support from PIRSA, SARDI and the University ✓ Vegetable IDO based in South Australia ✓ Support from individuals within organisations ✓ Good network of rural suppliers ✓ Growers are becoming willing to pay for information ✓ IDO independence – perception from growers ✓ HAL funding ✓ Established associations ✓ Success stories available ✓ Established database for commodities ✓ Some projects and research providers very outcome/communication focussed 	<ul style="list-style-type: none"> - Some Growers unwilling to change - Unenthusiastic/apathetic growers - Lack of understanding of how the levy works - Limited resources (\$) in some projects - Growers expectations – changing/different - Diversity of education/level of education - Projects that haven't delivered - Availability and adoption of technology - Unwillingness to participate in grower training - Industry fragmentation in fresh market

Strategies and Actions

Objective: Increase understanding of the process

Strategies	Action	Who	When
<ul style="list-style-type: none"> Increase awareness of project and levy investment / awareness of Industry Development Officer 	<ul style="list-style-type: none"> promote 'Your levies at work' statement Vegenotes to include levy information promoting levy involvement in IDO project Vegenote/brochure on IDO network 	HAL + IDOs Veg Project IDO <i>Veg Project</i>	Early 2003 Ongoing Early 2003
<ul style="list-style-type: none"> Improve understanding of the levy 	<ul style="list-style-type: none"> Protocol for recognising levy involvement (upfront specific words) Vegenotes series produced Maintain production and distribution of IDO newsletters – Statewide (articles explaining levy) 	HAL + IDOs Veg Project IDO	Early 2003 Early 2003 Ongoing
<ul style="list-style-type: none"> Improve understanding of R & D process 	<ul style="list-style-type: none"> Develop short presentation 'pack' available on project and levy information and process/outcomes Produce case studies and testimonials of success stories. 	HAL + IDOs HAL + IDOs + Researchers	Ongoing Ongoing

Objective: Increase and improve access to information

Strategies	Action	Who	When
<ul style="list-style-type: none"> • Increase awareness of where and how to access information • Create desire to seek information. • Facilitate uptake of new technologies. 	<ul style="list-style-type: none"> - Ensure up to date contact details available on publications/communications 	IDO	Ongoing
	<ul style="list-style-type: none"> - Facilitate ongoing communications within network 	IDO	Ongoing
	<ul style="list-style-type: none"> - Review communication channels periodically 	IDO	Ongoing
	<ul style="list-style-type: none"> - Identify preferred media methods/channels of communication 	IDO	Completed (for growers)
	<ul style="list-style-type: none"> - Targeted information provided for specific audiences 	Researchers	Ongoing
	<ul style="list-style-type: none"> - Provide localised contact for further information 	Researchers	Ongoing
	<ul style="list-style-type: none"> - Organise growers tours/visits of successful/interesting implementation of outcomes by local growers 	} Researchers + IDO	Ongoing
	<ul style="list-style-type: none"> - Organise specific field days/workshops/displays etc 		Ongoing
	<ul style="list-style-type: none"> - Encourage use of Website - promoting address 	IDO	When operational
	<ul style="list-style-type: none"> - Identify innovators and industry leaders 	IDO	Ongoing
	<ul style="list-style-type: none"> - Facilitate existing and new discussion groups 	IDO	Ongoing
	<ul style="list-style-type: none"> - Provide support to other discussion groups 	IDO	Ongoing
	<ul style="list-style-type: none"> - Use growers to present at forums 	IDO	Ongoing
<ul style="list-style-type: none"> - Identify possibilities for growers and service providers to participate in high quality study tours 	Appropriate growers IDO	Ongoing	

Objective: Better utilisation of information

Strategies	Action	Who	When
<ul style="list-style-type: none"> • Facilitate the identification and prioritisation of industry issues • Raise awareness and understanding of industry issues and information • Provide information to create the knowledge to allow better business decisions for increasing profitability. 	<ul style="list-style-type: none"> - IDO to provide appropriate support to Vegetable and Potato ARACs, encourage feedback through other avenues 	IDO & ARACs	Ongoing
	<ul style="list-style-type: none"> - Seek feedback from w'shops field days etc to ID issues 	IDO	Ongoing
	<ul style="list-style-type: none"> - Timely and easy to understand communication to growers and others (eg newsletters, email etc ,workshops, field days, Vegenotes) 	IDO	Ongoing
	<ul style="list-style-type: none"> - Initiate and Facilitate Annual Research Provider workshop 		Initiate
	<ul style="list-style-type: none"> - Maintain communications between state association and IDO 	IDO	Ongoing
	<ul style="list-style-type: none"> - 	IDO	Initiate
	<ul style="list-style-type: none"> - IDO to provide appropriate support for ARAC R,D & E day 		Ongoing
	<ul style="list-style-type: none"> - Source and distribute relevant info via Newsletters, magazines, Vegenotes, discussion groups and workshops etc 	IDO	Initiate
	<ul style="list-style-type: none"> - Ensure adequate funding is allocated to technology transfer in projects including appropriate Communication Strategies 	IDO	Ongoing
	<ul style="list-style-type: none"> - Use growers to present at forums 	Researchers	Ongoing
<ul style="list-style-type: none"> - Package up information from various projects 	Appropriate growers IDO, Researchers	Ongoing	

