TOMATO TOPICS

NEWS and INFORMATION
FOR THE PROCESSING TOMATO INDUSTRY

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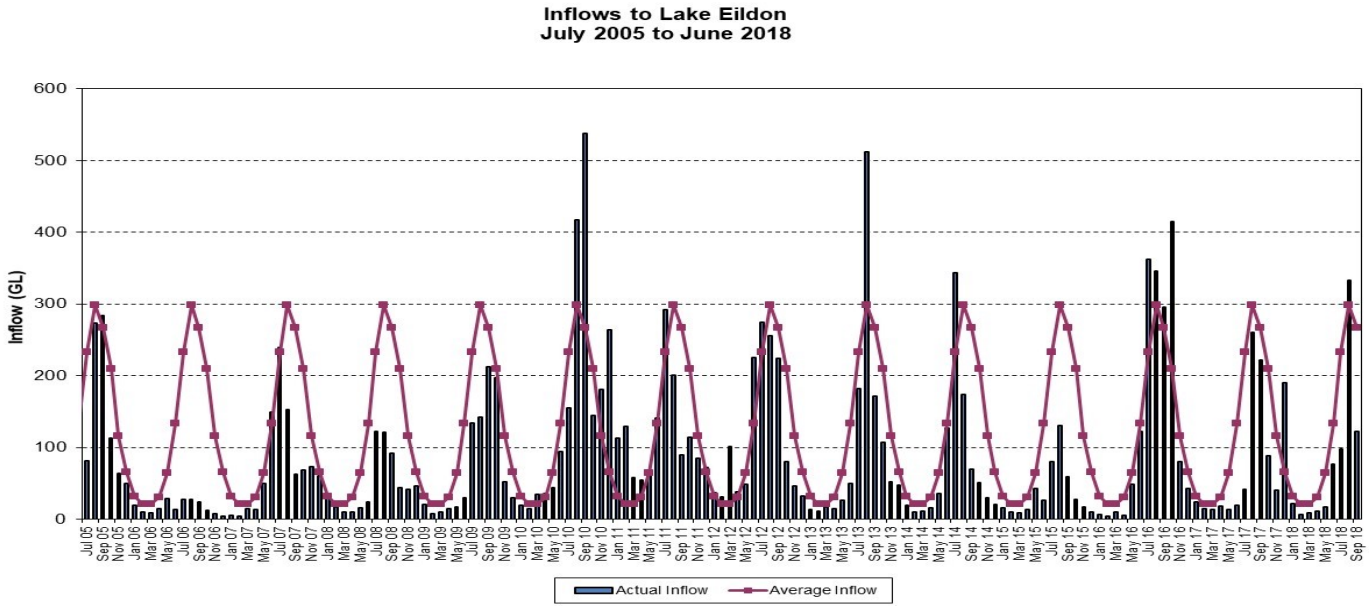


This season commenced on the 14 September 2018, with direct seed being sown into this season's tomato paddocks. For the first time organic processing tomatoes are also be grown, with harvest of these to occur mid to late January 2019.

Inflows into Lake Eildon over the past months have been well below average as shown in the above graph. With temporary water prices currently hovering around the $350/ML, cost of production for processing tomatoes will significantly increase. (Last season the average price was approximately $115/ML.)

Ag Vic produce regular seasonal summaries which I would encourage you all to subscribe to: https://www.youtube.com/watch?v=GwK3ahnrhHk&feature=youtu.be

Inside This Issue

IPM for the Processing Tomato Industry

A pest and disease update course for the processing tomato industry was held in mid September at Echuca. Participants included both growers and agronomists involved in the industry. At the end of the day some comments from participants included:

- Good timely update
- Surprised at the number of viruses/viroids that exhibit similar symptoms.

The day started with a refresher on how to carefully monitor a crop. It was stated that all crops should be monitored at least weekly, with valves at different growth stages also monitored separately, checking the youngest crops first.. To ensure pests and diseases are detected early it is also important that the crop is walked in a different pattern on each visit, but include crop boundaries in the sampling pattern to catch any edge effect and check areas of the crop near trees or vegetation for migrating pests. While monitoring the crop keep your eye out for hot spots or unusual insects, disease, or plant symptoms . Yellow sticky traps can be used to detect the presence of whitefly, thrips etc, but don't base spray recommendations on them. Pheromone traps can also be used to determine the presence of *H. punctigera* or *H. armigera*, but not for assessing if control measures are required.

