

# VEGETABLE INDUSTRY 07/08 INVESTMENT PRIORITIES

## The Vegetable Industry Strategic Plan - VegVision 2020

### Background

The Australian vegetable industry has been deeply engaged in an extensive Industry Partnership Program (IPP) with the Department of Agriculture Fisheries and Forestry's (DAFF) over the course of the last 12 months.

This process has generated three key documents: the 'Taking Stock' and 'Setting Directions' reports that can be found on the AUSVEG Ltd website [www.ausveg.com.au/issues](http://www.ausveg.com.au/issues) and the strategic plan for the vegetable industry, VegVision 2020 that can be found on the Australian Vegetable Industry Development Group website [www.avidgroup.net.au](http://www.avidgroup.net.au).

### Our Vision for 2020

To double the 2006 value of fresh, processed and packaged vegetables in real terms by stimulating and meeting consumer preferences for Australian products in domestic and global markets.

### Our Commitment

We are committed to strong growth for the Australian vegetable industry. Achieving the growth foreseen in the vision depends on maintaining the current high domestic market share, growing domestic consumption of vegetables well above the historical trend, and significantly increasing exports.

Our future lies in innovative and sustainable production and marketing based cooperation, and quality systems that deliver products and services according to consumer expectations.

The whole vegetable industry will work to increase demand and create new markets for Australian vegetables. This will be driven by gaining deeper understanding of consumers and their preferences, strategically investing in market and product research and acting collaboratively to efficiently supply the products sought by consumers.

### Strategic Imperatives

- Delivering to changing consumer preferences and increasing demand
- Market recognition for Australian quality, safety, reliable supply and innovations
- Internationally competitive Australian vegetable supply chains
- Advanced industry data and information systems
- Visionary leadership and change management

### Our Partners

The future of the vegetable industry in Australia is dependant on its ability to meet domestic and international consumer expectations, to compete effectively in a global market place and to do so in a profitable and sustainable manner. Strong, coherent working relationships with its R&D partners are absolutely critical if the vegetable industry is to meet these objectives.

This industry is the process of reviewing its research and development priority setting and planning processes, procedures and structures. This review will lead to a more engaging and transparent priority setting and R&D investment program.

On 28 September 2006 the vegetable industry held a forum for its key research and development partners. The purpose of this forum was to share with its partners the challenges of the past 12 months, the plans for the future and its commitment to continuous improvement.

## **The Australian Vegetable Industry Development Group (AVIDG)**

In early March 2006 the Minister for Agriculture, Fisheries and Forestry Peter McGauran appointed the Australian Vegetable Industry Development Group (AVIDG) to oversee funding of \$3M the government has allocated to the vegetable industry under the Industry Partnerships Programme (IPP).

The group brings together strong expertise and experience in the farming, retail, processing and wholesale/export sectors through:

- Richard Bovill (Chair)
- Michael Badcock, Chairman, AUSVEG Ltd
- Peter Cochrane, President, VFF Horticulture Group
- Wendy Erhart, Managing Director, Withcott Seedlings Queensland Pty Ltd
- John Mercer, Mercer Mooney, /fruit and Vegetable Merchants, Western Australia
- Terry O'Brien, Managing Director, Simplot Australia
- Ian Pavey, National Business Manager, Fresh Product Coles Supermarkets
- Ian Robinson, Australian Government Department of Agriculture, Fisheries and Forestry
- Nigel Steel Scott, Chairman, Horticulture Australia Ltd

In June 2005 the Australian Government contributed \$200,000 to an Industry Partnerships Program (IPP) project looking at turning around the vegetable industries fortunes.

The IPP project report "Taking Stock & Setting Directions for the Future of the Vegetable Industry outline seven foundation projects:

- Project 1: Developing a long term, industry wide strategic plan
- Project 2: Global comparison study
- Project 3: Industry information and decision support frameworks
- Project 4: Market Development
- Project 5: Industry leadership & structures
- Project 6: Industry leadership & structures
- Project 7: Business Skills Development

The AVIDG are responsible for:

- prioritising activities identified in the Vegetable Industry Partnership Project
- assisting Government direct its \$3 million investment; and
- being a focus for future industry commitment and resources
- Whole of vegetable industry and whole of chain approach
- Term of reference is to invest in Foundation Projects, supported by communications
- The Group will complete it's work and wind up in June 2008.

The first task of the AVIDG was to facilitate the implementation of Project 1: Developing a long term, industry wide strategic plan. VegVision 2020 was officially launched by Minister for Agriculture, Fisheries and Forestry Peter McGauran in Canberra on 13 September 2006.

With the launch of VegVision 2020, the Group can now focus more on commissioning the remaining foundation projects. The design of these projects will be aligned to the intent of VegVision 2020. Other organisations can also align their plans, priorities and projects to VegVision 2020. The AVIDG investment of \$3m over three years is small and short term relative to the large, long term investment of the wider industry through levy funds and other sources.

Projects will either be funded out of the \$3 million DAFF allocated to the vegetable industry partnership program (to be administered by the AVIDG), co funded by AVIDG and industry levies, entirely funded by industry levies and/or other sources of funds obtained from government or the commercial sector.

All Foundation Project terms of reference will go through a public tender process.

## **Administration**

Please see the HAL website [www.horticulture.com.au](http://www.horticulture.com.au) for details about how to apply for industry funding.

The Industry Call for 07/08 funding is open from 7th October 2006 to 20th November 2006. Applications can be submitted during this time on the new application system.