Objective: Enhance communication capabilities within the industry

Strategies	Action	Who	When
<ul style="list-style-type: none"> • • Identify, improve and maintain communication network throughout the vegetable industry and external to the vegetable industry. • Promote active participation from growers • Promote pro-active participation by other Stakeholders • 	<ul style="list-style-type: none"> - maintain IDO network - Identify existing networks within the vegetable industry - Identify and use effective existing networks - Identify gaps in networks and develop strategies to fill these gaps - Develop and maintain vegetable industry database/mail list - Share information/newsletters from other IDO's and research projects - Facilitate Annual Research Provider workshop - Ensure contents of workshops/field days and forums in targeted, relevant and presented in appropriate manner to audience - Facilitate Annual Research Provider workshop (May provide opportunity to identify communication skill gaps and opportunity for some communications training) - Ensure invitations to attend workshops/information days are circulated as widely as possible - Set up events information exchange within wider industry <p>Encourage National collaboration to enhance project outcomes</p>	<p>All IDOs</p> <p>IDO</p> <p>IDO</p> <p>IDO</p> <p>IDO</p> <p>IDO</p> <p>All IDOs</p> <p>IDO and Researchers</p> <p>IDO and Researchers</p> <p>IDO and Researchers</p> <p>IDO,PIRSA SARDI</p> <p>IDO</p> <p>IDO</p>	<p>Ongoing</p> <p>Complete</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Initiate</p> <p>Ongoing</p> <p>Initiate</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>

Appendix 3 Project VG97080 Milestones

Milestone 1 and 2

Sign agreement

Management and Steering Committees Established.

The Management Committee which deals with the operational aspects of the project has been established and has the following four members:

Chairman, Horticulture Section of South Australian Farmers Federation, John Mundy,
Executive Officer, Horticulture Section, SAFF, Trish Semple,
Primary Industries SA Vegetable Representative, Barry Philp,
And SARDI Vegetable Representative, Adrian Dahlenburg.

The Management Committee meet on a 2 monthly basis and review and advise on the project. The Steering Committee which oversees the overall direction and strategy development of the project includes:

The four management committee representatives, plus
1 HRDC Representative, Jonathan Eccles and
each of the six national representatives for the commodity groups.

This comprises at present;

Brassica John Cranwell

Leafy Paul Emery

Root Barry Nicol

Export To be filled

Processing To be filled

Other John Newman.

Milestone 2, Due 1st July 1998

Vegetable Industry Technology Transfer Coordinator Appointed.

The position was filled by Craig Feutrill, Bachelor of Agricultural Science (Hons). Official Start Date 27th of April 1998. Craig's background is as an Entomologist, primarily in citrus, vines and vegetables. Craig has also had extensive experience in Technology transfer, having been the National Citrus Information and Technology Transfer Coordinator for 6 years.

Milestone 3

Vegetable grower database developed and maintained

Formation of Vegetable Industry Forums

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Milestone 4

(1) Complete Audit of Tech Transfer Projects and resources (including projects with an R&D component.)

(2) Formation of networks of 'change agents' for the SA vegetable industry

(3) grower database validated and maintained

An audit of Technology Transfer projects and resources across the Australian Vegetable Industry has been completed and distribution networks established for those projects that relate to specific commodity groups.

Examples include:

- Western Flower Thrips Newsletter
- The Control of Celery Mosaic Virus Newsletter
- Plutella Update
- Diamondback Moth IPM News
- Carrot Crunch Newsletter
- Clubroot Updates
- GrowSearch News and Views
- VegeLink (Victoria and WA)
- RiverLink News

It was seen as extremely important to get information to the widest possible audience of growers on other R&D, and VegLink SA was initiated in May '99. This is distributed to approximately 1500 SA growers quarterly.

A further development of VegLink was a response to the need of the 400 strong Vietnamese growing community on the Northern Adelaide Plains. The quarterly VegLink Newsletter is translated into Vietnamese and distributed through a network established in the Virginia region.

Networks of 'change agents' have been established for the SA Vegetable Industry, these include chemical resellers, consultants on the Northern Adelaide Plains and Adelaide Hills (CRT Local Bloke Agronomists), Key commodity specialist growers and research personnel where possible. Examples of the success of this network include the recent distribution of a Diamondback Moth News alert which was directly sent to all Brassica growers on the database and distributed to consultants. The feedback regarding the success of this warning from growers and consultants has been very pleasing.

The Vegetable Industry Database (VIDB) is maintained on a fortnightly basis and in July '99 underwent a validation. 1,500 minor surveys were sent out of which 27% were returned. This was a little disappointing, but allowed new information to be collated.

It is expected that as more specific commodity information is direct mailed, usefulness of the database will be proved.

The database now includes information on consultants, chemical resellers, transport, retailers, wholesalers and other levels of industry.

The VIDB also includes information on technology transfer personnel in SA (and interstate) as well as their area of expertise. This has been useful when producing VegLink, as specific information or articles can be drawn from these sources. It has also allowed contact regarding chemical use issues and relevance of projects interstate and how they will relate to local R&D.