While monitoring crops hygiene measures must also be practiced, this includes spraying legs, boots and sweep nets with dilute methylated spirits or the equivalent to disinfect between properties (as per the APTRC Guidelines: Suggested Hygiene Measures for People Moving Between Tomato Crops).

Crop monitoring guidelines are also based on < 25 ha blocks for pre-flowing and < 15 ha for petiole sampling.

When monitoring crops it is important to record the numbers of pests and the sampling method, while noting insects causing significant physical damage to the crop. In particular the following:

- Aphids
- Brown leaf hoppers
- Cluster caterpillar eggs and larvae
- Cutworm eggs & larvae
- Heliothis eggs and larvae
- Looper eggs and larvae
- Thrips - western flower, tomato, plague and onion
- Tomato russet mites
- Two spotted mites
- Whitefly - greenhouse or silverleaf
- Wireworm - false and true
- Note presence of other insects causing damage such as; Rutherglen bugs, cockchafer grubs, African black beetles, vegetable weevils, darkling beetles, large numbers of green leaf hoppers
- be aware of the presence of beneficial insects and parasitised pests present in the crops

Also note the presence and level of diseases including;

- Damping off – Pythium/ Rhizoctonia / Phytophthora
- Powdery mildew
- Bacterial speck & bacterial spot
- Tomato spotted wilt (also known as bronze wilt)
- Tomato big bud
- Bacterial canker
- Other viral diseases such as Cucumber mosaic, Tobacco mosaic
- Fungal diseases Phytophthora (late blight)/ Verticillium wilt/Fusarium/Pythium
- Sclerotinia
- Anthracnose
- Alternaria (early blight)
- Septoria

Heliothis

Both *H.armigera* and *H.punctigera* have similar life cycles. In summer an adult can develop from an egg within 4-6 weeks, whilst in spring and autumn it takes between 8-12 weeks (egg to moth). Freshly laid eggs can hatch within 4-6 days depending on the temperature. It is possible to differentiate between the eggs as *H. armigera* has a small white patch within the dark band which is not present in *H. punctigera.* *H. punctigera* are also more predominant in spring and early summer. Whereas *H. armigera* overwinter in the local area and become more common from mid-summer onwards. *H. armigera* are more difficult to control due to multiple resistances to pesticide chemical groups.

Monitoring *Trichogramma* parasitism (from NSW DPI 2013, IPM Tomato Training Course for Processing Tomatoes)

- Collect as many heliothis eggs as possible – 30-40 is ideal
- Plate out heliothis eggs using a fine damp paint brush into plastic microtiter trays and cover with sticky tape;
- eggs need to be plated with individual eggs in each well as hatched larvae will eat any other eggs in the well.
- White (freshly laid eggs) may not have had time to be parasitised before collection and may give a lower parasitism level
- Leave trays in a warm location (20-25°C) out of direct sunlight for 5 – 7 days
- % parasitism is calculated by the number of black eggs (parasitised)/ (number of larvae + number of black eggs)
  - ⇒ Larvae = hatched eggs (a caterpillar may be stuck to the sticky tape)
  - ⇒ Black eggs = parasitised eggs
  - ⇒ Dead eggs = infertile/non viable (these eggs will dry up and form a pyramid shape often brown orange in colour)
- A large percentage of the heliothis eggs may be infertile/non-viable – don't include these in parasitism calculations
- Heliothis thresholds for 30 petiole samples
  - ⇒ Number of eggs – 5 viable unparasitized eggs per 30 petiole
  - ⇒ Number of larvae – 2 larvae per 30 petiole

(Continued on page 3)

(Continued from page 2)

Viruses

There are several viroids and viruses which may affect tomato plants, some of which are endemic to the region. Unfortunately, infected plant symptoms tend to be very similar, making a definitive diagnosis on visual symptoms very difficult.

