



# TPI Enterprises Ltd Investor Presentation

August 2015





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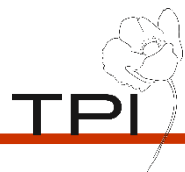
All dollar values are in Australian dollars (A\$) unless stated otherwise.

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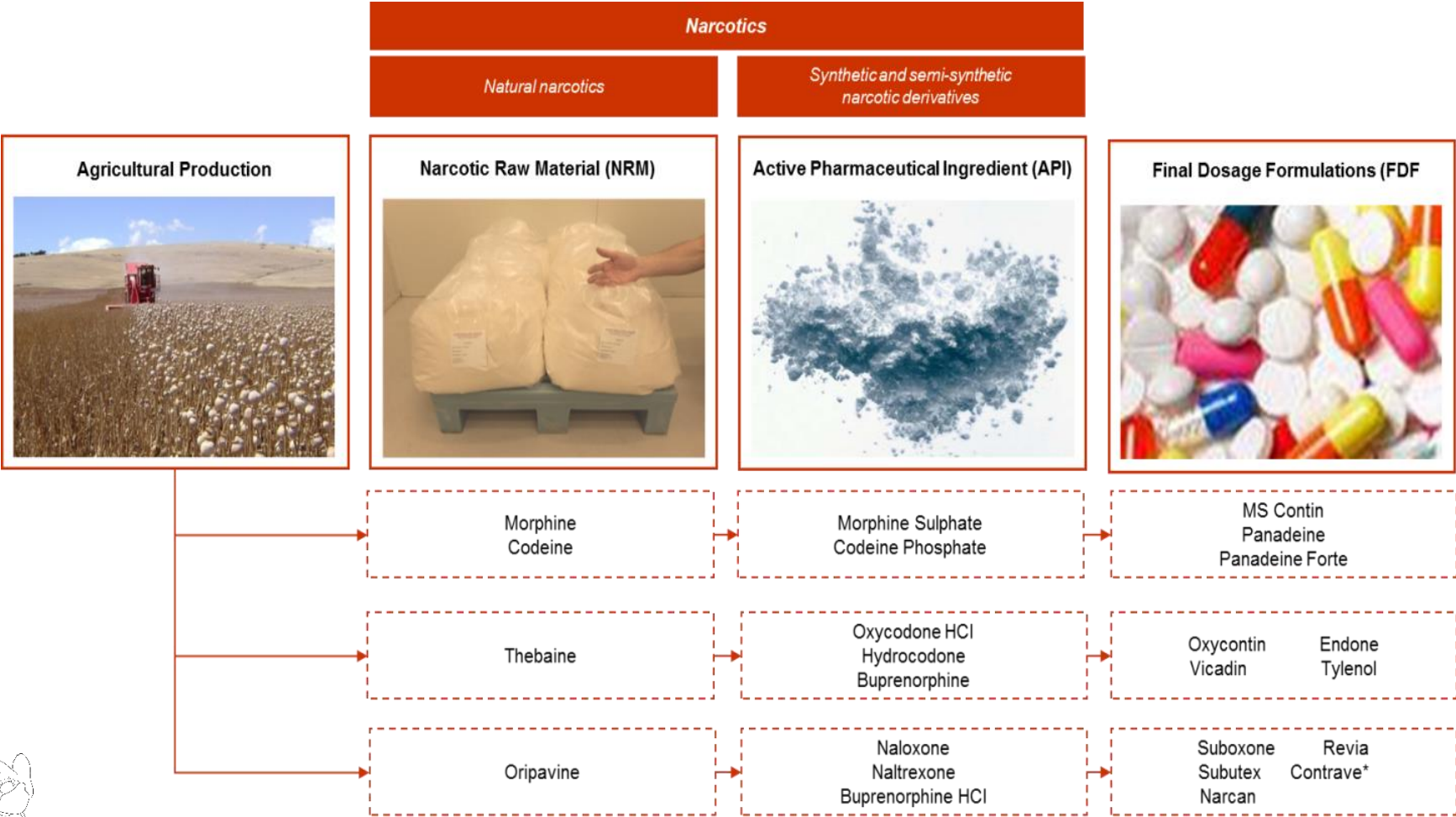
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# Narcotic value chain

*TPI is expanding from NRM's into API's*





# Business Overview

- Stock Code ASX: TPE
- Listed on the ASX since August 13 2015. Market Cap approximately \$180 million.
- Core competency in growing and extracting plant based pharmaceuticals in a highly regulated environment using a lower cost manufacturing process.
- Currently has manufacturing and storage facilities in:
  - Melbourne, Victoria, Australia
  - Lisbon, Portugal
  - Cressy, Tasmania, Australia.
- Currently contracts farmers in Australia (Tasmania, Victoria, Northern Territory) and Portugal to grow opium poppies for processing at its Melbourne facility.
- TPI extracts and purifies narcotics from opium poppies
- Since 2004 TPI has invested approximately \$100 million in IP creation, regulatory approvals, supply chain diversification and customer contracts.





# Investment Case

*TPI offers one of the few opportunities globally to invest directly in the licit narcotics sector*

1.

Growing industry

2.

Manufacturing advantage

3.

Highly regulated / significant barriers to entry

4.

Established business, experienced Management team

5.