This concept has also extended to the closer networking of the interstate Vegetable Industry Development Officers, where closer links have allowed sharing of information and techniques.

A communication and industry needs report has been produced as part of this milestone.

Communication needs are being addressed through the publication of VegLink, its translation into Vietnamese and direct mailing of commodity specific information.

However, the need for electronic communication has been identified and plans for a pilot project involving email and internet access is underway on the Northern Adelaide Plains.

A project involving R&D in the glasshouse industry is also being jointly developed with Rob Kennedy of the Virginia Horticulture Centre.

Milestone 5

Strategic Plan for SA Vegetable industry completed

Three strategic planning forums were held in Virginia, Murray Bridge and the Riverland in May 2000. Growers were direct mailed invites to the forums, which were conducted by Helena Whitman and Colin Mann of Correh Consultants. The outcomes from these meetings are reproduced at the end of the main report, and are discussed in the summary. In addition the outcomes will be forwarded to SARDI, PIRSA, and the SA Primary Industry Research (&D) Board management, to ensure they are aware of grower needs for SA.

The main report will form the basis for pulling together stakeholders, including PIRSA, SARDI and SAFF to update the SA Vegetable Industry Strategic Development Plan for years 2000 – 2005. As the National Vegetable Industry Strategic Plan has just been completed and released, both in hard copy and the associated video, grower awareness of the plan is currently high.

Many of the 1995 – 2000 plan outcomes remain current, i.e. have not been adequately addressed. Analysis of continued validity of these ‘outcomes’ should form a major aspect of the update of the SA Strategic Plan.

Since the initiation of the plan, the HRDC Vegetable Grower Levy has been implemented and approximately 400 projects have been approved with some completed in 1999/2000. This has implications for many of the research-based outcomes that were listed in the original plan. In the body of the full report, outcomes that have been, or are currently being addressed, are indicated. The employment of Industry Development Officers in SA for Production and Marketing on the NAP as well as the State Vegetable IDO, employed through SAFF has helped address some of the communication difficulties. This however, needs to be further developed to alleviate grower concerns as to ‘value-for-money’ for levy funded research.

Major needs for the SA industry, that have been indicated (and not addressed) by the regional forums include;

- Western Flower Thrips management strategies for greenhouse and broadacre crops
- Disparity between farm-gate and retail prices for commodities (see table below)
- Lack of pest incursion management/eradication strategies
- Consumer education as to the health benefits of vegetable consumption
- A shift from predominantly ‘production’ research to ‘market/marketing’ research.
- Quality Assurance – differing requirements for markets and retailers – a mess!
- Communication, the need for networks both, human and electronic.
- Minor use chemical issues in greenhouse and broadacre crops
- Labour issues, need for backpackers and other (imported?) labour

As detailed in the 1995 – 2000 plan the true value of the South Australian vegetable industry has not been accurately known due to a number of factors, not least being the growers reticence to give accurate figures to the Australian Bureau of Statistics for fear of taxation reprisals.

For the 2000 – 2005 strategic plan, more accurate data on the industry, for production, price received and exports have been made available through PIRSA staff working on the Food for the Future project. Rob Esvelt and Venton Cook, who are working on this project, have reviewed most vegetable commodities in South Australia providing valuable information on production volumes, returns to participants in the value chain, export volumes and returns, and whether the state is a net

importer or exporter of the commodity. This information will be updated each year for the life of the project. (See attachments at the end of the full report).

Recommendations:

1. That the SA Vegetable Industry Stakeholders meet to participate in updating the 1995 – 2000 Strategic Plan for the next 5 years, taking into account which of the original outcomes have been addressed, and which still need attention. Information from the Correh Consultant, grower forums and the Food for the Future data to be included.
2. That AQIS and Vegetable Industry Stakeholders participate in planning strategies for pest incursion management (potential and likely pests).
3. That marketing and Market related research occur to match production (volume and commodity) to available markets.

Milestone 6

Establishment of electronic communications pilot

Only have hard copy.

Milestone 7

Review Milestones for remainder of project and adjust where necessary to take into account client needs

Document new systems of technology transfer

As part of Milestone 7, VG97080 suggested a review of the project against previous milestones, and uptake of technology that might be attributed to the project, and this be conducted by an independent consultancy. A summary of this report is reproduced below;

Scholefield Robinson Horticultural Services Pty Ltd (SRHS) was retained to provide a brief overview and assessment of the Project VG97080. Prue McMichael, Plant Pathologist and Senior Consultant, SRHS undertook this brief. It encompassed review of the provided examples of technology transfer outputs, assessment from our perspective as consultants in horticulture including vegetable crops, and discussion with vegetable growers in SA (stakeholders) and one key researcher.

This project was initiated after acknowledgement of the existing fragmented approach to information delivery, for vegetable growers in South Australia.

Printed matter

Newsletters, news alerts, contributions to national and state horticulture publications. VegLink SA is published in The Grower and Vietnamese translations are distributed to more than 400 growers.