## **The Existing Vegetable Research & Development Program**

You will find in the vegetable industry section of the HAL website two PDF files titled "Vegetable Levy R&D Program 05-06" and "Vegetable Levy R&D Program 06-07". These files contain the project number, project title, name of the primary researcher, the name of the research & development organisation, the primary researcher's phone number and email address for all projects funded in totality or partially by vegetable levy in 2005-06 and/or 2006-07.

## **Vegetable Industry Research and Development Priorities for 07/08**

In this document you will find an explanation of the five strategic imperatives that underpin the vegetable industries vision for 2020. Please read this document carefully, it provides details of:

- The outcome the industry is seeking from each strategic imperative
- The rationale for each strategic imperative
- The industries existing activities are in relation to each strategic imperative
- What initiatives the AVIDG will pursue in 06/07 and 07/08 in relation to each strategic imperative
- And direction on the nature of the R&D project proposals the industry is seeking in relation to the respective strategic imperatives

In addition to the direction provided in this document the industry has developed a number of specific project definitions for which the industry is seeking project submissions. These specific briefs can also be found in the vegetable industry section of the HAL website. Should you have any questions in relation to this document or any of the specific project briefs posted on the website please call Simon Drum – HAL Industry Services Manager Vegetables on 0407 567 250.

## **Strategic Imperative 1: Delivering to changing consumer preferences and increasing demand.**

### **Outcome**

An increase in domestic and international consumption of Australian vegetables through understanding consumer preferences and values, consistently supplying products consumers want and promoting the qualities and benefits of Australian products.

### **Rationale**

In order to achieve the vision, the industry must increase the consumption of Australian vegetables by domestic and international consumers. There is intense competition for a share of the consumer's total food intake and, in order to compete the industry must have a deep understanding of consumers. This includes trends in consumers' food values and preferences, shopping preferences, meal preparation habits and food consumption patterns.

Achieving effective use of available information on consumers across the food sector is required. This should involve more collaboration between businesses and organisations in the vegetable supply chain, with other food industries and with consumer research companies both in Australia and overseas.

Where the need for new market research is identified, it should be targeted at market segments that offer potential returns on investment. It could involve detailed observational research that discovers why consumers buy the industry's products and how they use them; shows how vegetables are used with complementary products; quantifies the experiences from consuming particular vegetable products; and identifies opportunities for creating new experiences through vegetables as a food or beverage.

Along with establishing the capacity to track and quantify consumer responses to vegetable products, goes the need to communicate this information back down the supply chain in real time. Supply chain businesses will need to be attuned to consumer and wholesaler, retailer or food service demands and respond by delivering product quality, safety, nutritional value, attractiveness and convenience, timely delivery and price competitiveness.

Strategic opportunities lie in increasing vegetable consumption through the rapidly growing food service sector so that vegetables become a desired food in restaurants and other outlets. Another strategic opportunity is to capitalise upon the health and well-being benefits of vegetables by establishing collaborative relationships with the preventative health-care and 'lifestyle' industries. Australian vegetables have many quality attributes and are produced in an environmentally sustainable way. These need to be strongly promoted in existing and potential markets.

### **Existing Industry Activities**

In response to VegVision 2020, the vegetable IAC is undertaking a thorough review of the processes and procedures for commissioning R&D activities using the vegetable levy and matching government funds. The aim is to implement the revised R&D system including the supporting committee structure progressively from early 2007. The revised structure will align the industry's R&D priorities more closely with external collaborators and consumers domestically and internationally.

The vegetable levy will fund a detailed food service sector study in 06/07. This study will be commissioned.

The vegetable industry will continue to investigate ways in which the industry can partner with other horticultural industries, commercial industry participants, state and federal health departments in communicating to consumers the health benefits of vegetables.

### **AVIDG Initiative**

In 0607 and 0708 the AVIDG will drive activities around Action 1.2.2 Investigate the business case for a promotion and marketing levy and voluntary contributions system.

### **Proposals for Funding in 07/08**

If you are seeking levy or matching federal funds for voluntary contributions for the purpose of delivering to changing consumer preferences and increasing demand for vegetable products please submit your proposal within the industry call period.

## **Strategic Imperative 2: Market recognition for Australian quality, safety, reliable supply and innovation in products and services.**

### **Outcome**

Domestic and international markets recognise and value the quality, safety, reliable supply and innovation of Australian vegetables and market services leading to consistent growth in sales.

### **Rationale**

The capacity of the Australian vegetable industry to deliver quality products consistently to customers and consumers and to innovate in product development and presentation is critical to market recognition of Australian vegetables and the growth of the industry. Building strong market recognition is essential to establishing competitive advantages based on product qualities and services.

The whole of the supply chain and the industry's service sector should work collaboratively to ensure that production, distribution and marketing systems are at the leading edge of world benchmarks in order to deliver high quality products to the customer. The industry has a range of quality assurance systems for different customers. A framework is needed that consolidates and explains the requirements of these systems and the customers they serve, to ensure that vegetable businesses understand the quality standards which they should achieve.

Profitable growth in target markets needs to be supported by new products and services created by a vibrant R&D and innovation sector that is aligned to industry priorities and collaborates internally and externally (i.e. with industries inside and outside horticulture and internationally).

There are opportunities in world food markets for Australian businesses being niche operators and establishing well-differentiated brand presence in targeted market segments. In future, the marketing of new products will need to provide assurance about efficient water and energy use, and environmentally sustainable production and marketing.

## **Existing Industry Activities**

In response to VegVision 2020, the vegetable IAC is undertaking a thorough review of the processes and procedures for commissioning R&D activities using the vegetable levy and matching government funds. The aim is to implement the revised R&D system including the supporting committee structure progressively from early 2007. The revised structure will align the industry's R&D priorities more closely with meeting the changing needs of domestic and export markets.