Losses from viral diseases depend largely on when plants become infected, the variety, the virulence of the virus strain, and the environment.

Infection by severe strains before or during transplanting may reduce yield as much as 90 percent (40 percent with a mild strain). Yields of plants infected after fruit set may be reduced 4 or 5 percent in field-grown, virus-infected tomatoes (*https://ipm.illinois.edu/diseases/rpds/917.pdf*)

Virus	Endemic to region	Transmission	Symptoms
Potato spindle tuber viroid		Mainly mechanical transmission	Stunted plants, yellowing, purpling leaves, blotchy fruit
Cucumber mosaic virus	Endemic	Aphids	Light and dark green mottled leaves
Tomato yellow top virus		Potato and peach aphids	Stunted yellow plants, small leaves, fruit fail to set
Tomato yellow leaf curl virus	(found in NT)	Silverleaf whitefly *Bemesia tabaci*	Plants and leaves stunted, yellow rolled leaves, fruit reduced
Potato virus Y (leaf shrivel)	Endemic	Aphids >50 + mechanical transmission	Mottled leaves turned downwards, old leaves brown on underside
Tomato spotted wilt (bronze wilt)	Endemic	Thrips	Varies – purple or brown spots on young leaves, plants may be stunted with rolled leaves, fruit show yellow rings
Tomato mosaic virus (ToMV)	Endemic	Crop debris, seed borne, mechanical transmission	Lighter coloured plants, slightly crinkled mosaic leaves, fruit with internal browning & blotching

Please also remember if you see anything unusual and need assistance to identify the pest or disease to please contact Liz or Ann.

Scouting Calendar	Temp Range		Sept	Oct	Nov	Dec	Jan	Feb	March	April
Diseases	***infection***	***ideal***								
Bacterial Canker	12-34°C	24-27°C (humid or rainy)	■	■	■	■	■	■		
Bacterial Speck	13-28°C	18-24°C (humid or rainy)	■	■	■	■	■	■		
Bacterial Spot	20-35°C	26°C (humid or rainy)			■	■	■	■		
TSWV			■	■	■	■	■	■		
Other viruses			■	■	■	■	■	■		
Big Bud			■	■	■	■	■	■		
Anthracnose	10-30°C	20-24°C					■	■	■	■
Alternaria/early blight	6-34°C	18-30°C (humid or dewy)	■	■	■	■	■	■		
Downy mildew/late bligh	3-26°C	16-22°C (humid + moisture)	■	■	■	■	■	■		
Powdery Mildew		>30°C				■	■	■		
Damping Off	1-37°C	25-28°C (high mosture)	■	■	■					
Phytophthora	10-35°C depending on spp		■	■	■					
Sclerotina	4-30°C	20°C	■	■	■	■				
Fusarium (FORL)	10-20°C	18-20°C	■	■	■	■				
Fusarium (FOL)		28°C	■	■	■	■				
Unusual diseases			■	■	■	■	■	■	■	■
Insects										
H. armigera					■	■	■	■		
H. punctigera				■	■	■				
Loopers & cluster caterpillar			■	■	■					
Thrips (WFT, Onion, Tomato, Plague)			■	■	■	■				
Tomato Russet Mites							■	■	■	■
Two Spotted Mites							■	■	■	■
Whitefly (Greenhouse and Silverleaf)							■	■	■	■
Wireworm (fasle and true)			■	■	■					
Cutworm			■	■	■					
Aphids			■	■	■					
Leaf Hoppers			■	■	■					
Rutherglen bugs			■	■	■					
Tomato Potato Psyllid					■	■	■	■		
Unusual insects			■	■	■	■	■	■	■	■

2018/2019 Season Research

Passive Insect Surveillance Trapping Project

A new project titled: *Development of a new and improved insect surveillance system for the processing tomato and potato industry*, will be conducted this season. The surveillance system will involve the establishment of trapping system using passive traps (Macquarie or Zealot traps) across the processing tomato and potato production regions.