The messages delivered by this method have frequently included: alerts about pests and diseases; chemicals – changed regulatory or registration status, new permits for minor use; research updates from local, national and international sources; seasonal crop and market updates.

Strategic Plans and Project (R&D) development; Working Parties

Industry and specific commodity group workshops to prioritise R&D needs, gaps and proposals have been initiated and coordinated by the VITC. The outcomes from these meetings have been circulated to potential research providers.

Focus forums such as these are on-going for specific crops (Brassicas, Bunchlines, carrots, Brussels sprouts, celery etc); specific problems (Diamondback moth, chemical resistance management, minor use permit applications, Western Flower Thrips) and for industry sector development (Implementation of the Vegetable Industry Strategic Plan; Greenhouse Modernisation Program; Industry Sustainability).

A most important development in this area was the project development and appointment of Tony Burfield, the WFT –IPM Specialist. The VITC recognised the sustained effort needed to overcome the problems of WFT in Virginia. Efforts to carry out research and deliver the results to growers had in the past been intermittent and frustrating. The coordinated efforts of Dr Peter Bailey, Craig Feutrill and Tony Burfield have resulted in an effective WFT program with the growers and researchers both benefiting.

Video; CD Rom

These have been effectively utilised by the VITC as adjunct technology transfer methods for specific programs that required wider audiences than just growers and ‘change agents’. (Vegetable Industry Strategic Plan; Tour to Israel and California – Water Recycling).

Electronic information

The vegetable industry database has been created and validated as a means to achieve more comprehensive and efficient direct deliveries of both printed and electronic matter. This is the most comprehensive record of vegetable growers, areas of interest and contact details, in SA. It has been validated and its true benefit to this industry, which is not yet widely computer literate, is yet to be seen. As a resource for the VITC however it has already proved essential. Its development, by the VITC, deserves particular recognition.

The Vegetable and Potato Industry Website and Virginia Telecentre, are in the refining and grower trial stage of development. They are appropriate and suitable for growers comfortable with computers, or committed to developing computer skills. The coordinated scoping and planning efforts of the VITC, Leigh Walters and other Industry Development Officers in these technology transfer packages highlight the ability of the VITC to network widely to achieve outstanding results for SA growers, and to maximise the returns on the dollar inputs to such projects.

E-mail – Electronic mail has been the most effective means of communicating with researchers, and many change agents who regularly, in the course of a day, access computers. The VITC has acknowledged that many growers still prefer to receive hard copies of important information, but some commodity groups with specific problems are receiving regular crop alerts, and pest information in this manner. The numbers of growers comfortable with this method of frequent communication is increasing each year and the database – will allow their inclusion on electronic ‘mailouts’ very easily.

Tours/ Field Days/ On–site visits

Organised tours: The VITC has organised relevant tours for growers, researchers and change agents: Protected Cropping tour (Israel); Reclaimed Water tour (Israel and California). Demand for such apparently exists, if judged by the number and expertise composition of tour participants

Field days and on-site visits: These have been utilised as a mechanism for delivery of information when appropriate, but they are recognised as inefficient methods of delivering information, given the schedules of most growers today.

Milestone 8

R&D workshop review and needs analysis for the future

Criteria: **Review R&D input and current methods**
 Survey growers and other levels of industry
 Linkages established with all R&D providers
 Produce report on best methodology to gain greatest input.

In the same survey, assess the continuing information needs for all level of industry and produce a report on methods to be implemented in the future.

Work Plan for the next 6 months (summary):

Prepare and conduct survey to all commodities – separating out crops: This is to be a co-ordinated effort between all the Sate IDOs. This is part of the on-going R&D needs analysis, that have been conducted over the past 3 years.

First survey of Capsicum growers (predominantly Vietnamese Greenhouse growers in SA)

Subsequent surveys (identifying commodities) will be conducted in consultation with State IDOs.

Identify strategic or ‘mission-critical’ needs and address via funding applications to appropriate funding bodies.

Linkages will be maintained with all R&D providers, both State and National. Meetings are being organised in SA for the National WFT researchers and DBM meeting in Melbourne in July. Contact maintained with other researchers, both Government and Commercial.

A report will be produced that looks at, and identifies the best method of technology transfer and adoption for each of the commodities. The report will be based on feedback from IDO clients as to how they prefer information delivered and how useful they find the information. A measure of uptake will be investigated – concentrating on one commodity (most likely Bunchlines). The report will also review the methodology best suited to our Vietnamese Clients – this has become very important since a recent survey highlighted that approximately half our clients on the Northern Adelaide Plains are Vietnamese or Cambodian (previously thought to be about 1/3).

Complete report on Israel/California Reclaimed Water Tour, produce complimentary CD-ROM, deliver tour findings at meetings in all growing regions.

Complete and initiate joint Potato/Vegetable industry website with HA/Levy and NOIE funding.

Complete NOIE funding application.

A full work plan will be developed with the VG97080 Management Committee.

Communication and Extension activities since the last milestone report.

Monthly columns written and collated for Good Fruit and Vegetables, (Vegetable Platter).

Quarterly 6 page input to The Grower, translation of these pages into Vietnamese.

Completion and distribution of 250 CD-ROMs from the Israel Greenhouse tour from 2000.