## **AVIDG Initiatives**

Growth of the scale envisaged in VegVision 2020 will require the development of a successful vegetable export industry. In 06/07 the AVIDG will facilitate the formation of a Vegetable Export Council. The purpose of the council will be to bring together those businesses that are already exporting vegetables successfully and work with them to break down barriers to export, prioritise export market opportunities and to identify opportunities for growth. Specific projects will then be formulated to break down barriers and/or exploit opportunities for growth.

In 0607 and 0708 the AVIDG will continue to drive activities around Foundation Project 4 – Market Development (see Action 2.1.1 in VegVision 2020).

In 0607 and 0708 the AVIDG will continue to drive activities around Foundation Project 5 – Industry Leadership and Structures (see Action 5.1.1 in VegVision 2020).

## **Proposals for funding in 07/08**

If you are seeking levy or matching federal funds for voluntary contributions for the purpose of market recognition for Australian quality, safety, reliable supply and innovative products and services please submit your proposal within the industry call period.

The industry's investment in projects designed to increase growth in export will be driven by the investment priorities developed by the Export Council.

## **Strategic Imperative 3: Internationally competitive vegetable production and supply chains.**

### **Outcome**

Profitable and sustainable production and supply chain businesses that meet and grow domestic and global market demand for quality Australian products.

### **Rationale**

The future profitability of the Australian vegetable industry will rest with the capacity of its participants to apply new ways of doing business. This includes building and maintaining collaborative relationships across the supply chain to deliver to new product and market opportunities. Infrastructure, transport, distribution systems, information technology and government policies also need to align to meet opportunities for domestic and international market growth.

Competing on value for money through quality, service, convenience and timeliness will be essential to maintaining and increasing markets. Competing on price in world markets will not always be possible for Australian vegetable businesses, particularly as lower labour cost countries become bigger participants in key export markets.

In the vegetable growing sector, major structural change will be required and will occur through market forces. More research will be needed on industry business models that are internationally competitive and profitable to owners or investors. This includes the requirement for large-scale farms (family or corporate) that are professionally run with skilled and specialised labour forces and the capacity to contract out many operations.

The role and future profitability of small family farms also needs to be examined particularly to maintain diversity in the industry and to ensure a market focus on high value, low volume niche opportunities. In order to supply the processing sector, retailers or food service directly, small business will need to be part of consolidation networks or clusters to build scale, achieve efficiencies, to access skilled management and marketing services, and to access capital for growth.

This plan supports the development of an industry culture that builds business skills and market confidence for supply chain businesses. Continuous learning and improvement will be an important element of enabling the Australian vegetable industry to keep up with, or be ahead, of its competitors. Benchmarking will play an important role in staying at the forefront of production, processing, marketing, retailing and providing essential support services to the industry. It will also be essential to identify and reduce or take costs out of the supply chain.

Vegetable industry R&D needs a new focus on consumers, markets, and whole-of-supply chain operations and value-adding. This will require changes in the advisory and decision arrangements for investing industry R&D funds, including the statutory levy funding which is matched by Government contributions. Small, flexible, efficient and expertise-based decision-making committees that can identify opportunities for value creation in the supply chain and direct R&D investments to those that meet market requirements will be essential to achieving profitable innovation in the industry.

## Overview

The vegetable industry in partnership with their research and development partners make a significant investment in production related research and develop each year. Key areas in which investment is made include but are not limited to:

1. Chemicals
2. Vegetable Integrated Pest Management
3. Plant Pathology
4. Nematology
5. Soil Health
6. Environmental Sustainability

Detailed direction on the industry's investment priorities in these areas has been included below.

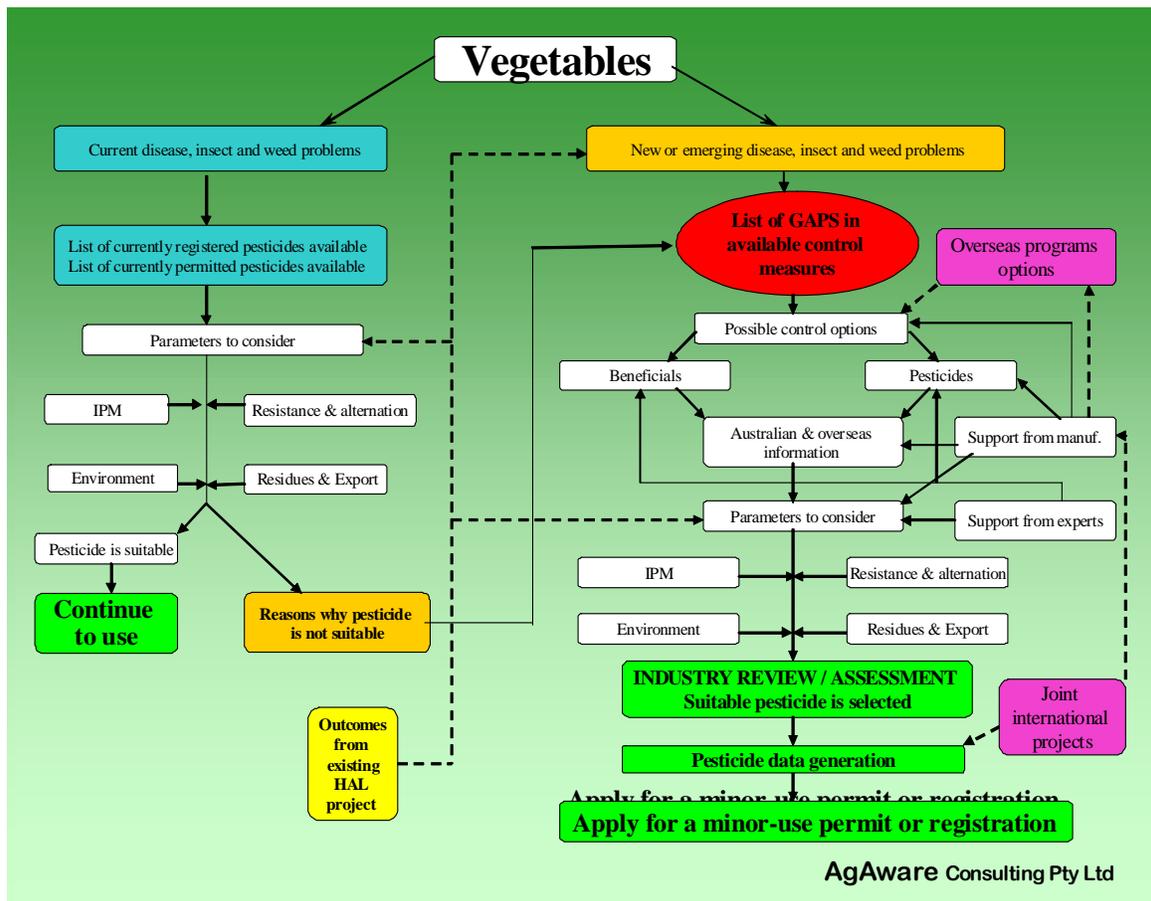
This is not meant to be an exhaustive list of areas in which the vegetable industry are prepared to invest in order to improve the industries international competitiveness and supply chain efficiency.