This project will establish a state wide passive trapping network that can be used in the future to provide data to assist processing tomato and seed potato growers with the management of thrips, aphids, whitefly, and potential exotics such as TPP, and their associated viruses or bacteria etc (CMV, TSWV, PVY, INSV, TYLC, CLSo). This project will link in with the following projects that are already underway in other industries. "To develop and evaluate a rapid technique for the identification of the exotic Tomato Potato Psyllid (TPP), the number 1 exotic threat to the Victorian potato industry". This project aims to develop and evaluate bulk DNA analysis as a new technology for rapid, reliable detection of the number one exotic threat to the Victorian potato industry, the tomato potato psyllid. (PBCRC & DEDJTR).

A project titled: "Improving plant pest management through cross industry deployment of smart sensors, diagnostics and forecasting" The Project is a $21 million partnership that aims to deliver a mobile, cross industry plant pest surveillance network to monitor and report the presence of pests that threaten major agricultural sectors across Australia, including grains, cotton, sugar, horticulture, wine and forestry industries. Producers will receive timely and accurate information about pests in their region, helping to guide on farm management decisions, reduce pest resistance and demonstrate pest-free status to domestic and export markets.

VG16086: Area wide management of vegetable diseases: viruses and bacteria Area wide management (AWM) historically has been mostly applied to management of insect pests. It also has potential for controlling plant diseases, particularly those with aerial dispersal mechanisms such as insect-vectored viruses and wind dispersed bacteria and fungi. This includes thrips-transmitted viruses of capsicum, aphid and whitefly-transmitted viruses of cucurbits, leafhopper-transmitted phytoplasmas and management of thrips, whitefly and aphids as pests. The second major focus is the management of foliar bacterial diseases of Solanaceous crops (i.e. capsicums, chilli and eggplant), cucurbits and lettuce. To underpin AWM, effective laboratory and field based diagnostics with short sample processing times will be developed, which are based on a comprehensive understanding of pathogen genetic diversity. The project will also improve preparedness of the vegetable industry to key viral and bacterial exotic threats through contingency planning and increased awareness.

The samples collected through this project will be archived for future DNA analyses with the aim to detect specific target pests (e.g. aphids) and pathogens (e.g viruses) through high throughput DNA assays, that are currently being developed through associated AgVic R&D projects.

Biological Trial

Two biological inoculant products, CataPult ™ and NitroGuard DEFENDER ™ from Mapleton Agri Biotec Pty Ltd. and Serenade® Prime from Bayer trials will be conducted this season. These products will all be applied to the tomato transplants at planting as a root dip. At harvest the crop will be assessed for yield and Brix.

Understanding the Relationship Between Tomato pathogens & pH around Long Term Subsurface Drip Emitters

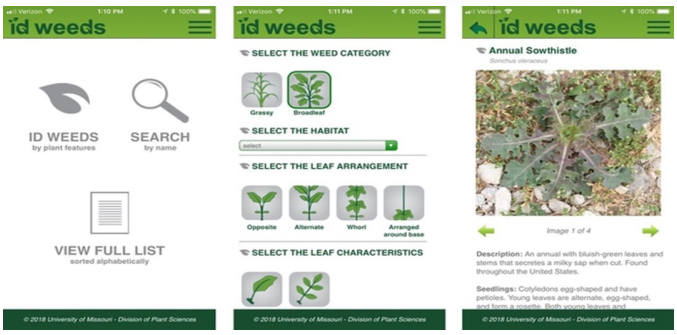
Of these several Pythium species and an important *Fusarium oxysporum* (Forl) were identified as pathogens associated with fields that had poor growth and were shown to cause plant biomass loss (pathogens). One of the most important abiotic factors reported to increase the severity of disease caused by *Forl* is low pH (Kuchareck et al. 2000; Roberts et al. 2001; Ozbay and Newman 2004).

Previous work conducted in the processing tomato industry has shown that the pH decreases near the emitter in long term subsurface drip irrigation. This project is supported by the Goulburn Broken CMA through funding from the Australian Government's National Landcare Program, and will be conducted by an Honours student from the University of Melbourne, working closely with Sophia Callaghan.