Direct mail-outs to Brassica, Lettuce, Carrot and Bunchline growers.

Extensive communication with R&D providers , both State and National.

Videos produced by ABC Landline on the California/Israel tour (two more in production for Horticulture Australia).

R&D workshop review and needs analysis for the future

In the same review, assess the continuing information needs for all levels of industry and included in report on methods to be implemented in the future.

Review of R&D input.

Current methods of R&D input in SA involve yearly (maximum 18 month apart) commodity specific (or open) meetings in the major production regions. Reports from these state meetings can be found attached; SA – MURRAYBRIDGE.doc, SA – BARMERA.doc and SA – VIRGINIA.doc and have been summarised in SA – FINAL REPORT2.doc. These reports have been summarised, updated and collated in the national issues document (see later).

These meetings not only involved growers, but other levels of industry such as consultants, extension officers, wholesalers and members of the transport industry - and the final report was released to SAFF, AUSVEG, HA and PIRSA/SARDI.

The IDO also attends the annual SA Primary Industries R (&D) Board meeting to put forward the list of Vegetable Industry needs and in 2001 contributed to a joint meeting of PIRSA Vegetable researchers looking at identifying key research areas for 2002/3. The IDO also sits on a number of state and national steering committees (with key SA growers) to ensure that the direction of HA funded projects have the desired outcomes – eg. Diamondback Moth project, Greenhouse modernisation project and a National residues in soils program conducted by CSIRO.

A Vegetable Industry Sustainability meeting was also conducted with researchers and growers because I was a little concerned that growers (the R&D committee in particular) were not fully understanding the concept of sustainability on-farm. This meeting better equipped the SA members to make informed decisions at the National level.

The State issues and R&D priorities are collated into a national document (see National Issues list Sept01.doc attached) and sent to all identified vegetable researchers in SA. In addition to this document, the National R&D committee members participated in a needs analysis in October 2001 and this document (see VG R&D priorities final draft.doc attached) was also circulated to the state vegetable researchers.

Linkages established with all R&D providers.

As illustrated above strong linkages have been established with all state and national R&D providers, not only departmental, but private companies such as Serve-Ag in Tasmania and consultants in SA such as Domenic Cavallaro, Vic Szabo and John Jeffs. Linkages have also been established and maintained with rural supply companies such as P&P, Dimannos and Elders/Farmer John's.

The national vegetable Industry IDO network (and wider Horticultural IDO network) is also seen as a valuable adjunct to the above linkages as it allows 'cross-fertilisation' of information and inputs at the state and national level.

Report on best methodology to gain the greatest input.

Direct grower input, whether commodity meeting or one-on-one.

Currently there is no better method, however, an additional method is possible via the national website project - it is proposed to have a research 'news' page that allows researchers to put up proposals to get direct feedback from growers.

Next Steps in the Project

Milestone 9: Project Evaluation

Criteria: Select independent consultancy to undertake evaluation
 Consultant's report completed and presented to SA Vegetable Forum.

This milestone was completed during 2001 (see attached Scholefield Robinson report – VG97080 evaluation 0701LH.doc) and presented to the Management Committee and HA.

Proposal: Since the next milestone has already been finalised, work proceeds on the development of the SA vegetable industry Strategic Plan.

Work Plan for the next 6 months :

Organise and conduct commodity-based meetings with carrot, leafy vegetable, bunchline, Brassica, Vietnamese/greenhouse and other growers in all major vegetable production regions to review and update SA Vegetable Industry Strategic Plan (SAVISP).

Utilise the Grower to get interest and participation in the SAVISP update (start with March issue).

Organise and conduct Industry based meetings with resellers, consultants, transport, wholesalers, retailers, R&D providers, SAFF to review and update SAVISP.

Investigate the possibility of utilising an external facilitator/and sourcing funds for the non-grower meetings – possibly hold one meeting for the key people.

Facilitate/complete/publish written update of 2002-2007 SAFF/PIRSA SAVISP

Continue joint Potato/Vegetable industry website with HA/Levy and alternate funding with Leigh Walters.

Communication and Extension activities since the last milestone report.

Monthly columns written and collated for Good Fruit and Vegetables, (Vegetable Platter) – see attached.

Application to Crop protection approvals of 60 minor use chemical permist for SA's Bunchline, Greenhouse and Brassica growers.

Finalised and submitted final report on Reclaimed water tour to Israel and California to HA – signed off project. Still to do final editing of CD-ROM (handout at meeting).

Quarterly 6 page input to The Grower and translation of these pages into Vietnamese – see attached.

Completion and distribution of 300 CD-ROMs from the Israel Greenhouse tour from 2000.

Completed direct mail-outs to Brassica, Lettuce, Carrot and Bunchline growers.

Extensive communication with R&D providers, both State and National on current and proposed projects.

Six videos produced by ABC Landline on the California/Israel tour (three televised for the Land Line program and three specifically for Horticulture Australia).

Production (with Anne Frodsham (ex- SA Nursery Industry IDO) of an Integrated Pest Management Training course for the vegetable nursery industry).