If you are seeking levy or matching federal funds for voluntary contributions for the purpose of improving the vegetable industry's international competitiveness and supply chain efficiency please submit your proposal within the industry call period.

## 1. CHEMICALS

Over the course of the past 10 years the vegetable levy has literally investment millions in the provision of chemicals for the vegetable industry. As the cost of research increases and the buying power of the R&D levy continues to decline the industry continues to refine its investment in this key area in order to ensure growers chemical needs are meet in the most cost effective manner.

The industries integrated chemical strategy is best explained by the diagram below:



## Existing Industry Activities

The vegetable industry's primary investments in chemicals in 06/07 are:

1. Minor Use Coordinator (AH04009) for horticulture. Peter Dal Santo (AgAware consulting). Peter's key responsibilities are:

- Assist industries with the pesticide needs by strategically assessing gaps in currently available pesticides and seeking softer or best replacement option
- Provide industries with APVMA data requirements for permits
- Provide industries with cost estimates to complete permit requirements
- Improve international communication, including developing opportunities to work with international agencies on collaborative work, gaining of overseas data, jointly with APVMA. This includes annual attendance of the IR4 conference in the USA.
- Tenders and manages projects for data generation to support permit applications

2. New Pesticide Regulation Coordinator for horticulture. Kevin Bodnaruk's (AKA Consulting). Key responsibilities are:

- Liaise with regulators on pesticide related matters
- Coordinating industry responses to pesticide reviews and risk assessments, including the gathering of data
- Provide feedback to industry on the direction of regulatory policy
- Help to increase industries understanding of pesticide regulatory developments
- Participate and provide horticultural input to panel meetings for the codex committee for pesticide residues
- Maintain watchful brief over the codex committees for Food Hygiene, Fresh Fruits and Vegetables and Food additives and contaminants.

3. Vegetable levy funds in excess of \$500K of data generation and desk top studies to support permit applications for vegetable crop uses in protected and field crops annually.

4. VG06094 - A scoping study of IPM compatible options for the management of key vegetable sucking pests

5. VG06097 - Scoping study to determine the impact of pesticides on key beneficials in vegetable crop production

6. Fruit fly management with loss of dimethoate / fenthion for fumigation

### How this investment links in to the bigger vegetable plant health picture?

- Increase in available pest management options for vegetables.
- Improved capacity to manage a range of diseases, insects and weeds in a sustainable manner. Greater 'fit' with IPM techniques.
- Reduced reliance on 'older' pesticides.
- Improved compliance to state and national pesticide legislation.
- Greater capacity for international trade due to data sharing.
- Access to new pesticides with international programs.
- Less permits and more registrations with SPGA and crop groupings.
- Coordinated outcomes with other HAL projects.
- Encompass the overall strategy of VegVision 2020 and Industry Strategic Initiatives.

## **Proposals for funding in 07/08**

The vegetable industry will not be accepting project proposals for chemical work in the vegetable industry in 07/08.

The industry's investment in the area will continue to be driven by the chemical working group (Brad Wells (HAL Plant Health Portfolio Manager), Allan Alan Norden – APVMA, Dale Griffin (Agronico), Ian Macleod (Serve-Ag Research), Kevin Bodnaruk (HAL Pesticide Regulation Coordinator), Martin Collett (Agrisearch Services), Peter Cochrane (Victorian vegetable grower), Ian Young (Tasmanian vegetable grower) & Peter Dal Santo (HAL Minor Use Coordinator).

If you have any questions in relation to vegetable levy investment in chemicals please call Peter Dal Santo on (03) 5439-5916.

## **2. VEGETABLE INTEGRATED PEST MANAGEMENT (IPM)**

Over the course of the past 10 years the vegetable levy in partnership with its key research and development partners, has invested millions in the development of Integrated Pest Management (IPM) tools for the vegetable industry.

In 05/06 and 06/07 the vegetable levy funded VG05043 - Benchmarking vegetable integrated pest management systems against other agricultural industries. The objectives of this project were to:

1. Report on what IPM tools are available in what crops,
2. Evaluation of those tools for applicability for vegetables in general and a pathway for their use defined.
3. Report on current possible and potential IPM strategies for 11 specific vegetable
4. Pathways to IPM adoption by region.