Weed ID Apps from OS

There are a number of mobile phone applications (apps) designed to help with weed ID. The ID Weeds app, which was created by the University of Missouri, is focused, primarily, on species common to the Midwestern US, but can still be of use to growers across the world. This app lets you compile a "list of suspects" by inputting the characteristics that describe your unknown specimen. These attributes include: whether a species is a grass or a broadleaf weed, how the leaf margins appear, if the leaves and stems are hairy or not, what the flowers look like, and so on. The ID Weeds app then provides information and corresponding images about possible ID matches (Figure 1). You also can search for a weed species, directly, by its common or scientific name (just as you might use a traditional ID book).

There are several similar apps available including: Weed Identifier (Monsanto Canada), Weed ID (BASF), and Savvy Weed ID (The Savvy Farmer Inc.).



UPCOMING EVENTS

Community meeting to discuss the Australian Government's new water efficiency initiative, the Murray–Darling Basin Water Infrastructure (MDBWI) Program.

Murray–Darling Basin governments are seeking advice on how they can best invest in on-farm water efficiency projects
To attend a meeting, or receive further information, please email
mdbwip.consultation@seftons.com.au
Swan Hill: 10am Tuesday 23 October (Swan Hill Club)
Kerang: 6pm Tuesday 23 October (Kerang Memorial Hall)
Echuca: 10am Wednesday 24 October (The Cal Hotel)
Shepparton: 6pm Wednesday 24 October (Shepparton RSL)

Cover Crops and Soil & Tissue Testing Workshop

Wednesday 7 November 2018
5:00-8:00pm
430 Central Avenue, Orrvale (near Shepparton)
RSVP: Ken Orr, 0428 502 936, ken.orr54@bigpond.com

Crop Inspection—Boort/Lake Boga

Date TBC but will be mid December 2018

Annual Crop Inspection and Dinner

Date: Friday 18 January 2019
Dinner Venue TBC

14th Congress and 16th Symposium on the Processing Tomato

will be hosted by the Argentine Province of San Juan,
March 2020

Integrated Pest Management of vegetable pests - a more sustainable approach (webinar recording)

https://youtu.be/xIxdpqgnjEo

Tomato Foundation Health Claim Project

The aim to clearly demonstrate that processed tomato products have health benefits for maintaining cardiovascular and heart health by reducing platelet aggregation, benefiting the circulation, and otherwise benefiting blood flow. For more info visit the project page: the tomato foundation | tomato health claim project

The project aims to win an EFSA Health Claim for Tomato Paste and Tomato Products – for improved blood flow – due to the high concentration of tomato phenols they contain. This will cover an EFSA 13.5 'New Function Claim' in 28 European member states, an FDA 'Structure/Function Claim' in the US, a CFIA 'Function Claim' in Canada, and a FSANZ 'General Level Health Claim' in Australia and New Zealand.

The APTRC is an Industry Partner of this project, the health claim will be available to all members of the APTRC to use. The project team will determine the criteria of the product which will be tested through this project, but is likely to include 2-3 samples of Australian products.

The Tomato Foundation will guarantee a licence of use for the health claim on ALL consumer tomato products tested and passed by SSICA during the Phase 2 sample study - due to start in the European Autumn 2018. .

More Sustainable Crops Just a Spray Away

https://horticulture.com.au/more-sustainable-crops-just-a-spray-away/

Scientists are investigating whether a clay-based 'vaccine' for plants could safeguard the nation's $5.5 billion-combined cotton and vegetable industries against pest infestation and crippling crop losses.

Funded by Hort Innovation and the Cotton Research Development Corporation, the project is being delivered by the University of Queensland (UQ) in partnership with Nufarm, and involves trials of the non-toxic, biodegradable product BioClay on farms in Queensland and other locations across the country.

The high-tech BioClay spray responds to these challenges of managing pests and diseases by priming the plant's own defences, helping the plant to naturally attack specific crop pests and pathogens.

UQ research arm, the Queensland Alliance for Agriculture and Food Innovation, is leading the trials, and while the project is not due for completion until 2021, agricultural biotechnologist and research leader, Professor Neena Mitter, said early signs were promising. "Through large-scale trials we know that BioClay works, and the work we have done to date provides a great foundation for pest and disease management across vegetable and cotton crops," she said.