Alternate funding sources investigated with Leigh Walters (Potato Industry IDM), for National website project due to failure of NOIE funding application – see attached letter and proposal.

Milestone 9

Project evaluation – see later Chapter

Progress of project against milestones is ahead in most areas and behind in finalizing the SA Vegetable Industry Strategic Plan.

Agricultural Research Advisory Committees

Members of the SA R&D committee had noticed that the Tasmanian commodity members had strong industry backing, a good understanding of state projects submitted and a unified voice for the support (or otherwise) of the projects put forward by their state.

Following the R&D meeting in Tasmania, I visited a number of researchers and research providers (in Tasmania) to talk about the Agricultural Research Advisory Committees (ARACs) and their effectiveness, with the view of introducing them in SA.

A discussion paper proposing ARACs be initiated in SA was produced and widely circulated – with positive feedback – particularly from the research providers in SA.

The initial meeting, held 4th of July at PIRSA, Lenswood established that ARACs should be initiated in SA and that Craig Feutrill SAVIDO and John Fennell (PIRSA) prepare a detailed action plan to progress the concept.

Website Project

With the National Potato Industry Development Manager, Leigh Walters, work has been progressing on the National Vegetable Industry Website Project. (See 6 month work-plan below).

The project had initially stalled due to a failure to obtain National Office for Information Economy (NOIE) funding. Funds to address the difference - \$114,000 – were then sought from the Departments of Agriculture around the Nation with variable results.

Leigh and I then made the decision to approach large business corporations in Australia to make up the shortfall. To this end a preliminary proposal was produced and when finalized will be promoted to identified businesses.

Work has also progressed on the structure and management of the Website, including information gathering and State based IDO management of local databases. The initial commodity groups to be put up on the web have been allocated against each state Vegetable IDO and the requirements (and funding) of data collection/collation is being drafted at present.

Communication and Extension activities since the last milestone report.

Wastewater Workshop organised and conducted with Paul Harrup, Andrew Hamilton, DNRE at Virginia.

Attended the National Pathology Workshop in Bunbury, WA – produced and distributed information on outcomes via publications.

Organising 2004 Vegetable Pathology Conference with Barbara Hall and Trevor Wicks (SARDI) to be held in Adelaide.

Preliminary organisation of National Brassica conference, with Caroline Donald (DNRE) Victoria.

6 Monthly columns coordinated written and collated for Good Fruit and Vegetables, (Vegetable Platter) in conjunction with other state Vegetable IDO's and researchers. The pre-published

column is sent to approximately 200 growers and researchers and other industry contacts via email for comment.

2 Quarterly 6 page VegLink articles to The Grower and translation of these pages into Vietnamese. The pre-published column is sent to approximately 200 growers and researchers and other industry contacts via email for comment.

'Southern IDO' training for Website/Interactive CD-ROM production with Leigh Walters

Completed direct mail-outs to Brassica, Lettuce, Carrot and Bunchline growers.

Distributed Safe vegetable Production and Lettuce IPM manuals to states growers

Extensive communication with R&D providers, both State and National on current and proposed projects.

Direct one-on-one liaison with Adelaide Hills, Northern Adelaide Plains and Murray Bridge growers regarding chemical permits, Brassica trials and quality assurance.

Five videos finalised -produced by ABC Landline on the California/Israel tour (three televised for the Land Line program and two, specifically for Horticulture Australia).

Alternate funding sources still being investigated with Leigh Walters (Potato Industry IDM), for National website project due to failure of NOIE funding application – see attached letter and proposal.

Milestone 10

Ian Lin's seminar

Milestone 10: Ian Lim contracted to present at SAFF AGM
Information Directory Produced

Description: Ian Lim contracted to present at SAFF AGM
Information Directory Produced

Criteria: Ian Lim contracted, meets with SARDI, report produced
Production of a comprehensive industry information directory including:
* all service providers
* all research institutions and researchers
* research publications listings
* websites and other internet services

Ian Lim (Quo Vadis Consulting) contracted to present at SAFF AGM.

This was a joint initiative of Jim Kelly and the SAVIDO, during Jim's time as SAFF Horticulture Manager – and added as a reportable Milestone due to an extension of funding (VC) by Horticulture Australia to this project.

South Australian Horticulture Annual General Meeting invited Keynote Speaker Dr Ian Lin to talk to the members about the choices they face and determining their future.

The keynote presentation entitled "Your Future! Your Choice! You Choose!" was given at the AGM by Dr Lin, a futurist from the Quo Vadis Consulting Group. It outlined the rapid and radical period of change that not only horticulture, but all Australian industries are going through at the present time, as the world in which we live and work transforms from the old systems, structures,

and strategies of the Industrial Age to the new economic, social, and political environments of the Information Age of the 21st century.

The meeting was well attended by 65 guests and members. Further to this, advantage was taken of Dr Lin's visit by organising visits with the Market Development group from the Adelaide Produce Markets and from Primary Industry and Resources South Australia.

A group from PIRSA (15) Market Development and Food for the Future had a private meeting with Dr Lin and were very interested in his approach. Following the meeting many of the PIRSA representatives remained back for the Horticulture AGM to talk with growers and to further listen to Dr Lin. This was extremely valuable as it provided an opportunity for those in government, who promote export, to hear first hand the sentiments of the growers.