General recommendations from this project are:

1. Establish an IPM Working Group
  - Annual planning for IPM
  - Identifying potential/current pest management crises
  - Select crops for pest & disease surveys and strategic planning session
  - Select groupings for IPM sector meetings
  - Review outcomes and feed into planning processes
  - Overview current or proposed projects to improve collaboration between projects or add additional activities to improve overall IPM outcomes
2. Create an IPM Clearing House/Web Hub
  - IPM information sources are vast and dispersed.
  - Needs IPM technical moderator and logistical support
3. Facilitate regular IPM sector workshops
  - Entomology, pathology and IPM stakeholder meetings were useful
  - Need to have practical and tangible outcomes
  - Need to broaden to include sectors of market chain
  - Rotate participant representation
4. Conduct Crop/Product Group Strategic Planning
  - Gap analysis and strategic planning –at least every 3 years
  - Include collation of survey work and summary of completed and current projects

5. Develop a General IPM information Toolbox
  - Need to consult/engage widely to develop IPM Tool box to find out what format for tools – generic or crop; use guides, PDA, CD rom etc and how they should be delivered
  - Series of training workshops in major cropping areas for growers and for consultants
6. Active surveillance
  - Knowledge of the regionally important and sporadic pests and diseases of minor crops is poor
  - Focus regionally or annually on a crop group e.g. solanaceous, cucurbits, Asian veg
  - Ensure that crop focused projects do include pest & disease surveys of main growing regions
7. Stimulate IPM Consultants
  - Ensure collaboration between existing projects
8. Access to soft chemistry
  - Minor use permits & strategic planning (existing project)
  - Efficacy work in major crops
  - Beneficial testing to define relative softness (extraordinary round)
  - Testing resistance levels of common fungal diseases to fungicides
9. Biopesticides
  - Need on-going testing of Biopesticides as developed and looking at full crop/pest range
10. Access soft options for RGB, thrips, SLW & leafminers
11. Cultural controls
  - Revegetation by design
12. Weed Audit

This audit had a particular focus on entomology. In order to ensure the pathology and soil health aspects of IPOM in vegetables were also well understood “IPM Gap Analysis for Plant Pathology – VG06092” and “Vegetable Plant and Soil Health VG06100” have been contacted in 06/07. Recommendations from these audits will drive investment priorities in IPM in 0708 (see the Pathology and Soil Health sections of this document).

## Existing Industry Activities

PROJECT CODE	PROJECT TITLE AND STATE	CROP	ISSUES BEING ADDRESSED		R&D/ EXTENSION
			Insect pest	Disease	
VG 03099	Qld: Regional extn. strategy for managing WFT & TSWV – Bundaberg & Bowen	All crops (PC/Field)	WFT	TSWV	Extension
VG03098	NSW: Regional extension strategy for managing WFT and TSWV in the Sydney Region (Stephen / Leigh Pilkington)	All crops (PC/Field)	WFT	TSWV	Extension
VG06037	WA: Increasing adoption of IPM by WA vegetable growers and development of an ongoing technical support service	All crops (PC/Field)	IPM including WFT	TSWV	Extension
VG06088	Tas: Providing an IPM Advisory Service	All crops	All IPM	Diseases	Extension / training
VG03109	NSW: Extension to Greenhouse IPM Program – includes novel bio-pesticides for use in greenhouses (Stephen / Leigh)	All PC	Insects	Diseases	Extension
VG05093	NSW: IPM for greenhouse vegetables - research to industry (Stephen / Leigh)	All PC	Insects		Extension
VG05069	Natnl: Greenhouse vegetable study tour, Holland, November 2005 (Graeme Smith)	All PC	Crop health +		Extension/training
VG05086	Development of Hippodamia and Micromus biocontrol agents	Brassica & other veg.	Insects		R&D
VG05034	Qld: Managing mildews: prevention using systemic acquired resistance (SAR) in greenhouse and field grown cucurbits (Jenny Jobling)	Cucurbits		Mildews	R&D
VG05054	Qld: Management of powdery mildew in field & greenhouse cucurbits (Chris Akem)	Cucurbits		Powdery Mildew	R&D
VG05084	NSW: Integrated management of greenhouse vegetable diseases: Development of microbial biocontrols, biorational chemical and cultural strategies. (Len Tesoriero)	All PC		Various diseases	R&D
VG05094	SA: Sustainable integrated control of foliar diseases in Greenhouse Vegetables (Barbara Hall)	Capsicum			R&D

Note: The table above does not include a number of recently contracted projects.

In 06/07 the vegetable industry will create an IPM Web Hub. The hub will centralise all known information on vegetable IPM, providing vegetable producers, the research community and allied industries with a one stop shop for vegetable IPM information, tools and information sources.

In 06/07 vegetable levy is providing seed funding in WA and Tasmania for IPM consulting businesses. The purpose of this initiative is to stimulate demand for IPM consulting services in the short term enabling commercial demand to sustain such a service in the medium to long term.

Chemical requirements for IPM production systems (in field and protected cropping systems) are being identified through the chemical gap analysis activities being undertaken through the minor use coordinator project. The necessary field or desk work to bring the required chemicals to market is being funded through the minor use program and a number of IPM specific projects.

In line with the review of the vegetable R&D planning structure it is highly likely an IPM working group will be formed in 2007. The working group would be composed of vegetable growers and external experts in the area of IPM. The working group would:

- Identifying potential/current pest management crises
- Select crops for pest & disease surveys and strategic planning session
- Select groupings for IPM sector meetings
- Review outcomes and feed into planning processes
- Overview current or proposed projects to improve collaboration between projects or add additional activities to improve overall IPM outcomes

It is the industries intention to continue to fund IPM Sector workshops of entomologist, pathologist and IPM stakeholder meetings as they have in the past in order to facility the cross pollination of ideas and shared learning.