Natural Mortality Factors of *Tuta Absoluta* in tomatoes

Wiley Online Library

Little importance has been given to the role of natural mortality factors (biotic and abiotic) in the regulation of tomato leafminer *Tuta absoluta* (Lepidoptera: *Gelechiidae*) populations. A new study determined the action of mortality factors on *T. absoluta* populations infesting cultivated tomato crops. Eighty ecological life tables for T. absoluta in field cultivated tomato plants were constructed and analyzed.

Results

Total *T. absoluta* mortality was 99.08%, with 38.76% mortality during the egg phase, 57.20% in the larva phase and 3.12% in the pupal phase. The main mortality factors during the egg stage were predation, parasitism and egg unviability. In the larval stage, the main mortality factors were predation, parasitism, entomopathogenic agents and physiological disorders. In the pupal stage, the main mortality factor was predation. The larvae of the 3rd and 4th instar were more susceptible to the action of mortality factors and the predatory wasp, *Protonectarina sylveirae*, was the main insect predator of these larvae.

Conclusions

The *T. absoluta* population is regulated under field conditions by the action of natural enemies of the larvae. The predatory wasp *P. sylveirae* is very important in the regulation of *T. absoluta* populations in field tomato crops in Brazil.

2018 Sample Costs to Produce Processing Tomatoes San Joaquin Valley South, Fresno County, Sub-surface Drip Irrigation

Updated costs of production for processing tomatoes are now available on line:
https://coststudyfiles.ucdavis.edu/uploads/cs_public/2e/7a/2e7a8cf0-b7fd-4207-b945-7b4b8a82625c/17processtomatofresnosdi-final_draft.pdf

Eating Tomatoes May Protect Against Skin Cancer

Ohio State University

Could eating a tomato a day help keep skin cancer away — or at least lessen the risk of developing non-melanoma skin cancers?

Researchers at The Ohio State University think the answer is maybe, based on promising results of a new study of how nutritional interventions can modulate the risk for skin cancers in mice. The study, published in the July 11 edition of Scientific Reports, found that mice fed tomatoes daily over 35 weeks and exposed to ultraviolet light experienced a 50 percent decrease in developing skin cancer tumors compared to mice that didn't consume tomatoes.

The theory is that dietary carotenoids, the pigmenting compounds that give tomatoes their colour, may protect skin against UV light damage. Previous human clinical trials suggest that eating tomato paste over time can dampen sunburns, perhaps thanks to carotenoids from the plants that are deposited in the skin of humans after eating, and may be able to protect from UV light damage.

"Lycopene, the primary carotenoid in tomatoes, has been shown to be the most effective antioxidant of these pigments," according to the researchers "However, when comparing lycopene administered from a whole food (tomato) or a synthesized supplement, tomatoes appear more effective in preventing redness after UV exposure, suggesting other compounds in tomatoes, apart from lycopene, may also be bioactive."

"As a result, alternative methods for systemic protection, possibly via nutritional interventions to modulate risk for skin-related diseases, could provide a significant benefit to reducing the incidence of skin cancer. Although foods are not drugs, they can possibly over the lifetime of consumption alter the development of certain diseases. "This preclinical research gets at that prevention aspect and rationalizes studying this issue further." *The three-year study was funded by a grant from the National Institutes of Health through the National Cancer Institute. The study was a collaborative project involving three other Ohio State researchers including Tatiana Oberyszyn, a professor and vice chair in the Department of Pathology in the College of Medicine; David Francis, professor and tomato geneticist in the Department of Horticulture and Crop Science, and Steven Schwartz, a professor in Food Science and Technology.*

WPTC World production estimate of tomatoes for processing
(in 1000 metric tonnes)