In this new environment, the entire world is now the marketplace and source of supply, for all goods and services, for all enterprises, regardless of size or geographical location.

For Australian farmers this means livelihood and success no longer depend mainly on small local markets or price sensitive global commodity markets. We have opening up before us, a vast array of new global niche markets, presenting many new opportunities, but these need to be approached, supplied and serviced in totally new ways.

To take advantage of these opportunities we must develop a new level of corporate agility, flexibility, quick response, customer focus and cross-cultural connectivity. The foundation to success is continuous integrated innovation throughout the whole value/supply chain and the key to accessing niche markets is the creation of an ever-evolving network of global contacts.

However, the new global environment not only brings with it new opportunity, but also new global competitors. In this new business world we need to be prepared to respond quickly to new challenges while at the same time being alert and ready to grasp new opportunities. If we are to succeed, it is not likely that we can use yesterday's strategies, to solve today's problems and expect to be in business tomorrow. A totally new approach is needed.

At present, we are confronted with two choices. We can choose to defensively react to the changes created by others and expend our energy in trying to protect the status quo; or we can proactively create the changes that we want, in order to determine our own future and shape our own destiny. If we choose the former our future will most likely be one of a continuous struggle for survival. If we choose the latter we can, not only, survive, but also prosper, grow and thrive in the 21st century.

If we choose to create our own future, how is this to be done? How can we create the opportunities and develop the strategies to allow us to decide the direction we should take and let us be constantly updated on the challenges, opportunities and risks of an ever-changing global environment?

This is best done through the formation of clusters of like-minded individuals throughout the entire value/supply chain. They combine their diversity of experience, knowledge and intellectual resources to think into the future, with imagination, about the possibilities. This forms the foundation for learning about the future and for creating scenarios or simulators of the future. These simulators are then used to evaluate possibilities and to practice the future without risk or cost.

This concept, of forming collaborative clusters of those in the horticulture value/supply chain in order to define the values, vision, and strategic action needed to develop a new future, was well

accepted by all at the AGM and also by sponsoring organizations, who had private consultations with Dr Lin during the same day.

The presentation given by Dr Lin has rekindled discussion on the successes and problems associated with export of fresh vegetables from South Australia. Although government agencies are providing information and telling industry there are export opportunities, industry is of the opinion that real and perceived barriers and risks outweigh the potential benefits.

A forum, with all parties, to discuss what has been learnt over the past ten years with respect to the export of fresh produce. There has been a somewhat piecemeal approach to export in the past with many repeating the mistakes made by others. However, it is clear that there have been some significant successes that have provided significant rewards to those involved and to the industry as a whole. Through an open forum the successes and barriers can be identified, along with the strategic information required to provide marketers and exporters with the information necessary to enter into successful export contracts.

There is no doubt that all involved hold the opinion of 'if we fail to develop the markets both domestically and offshore then expansion in the industry will be doomed to low prices and failure'. The take home message being that 'a strong and successful export program is required to ensure the economic sustainability of our industry'.

Milestone 11

Information Directory Produced

The information directory production has come to a halt due to the need to adhere to the amended Privacy Act of 2000 which was brought to my attention by Leigh Walters and Jonathan Eccles. See attached act.

Each person will have to be approached and asked if it is acceptable for their details to be included in the information directory.

Sections on Service Providers, Researchers and research publications are finished.

Bill Bishop of SAFF Market Services will be supplying (at a cost) the market trends for levied vegetables in the next few weeks, for inclusion in the directory.

Website Project

With the National Potato Industry Development Manager, Leigh Walters, work had stalled until he had cleared his backlog of work.

A meeting of all Vegetable IDOs was convened in Adelaide during the VegeNotes steering committee meeting in December. The project was modified to suit the available funding and priorities set against vegetable commodities.

Communication and Extension activities since the last milestone report.

Collaborating with Dr. Mike McLaughlin (CSIRO) on national publication Cadmium in Vegetables National Diamondback Moth Steering Committee meeting in Adelaide, Plant Research Centre. National IDO meeting to initiate VegeNotes project, Sydney. ARAC meetings in Adelaide (Vegetable and Potato committees) Rootzone limitations meeting, Melbourne, Ferried Victorian researcher Liz Minchinton, and Liz Oxspring SARDI to BunchLine grower's properties, sampling for fungal diseases – organise grower meeting at Danny DeIeso's shed. Host tour of Sunraysia

Greenhouse growers through the Northern Adelaide Plains, looking at Greenhouse Modernisation Project, Reclaimed Water, Research undertaken etc. Organise night meeting with guest speakers, Leigh James NSW Agriculture and Domenic Cavallaro. Direct mail out to 2,500 growers and Industry people seeking issues. Visit growers regarding ARAC issues. Survey national Brassica growers for joint work undertaken with Subbu Pitchu of NRA (mevinphos). IDO tour of Sydney Basin greenhouse growers to understand local problems. Work with Bunchline growers and CPA regarding bunchline permits. CSIRO Soils steering committee meeting, Adelaide. Australian Pacific Extension Network meeting Adelaide (Chair). Second ARAC meeting, support of projects – letters of support produced. 2 Brassica direct mailouts. Working with Sally Richards, Bi\$Link to identify NESB communication issues in SA, VegeLink steering committee meetings, Adelaide. Carrot Virus Y (CVY) emergency meetings in Virginia assist in organization of Lindrea Latham's visit, develop project extension methodology for SA with Trevor Wicks and Robin Coles, VIDO review Sydney. Identification of funding for WFT research extension project (SARDI – Glynnis). Work with carrot industry and Agrichem to get Agrifos trial/registration for carrots.