The vegetable product groups and Industry Advisory Committee (IAC) and will consider a proposal for an IPM coordinator in February/March 2007. It is envisaged that such a resource would drive and coordinate activities in IPM in much the same way as the minor use coordinator does in the chemicals area.

### **Proposals for funding in 07/08**

Any IPM proposals submitted in the industry call will be considered in light of the recommendations from “VG05043 Benchmarking vegetable integrated pest management systems against other agricultural industries”.

A number of specific briefs addressing IPM related priorities can be found in the vegetable industry section of the HAL website.

## **3. PLANT PATHOLOGY**

### **Existing Industry Activity**

DPIV have been contracted in 06/07 to undertake a gap analysis for vegetable pathology, “IPM Gap Analysis for Plant Pathology – VG06092”. This project follows “VG05043 Benchmarking vegetable integrated pest management systems against other agricultural industries” which was lead by NSW DPI.

Objective: The primary objective of VG06092 is to strategically assess where gaps exist in IPM programs for control of plant pathogens (for major crop groups).

Methodology: Working with industry DPIV will generate a short list of projects for consideration by the commodity groups and IAC in March 2007. Those following activities will be facilitated in order to ensure the key issues are identified, that industry is deeply engaged in the process and that previous work is not duplicated:

- Database developed of existing projects and expert systems to identify gaps (New Vegetable industry database)
- Gaps identified from National Vegetable Pathology Working Group Reports in 2004 and 2006
- National Workshops (x 4: Vic/Tas, NSW, Q, SA/WA)
- Consultant and grower survey
- Audit of projects, other IPM in Australian industries and overseas programs
- Generic IPM model (IR4 Program USA – Frank Zalom, Dan Chellemi)

### **Proposals for funding in 07/08**

From the audit a shortlist of project briefs will be developed and presented to commodity groups and the vegetable IAC for their consideration in March 2007. Those projects supported by industry will advertised via public tender seeking full proposals. Successful projects will be funded in 07/08.

Any proposals submitted in the industry call will be considered in light of the recommendations from "IPM Gap Analysis for Plant Pathology – VG06092".

For further information about "IPM Gap Analysis for Plant Pathology – VG06092" Ian Porter on (03) 9210 9222.

#### 4. NEMATOLOGY

In 05/06 the vegetable levy and Tasmanian Institute of Agricultural Research funded “VG05026 Workshop to develop research, development and extension priorities for nematode control in vegetable crops”.

##### Methodology

- Literature review to identify nematode management strategies.
- Workshop held at University of Tasmania, Burnie on 10th and 11th July 2006.
- 21 participants from TIAR, SARDI, DPI Vic, DPI WA, DPI Qld, NZ Crop and Food Research, Biological Crop Protection, Serve-Ag, Agronico, Forth Farm, Industry Development Officers and included nematologists, agronomists and industry personnel.
- The participants worked through potential management strategies for nematodes identified in the literature review, discussing pros and cons of each.
- Guest speakers – Drs. Graham Stirling, Kathy Ophel Keller and Jackie Nobbs
- A list of nematode management strategies was circulated to participants. Participants rated each strategy for its potential to improve the management of nematodes through RD&E.
- Key recommendations were developed as a group

Recommendations from this project where:

##### Recommendation 1 – Training & Extension

Update extension materials for agronomists/growers

- Develop booklet and/or web based publication
- Conduct workshops

Maintain nematological expertise for the vegetable industry

- Coordinated approach by industry, funding agencies, state agencies, universities, CRC's
- Fund postgraduate scholarships in nematology

Maintain nematode taxonomy skills in Australia.

- Potentially impacts on ability to respond to incursions (e.g. *Meloidogyne chitwoodii*).
- Implications for market access issues.
- Hampers research efforts.

##### Recommendation 2 - Management of nematodes through species identification, cover crops and rotations.

Development of DNA based tests to identify/quantify *Meloidogyne* spp. in vegetable crops (SARDI).

Survey to identify species present in particular vegetable production regions

- Gather information on pre-plant density vs. yield/quality to develop better damage thresholds, validate tests.
- Measure of industry wide losses.
- Biosecurity and market access.

Screen/demonstrate cover crops and vegetable varieties for resistance/tolerance to nematode species of interest which can be grown in particular regions.

### Recommendation 3 - Farming Systems Approach

- Integrate use of permanent beds, appropriate rotations, minimum tillage and organic mulches into vegetable production system (similar to sugar cane industry).
- Requires regionally-based, multi-disciplinary research teams.

For vegetables, this would require further research in the areas of:

- Optimum mulches and rotations
- Equipment to plant seedlings and mulch crops through trash.
- Effects on soil temperature for winter plantings
- Management and re-use of trickle tubing
- Management of nutrients to optimise mineralisation and minimise leaching
- Monitoring of pest, disease and weed management issues.
- Productivity and economics

### Recommendation 4: Biosecurity

Watching brief of priorities of Biosecurity Australia and National Plant Biosecurity CRC to ensure adequate resources are devoted to nematode threats to the vegetable industry e.g. taxonomic expertise, DNA diagnostics.

### **Proposals for Funding in 07/08**

From the workshop and product group/IAC meetings a number of specific project briefs have been developed. They can be found in the vegetable industry section of the HAL website.

Any proposals submitted in the industry call will be considered in light of the recommendations from "VG05026 Workshop to develop research, development and extension priorities for nematode control in vegetable crops".