Date of last update: 01/10/2018

			2015 FINAL		2016 FINAL		2017 FINAL		2018 FORECAST		AVERAGE 2015-2017	VARIATION 2018 vs 2017
NORTHERN HEMISPHERE*	MEMBERS IN MEDITERRANEAN AREA (AMITOM)	Algeria**	500	Mem.	550	Mem.	600	Misc.	500	Est.	550	-17%
		Egypt	250	Est.	350	Misc.	300	Est.	300	Est.	300	0%
		France	170	Mem.	183	Mem.	195	Mem.	145	Mem.	183	-26%
		Greece	500	Mem.	440	Mem.	400	Mem.	320	Mem.	447	-20%
		Hungary**	105	Est.	105	Est.	100	Misc.	106	Mem.	103	6%
		Iran**	1 350	Mem.	1 150	Mem.	980	Mem.	300	Mem.	1 160	-69%
		Israel	220	Mem.	200	Mem.	200	Mem.	200	Mem.	207	0%
		Italy	5 393	Mem.	5 180	Mem.	5 200	Mem.	4 600	Mem.	5 258	-12%
		Malta**	8	Mem.	8	Mem.	8	Mem.	8	Mem.	8	0%
		Portugal***	1 660	Mem.	1 507	Mem.	1 554	Mem.	1 100	Mem.	1 574	-29%
		Russia**	90	Mem.	145	Mem.	400	Mem.	500	Mem.	212	25%
		Spain***	3 028	Mem.	2 950	Mem.	3 350	Mem.	2 700	Mem.	3 109	-19%
		Syria**	70	Mem.	70	Est.	70	Est.	70	Est.	70	0%
		Tunisia	935	Mem.	650	Mem.	643	Mem.	629	Mem.	743	-2%
		Turkey	2 700	Mem.	2 100	Mem.	1 900	Mem.	1 300	Mem.	2 233	-32%
		Ukraine**	550	Mem.	550	Mem.	650	Mem.	750	Mem.	583	15%
		Subtotal AMITOM	**17 529**		**16 138**		**16 550**		**13 528**		**16 739**	**-18%**
		of which members in EU	**10 864**		**10 373**		**10 807**		**8 979**		**10 681**	**-16,9%**
	OTHER MEMBERS	Brazil	1 300	Mem.	1 450	Mem.	1 450	Mem.	1 480	Mem.	1 400	2,1%
		Canada	386	Mem.	456	Mem.	426	Mem.	424	Mem.	423	0%
		California	13 025	Off.	11 470	Mem.	9 492	Mem.	10 886	Mem.	11 329	15%
		China	5 600	Mem.	5 150	Mem.	6 200	Mem.	3 800	Mem.	5 650	-39%
		Japan	35	Mem.	33	Mem.	30	Mem.	25	Mem.	33	-17%
		Subtotal Other Members	**20 346**		**18 559**		**17 598**		**16 615**		**18 834**	**-5,6%**
	NON MEMBERS	Bulgaria	60	Misc.	40	Misc.	50	Misc.	50	Est.	50	0%
		Czech Republic	25	Est.	25	Est.	25	Est.	25	Est.	25	0%
		Morocco	130	Est.	130	Est.	130	Est.	130	Est.	130	0%
		Poland	210	Misc.	220	Misc.	200	Misc.	180	Misc.	210	-10%
		Slovakia	20	Est.	20	Est.	20	Est.	20	Est.	20	0%
		USA excluding California	350	Misc.	476	Misc.	408	Misc.	450	Misc.	411	10%
		Subtotal Non Members	**795**		**911**		**833**		**855**		**846**	**2,6%**
		Total Northen Hemisphere	**38 670**		**35 608**		**34 981**		**30 998**		**36 420**	**-11,4%**
		of which WPTC members	**37 875**		**34 697**		**34 148**		**30 143**		**35 573**	**-11,7%**
		of which European Union	**11 179**		**10 678**		**11 102**		**9 254**		**10 986**	**-16,6%**
SOUTHERN HEMISPHERE*	MEMBERS	Argentina	535	Mem.	405	Mem.	488	Mem.	435	Mem.	476	-10,9%
		Australia	286	Mem.	275	Mem.	185	Mem.	228	Mem.	249	23,0%
		Chile	850	Mem.	800	Mem.	1 080	Mem.	1 211	Mem.	910	12,1%
		Peru	112	Mem.	100	Mem.	110	Mem.	100	Mem.	107	-9,1%
		South Africa	140	Mem.	145	Mem.	180	Mem.	145	Mem.	155	-19,4%
		Subtotal members	**1 923**		**1 725**		**2 043**		**2 119**		**1 897**	**3,7%**
	NON MEMBERS	Dominican Republic	210	Misc.	210	Est.	220	Est.	258	Misc.	213	17,3%
		India	130	Est.	130	Est.	130	Est.	130	Est.	130	0,0%
		Mexico	40	Misc.	40	Misc.	40	Est.	40	Est.	40	0,0%
		New Zealand	51	Misc.	51	Est.	50	Misc.	50	Est.	51	0,0%
		Senegal	80	Misc.	28	Misc.	53	Misc.	53	Misc.	54	0,0%
		Thailand	260	Est.	260	Est.	260	Est.	260	Est.	260	0,0%
		Venezuela	20	Est.	20	Est.	20	Est.	20	Est.	20	0,0%
		Subtotal non members	**791**		**739**		**773**		**811**		**768**	**4,9%**
		Total Southen Hemisphere	**2 714**		**2 464**		**2 816**		**2 930**		**2 665**	**4,0%**
GENERAL TOTAL			**41 384**		**38 072**		**37 797**		**33 928**		**39 084**	**-10,2%**
of which members of the WPTC			39 798		36 422		36 191		32 262		37 470	-10,9%
WPTC as percentage of total production			96%		96%		96%		95%		96%	-0,7%