Six monthly columns coordinated written and collated for Good Fruit and Vegetables, (Vegetable Platter) in conjunction with other state Vegetable IDO's and researchers. The pre-published column is sent to approximately 200 growers and researchers and other industry contacts via email for comment.

Two quarterly six page VegLink articles to The Grower and translation of these pages into Vietnamese. The pre-published column is sent to approximately 200 growers and researchers and other industry contacts via email for comment.

Completed direct mail-outs to Brassica, Carrot and Bunchline growers.

Extensive communication with R&D providers, both State and National on current and proposed projects.

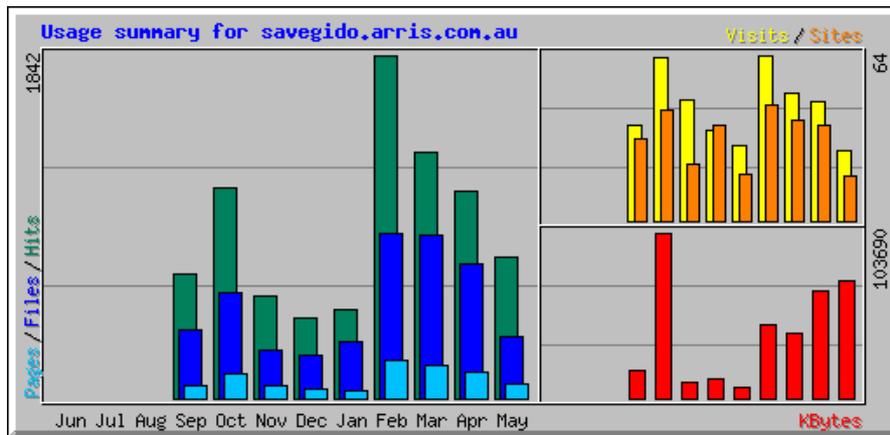
Direct one-on-one liaison with Adelaide Hills, Northern Adelaide Plains and Murray Bridge growers regarding chemical permits, Brassica trials and quality assurance.

Appendix 4 – Publications

- VegLink – published in the Grower Quarterly (December, March, June and September) Started in June 1998, still going – 26 VegLink columns of 6 pages.
- Veg Platter – published monthly in Good Fruit and Vegetables. Started in May 1998, still going - 80 monthly columns of up to 6 tabloid pages.
- VEGEnotes (contributed or wrote) 2003 - 2004
 - Farm Computing
 - Lettuce Aphid
 - Biosecurity
 - The National Vegetable Levy
 - The National IDO Network
- 6 Interactive CD-ROMS
 - Brussels Sprouts – The CD
 - Protected Cropping Tour Investigation Tour to Israel 2000 VG99075 – Interactive CD-ROM
 - Horticulture Australia Recycled Water Tour to Israel and California 2001, VG00087 – Interactive CD-ROM
 - National Vegetable Pathology Working Group 2004 – VG03035 – Interactive CD-ROM
 - Brassica R&D Product Group Project Review Meeting 2004 – Interactive CD-ROM
 - The South Australian Vegetable Industry Information CD – Search Engine based CD-ROM
- Final and other Reports
 - Protected Cropping Tour Investigation Tour to Israel 2000 VG99075
 - Horticulture Australia Recycled Water Tour to Israel and California 2001, VG00087
 - Vegetable Product Group Member's Tour, New Zealand March 2003
 - National Vegetable Pathology Working Group 2004 – VG03035
 - Brassica R&D Product Group Project Review Meeting 2004

Appendix 5 – SA Vegetable IDO website (<http://savegido.arris.com.au>) usage statistics

Summary Period: Last 12 Months



Summary by Month										
Month	Daily Avg				Monthly Totals					
	Hits	Files	Pages	Visits	Sites	KBytes	Visits	Pages	Files	Hits
May 2005	35	17	3	1	12	23137	14	49	223	463
Apr 2005	39	25	5	1	37	67565	46	140	725	1113
Mar 2005	42	28	5	1	39	40282	49	173	873	1319
Feb 2005	65	31	7	2	45	46540	64	202	887	1842
Jan 2005	16	10	1	1	18	6720	29	40	302	472
Dec 2004	14	7	1	1	37	11647	35	51	231	430
Nov 2004	18	8	2	1	22	9947	47	72	258	546
Oct 2004	36	18	4	2	43	103690	63	135	571	1134
Sep 2004	35	19	3	1	32	17742	37	64	363	666
Totals						327270	384	926	4433	7985