For further information about "VG05026 Workshop to develop research, development and extension priorities for nematode control in vegetable crops" contact Dr. Frank Hay, at TIAR on 03 6430 4907

## **5. SOIL HEALTH**

### **Existing Industry Activity**

QLD DPI have been allocated funds in 06/07 to undertake a study to understand soil health limitations, identify improved management techniques and to determine what information vegetable growers need to implement plant and soil health strategies, "Vegetable Plant and Soil Health – VG06100".

Funds have also been allocated to DPIV in 2006/07 to undertake a literature review of historical soil health research in the vegetable industry to identify current knowledge, research and development gaps and preliminary research priorities for soil health for the vegetable industry.

External Government funding has been provided to the vegetable industry, through Ausveg, to develop a practical guide for soil management. The project "Ute Guide & Soil Health Interpretation Courses for Vegetable Growers" has funding into 2007/08.

Objective: The primary objective of VG06100 is to increase the knowledge of vegetable growers and researchers about soil management impacts on plant and soil health. By linking these activities with the ute guide project, practical tools and information on how to better manage the soil resource will be developed for vegetable growers. While these activities continue in 2006/07 the literature review will identify strategic priorities for 2007/08 (short term) and identify research gaps to be incorporated in the vegetable strategic planning process (long term).

These three activities will be integrated to provide a strong platform for informing strategic priorities within the soil health area for vegetable industry into the future.

#### Methodology:

QLD DPI project (VG06100) will:

1. Review current and innovative methods of vegetable production being used by growers, through grower focus groups, identification of constraints and testing of practice changes on farm
2. Refine the soil health monitoring methods, by monitoring of soil health properties on-farm to develop a minimum set of soil health measurements, and
3. Distribute information to vegetable growers through field days, grower meetings and publications, about vegetable plant and soil health issues.

DPIV project will review historical soil health research in the vegetable industry to identify gaps and extract useful / relevant research. Outcomes from literature review will be collated and made presentable.

A Soils Reference Group will monitor progress of the above activities. Workshops will be held around Australia with key soil researchers to discuss the findings of the literature review to continue to develop specific R&D priority areas for soil health in vegetable industry.

Linkages between these projects and the externally funded project "Ute Guide & Soil Health Interpretation Courses for Vegetable Growers" will continue to ensure collaboration.

Communication of outcomes from the literature review and current projects will be maintained to ensure extension of research to industry.

### **Proposals for funding in 07/08**

From the audit a shortlist of project briefs will be developed and presented to commodity groups and the vegetable IAC for their consideration by June 2007. Those projects supported by industry will advertised via public tender seeking full proposals. Successful projects will be funded in 07/08.

Any proposals submitted in the industry call will be considered in light of the recommendations from “Vegetable Plant and Soil Health – VG06100” and the literature review recommendations.

## **6. ENVIRONMENT & SUSTAINABILITY**

### **Existing Industry Activity**

Funding for the Enviroveg program continues in 2006/07 with “Implementation of national environmental strategy for the vegetable industry – VG06015.” The project aims to provide the supporting material and an articulated structure to enable vegetable growers to demonstrate through self assessment and certification that they are being environmentally responsible both on-farm and to their surrounding environment. This project has strong linkages with the Horticulture for Tomorrow environmental program.

A climate change scoping study was undertaken in 2005/06 by QLD DPI titled “Scoping study into climate change and climate variability – VG05051.” Recommendations from this study have been used to inform the national across-horticulture climate change scoping project.

Soil health has also been supported by the vegetable industry in 2006/07 (see separate soil health priorities).

The Horticulture Water Initiative has developed a Water Position Paper and Irrigation Priorities document for the horticulture industry. Industries are invited to consider these documents when considering future projects within this area.

A Horticulture Natural Resource Management (NRM) Strategy has been developed and presented to the vegetable IAC for consideration in their strategic planning process. Key themes of the strategy include efficient production, skilled growers, healthy environments, positive communities and loyal consumers.

Information on these programs is located at [http://www.horticulture.com.au/delivering\\_know-how/Environment/overview.asp](http://www.horticulture.com.au/delivering_know-how/Environment/overview.asp)

### **Proposals for Funding in 07/08**

In response to VegVision 2020, the vegetable IAC is undertaking a thorough review of the processes and procedures for commissioning R&D activities using the vegetable levy and matching government funds. The aim is to implement the revised R&D system including the supporting committee structure progressively from early 2007. The revised structure will allow for a dedicated environment/sustainability working group whom will be responsible for the development of the industries NRM investment priorities in the future.

If you are seeking levy or matching federal funds for voluntary contributions for the purpose of investment in Natural Resource Management your proposal should be aligned to Horticulture NRM Strategy. Please submit your proposal within the industry call period.

## **Strategic Imperative 4: Advanced industry data and information systems to meet future needs.**

### **Outcome**

Quality industry data and information readily available to Australian vegetable businesses through the supply chain enabling effective business and policy decisions.

### **Rationale**

Access to quality information when it is required and in a format that supports effective decisions is fundamental to the effective performance of the industry and its participants. It is also critical to engaging with policy makers, legislators, the media and the Australian community to ensure the industry operates within a supportive environment.

A strategic imperative of this plan is to fill gaps and overcome deficiencies in industry data on the production, transformation, distribution consumption and trade of Australia's vegetable products, along with improving the timeliness and accuracy of data. The challenges include providing improved access to reliable and timely industry and market data for decision-making, and developing open and constructive communication between industry participants.