Sources:
Mem.= WPTC members, Off.= Official data, Misc.= Other sources (industry contacts, press, ...), Est.= WPTC estimate, in the absence of reliable data

Notes:
*Hemispheres are not defined in the strict geographic sense but as Northern Hemisphere: crop period mainly July to December & Southern Hemisphere: crop period mainly January to June
** AMITOM associate members
*** Tomatoes produced in Portugal but processed in Spain are reported in Spain

DISCLAIMER:
WPTC does not guarantee or assume any liability for the accuracy of the contents of this report and shall not be responsible for any losses sustained as a result of relying on the contained information.

For more information, contact Sophie Colvine, WPTC General Secretary at colvine@tomate.org - www.wptc.to

Regional Investment Corporation

http://www.ric.gov.au/

Low Interest Loans: Eligibility Criteria

You

- are an Australian citizen or permanent resident
- contribute at least 75% of your labour to the farm business (under normal circumstances)
- earn at least 50% of your income from the farm business (under normal circumstances)

Your business

- is in financial need of a loan
- has the capacity to repay the loan
- is financially viable in the long term
- has existing commercial debt

You must

- provide security for the loan
- secure the support of your commercial lender for the proposed loan
- repay the loan

The processing tomato production region is in an eligible area for Drought Loans, or growers could also consider applying for the Farm Investment Loans.

- No fees
- 3.58% variable interest rate
- Up to $2 million
- Apply anytime

I would encourage you to visit the website : http://www.ric.gov.au/ to see if you can qualify. It may be worth considering if you wanted to look at your existing loan and split that 50:50 between your current commercial lender and the low interest loan available through RIC.

Global Production

(www.tomatoland.com)

All regions are on the downside except North America thanks to California, up 25 % from 2017. The largest drops are Iran at -65 % and, more important to the economy of processed tomatoes, China down 45 % from a year ago. The 2018 Chinese output is less than a 1/3 of its record volume from 2009. Europe follows the same trend with a 17 % reduction from a year ago with Portugal and Spain down respectively 26 % and 18 %. This huge contraction comes from reduced surfaces and poor yields in most parts of the world. Moreover, the low production yields (lower brix and poorer fresh fruits quality) will induce further reductions of finished products !

When looking at the pattern of the world production for the 4 last years, we noticed a very interesting detail : it highly resembles the 4 crops following the over production of 2009 (in 1,000,000 tonnes):

2009: 44 – 2015: 42 (very strong overproduction)
2010: 37.6 – 2016: (strong reduction)
2011: 37.3 – 2017: 37.2 (stability)
2012: 33.2 – 2018: 33.2 (strong reduction)

Comparison is not reason as says the proverb but one can clearly expect a strong price recovery like the one processors enjoyed back 6 years ago

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