The collection, dissemination and application of quality information represents a powerful platform for improving business performance and promoting the industry's attributes and performance in product and capital markets. The expected outcome of upgrading industry data and information collection and dissemination systems are:

- Better-informed decisions for investment by the industry and commercial players in the supply chain to develop growing profitable markets for Australian vegetables
- Greater understanding of consumers and food consumer trends
- Greater knowledge of market requirements and quality systems
- Improved matching of demand and supply.

### **Background**

In 05/06 the vegetable levy funded an audit of the available market information for vegetables 'VG05071 Vegetable Information Audit'. This audit identified key gaps in the available information, and prioritized the most urgent of these gaps.

In summary, the highest priority recommendations were as follows:

1. Monitor your own production – establish a 'Grower Information Exchange' for each vegetable industry.
2. Reconnect access to retail sales data on a regular basis.
3. Gather some information on the Food Service sector.
4. Prioritise export market opportunities and research priority export markets.
5. Conduct consumer research to cover all (or most) vegetables.
6. Consider establishing an industry specific vegetable consumer panel.

## **Existing Industry Activities**

Pilot projects are underway to investigate the benefits derived from developing 'Grower Information Exchanges'.

The vegetable industry is the process of developing a Farm Financial Survey with ABARE. The objective of the survey is to collect and disseminate representative data on the economic structure and financial performance of the Australian vegetable growing industry that will assist industry stakeholders in developing plans for the long term direction of the industry. The survey would be undertaken on an ongoing basis, providing the industry and its members with a regular flow of accurate farm financial performance data.

AUSVEG Ltd have been working with Australian Bureau of Statistics (ABS) to improve the level of detail collected on vegetable enterprises during the agricultural census. The industry will have access to fare more useful information follow this year's census.

The vegetable levy will fund a detailed food service sector study in 06/07. This study will be commissioned.

The vegetable product groups and Industry Advisory Committee (IAC) and will consider a proposal for an integrated Marketing Information System (MIS) in February/March 2007. The system would warehouse much of the market information industry participants require and enable participants to access the information they need to make informed decisions about their business.

## **AVIDG Initiatives**

In 0607 and 0708 the AVIDG will continue to drive activities around Foundation Project 3 – Industry Information and Decision Making Framework (see Action 4.2.1 in VegVision 2020).

## **Proposals for funding in 07/08**

If you are seeking levy or matching federal funds for voluntary contributions for the purpose of advancing vegetable industry data and information systems to meet future needs please submit your proposal within the industry call period.

## **Strategic Imperative 5: Visionary leadership and managing change**

### **Outcome**

Strong and visionary leadership supported by change management policies that provide the enabling environment, industry capacity, motivation and commitment to meet the VegVision 2020.

### **Rationale**

The growth of the Australian vegetable industry as envisioned by the requires greater cohesion and communication across the supply chain led by service organisations that support the industry's businesses to identify, create or capture and co-invest in market opportunities. The leadership challenges include developing a shared commitment to industry cohesion and unity of purpose; moving to new industry service structures that involve a through-chain, expertise-based and highly responsive approach to decision making; investing in present and future leaders that can balance multiple stakeholder interests in periods of rapid industry change and growth.

The outcomes sought from investment in leadership and change management are:

- A cohesive and purposeful industry that engages all stakeholders to influence the future
- Recognition in markets and the wider community that vegetable industry organisations are professional and credible in service delivery and policy development
- The development of efficient and responsive structures that deliver valuable services which meet changing business and investor needs.

The future environment will be one of increasing demand for effective information services, member representation, relationship management with stakeholders, communication, issues management and policy development. The development of the industry's capacity to respond quickly and effectively to issues that impact on its performance, without having to rely on others to respond, will be increasingly important in the future.

### **Existing Industry Activities**

In response to VegVision 2020, the vegetable IAC is undertaking a thorough review of the processes and procedures for commissioning R&D activities using the vegetable levy and matching government funds. The aim is to implement the revised R&D system including the supporting committee structure progressively from early 2007.

In parallel to the review of the R&D system, a review is in progress across all sectors of the horticulture industry of Industry Development. One important outcome will be an examination and clarification of the roles etc of vegetable industry development officers (IDO's) to ensure these are consistent with VegVision 2020 and the key needs of the industry.

Other current activities include professional development of vegetable growers through sponsorship on industry visits and attendance at conferences in Australia and overseas, input into the Rural Standing Committee of the Agri-food Industry Skills Council to ensure the industry's vocational education and training needs are met, and participation in initiatives to raise the skill-base of growers from non-English speaking backgrounds.

Other initiatives to be progressed by industry during 07/08 include:

- Development of a program of structured professional development activities to provide leadership and management skills to growers and vegetable industry partners throughout the supply chain,
- Identify and provide training programs in essential business skills
- Providing opportunities for young industry leaders to participate in advanced development programs including the Nuffield Scholarship and the Rural Leaders Development Program
- Forming a network of training providers active in delivering vocational (TAFE-level) programs to the vegetable industry
- Seeking formal recognition of Enviroveg training programs and obtaining resources to develop materials to support vocational level (and other) training
- Forming a women's' Industry Network for the vegetable industry
- Developing exemplars of how growers and others can acquire essential competencies such as in OH&S, food safety, environmental awareness by 'e' learning
- Provide induction training for members appointed to the vegetable IAC and its advisory committees

### **AVIDG Initiatives**

In 0607 and 0708 the AVIDG will continue to drive activities around Foundation Project 5 – Industry Leadership and Structures (see Action 5.1.1 in VegVision 2020).

### **Proposals for funding in 07/08**

If you are seeking levy or matching federal funds for voluntary contributions for the purpose of investment in leadership development, study tours, people development and/or training please submit your proposal within the industry call period.