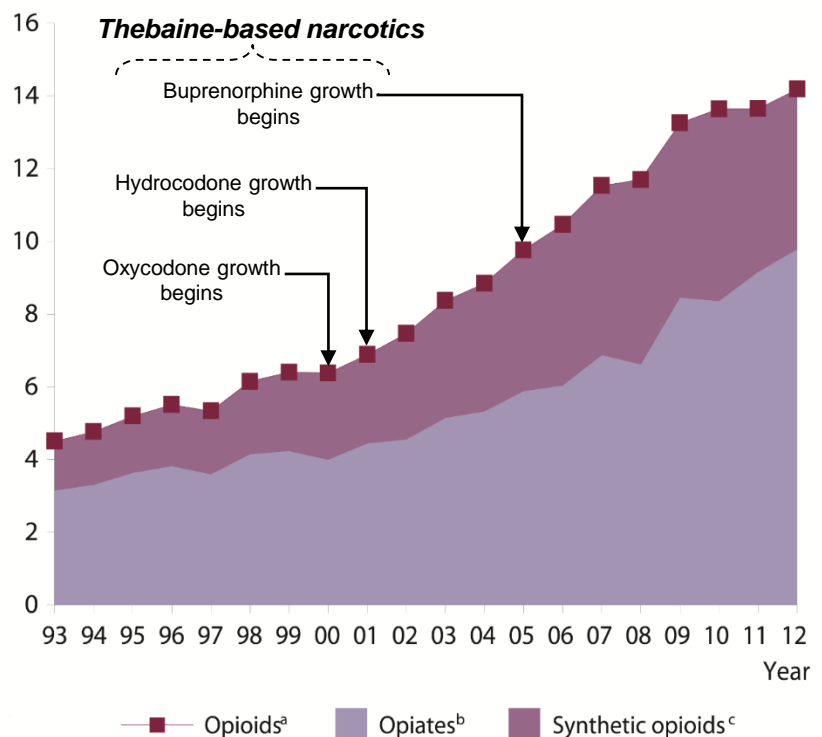
Diversity of supply



# Demand for Narcotics has Grown 3.5x Since 1993

*Growth underpinned by traditional and new products*

Global Consumption of Narcotics in Billions of Defined Daily Doses for Statistical Purposes (S-DDD)



- **Key drivers of growth include:**

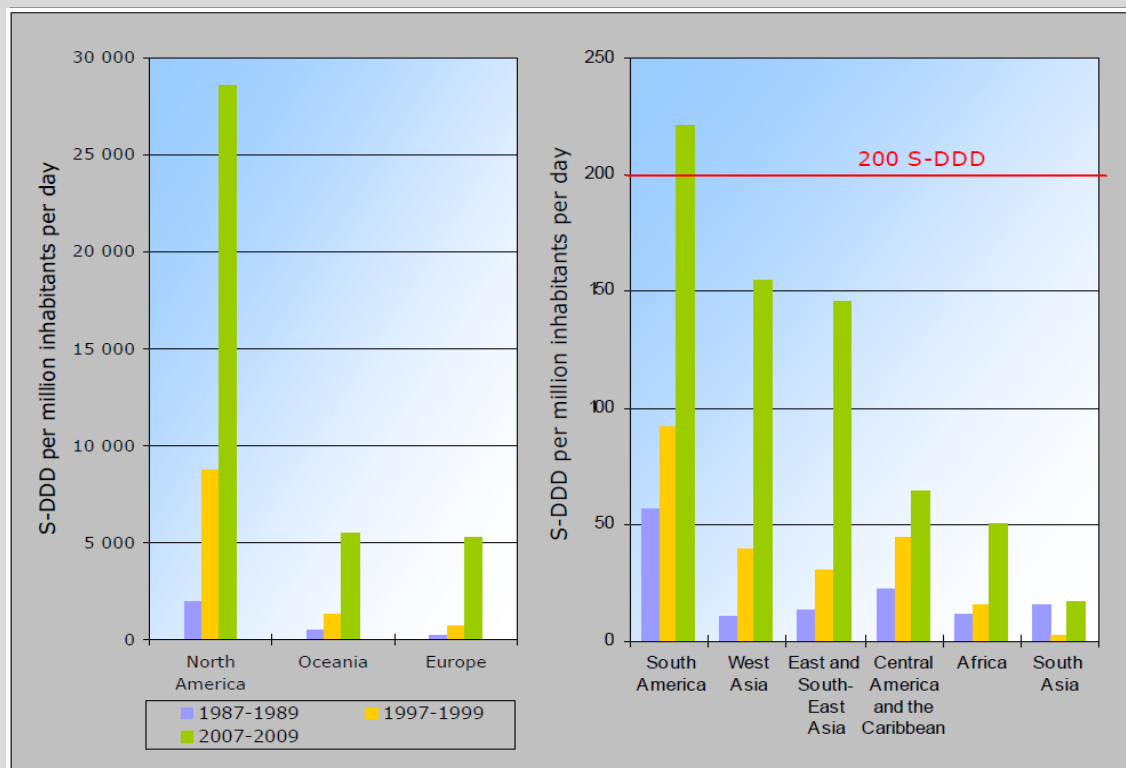
- INCB 3 March 2015 press release **“3/4 world has limited to no access to pain relief”**
- Ageing populations and the increasing incidence and severity of chronic disease
- New product approvals and alternate narcotic applications (non-pain management)
- Retreat from non-narcotic pain management alternatives to more traditional narcotics
- 5.5 Billion people have little or no access to pain relief
- World population expected to increase by approx. 50% within 35 years.



# Regional Consumption is Doubling Every Decade

*Upside demand in developing countries – 100-1,000x*

All regions: Average consumption of narcotic analgesics (87-89, 97-99, 07-09)



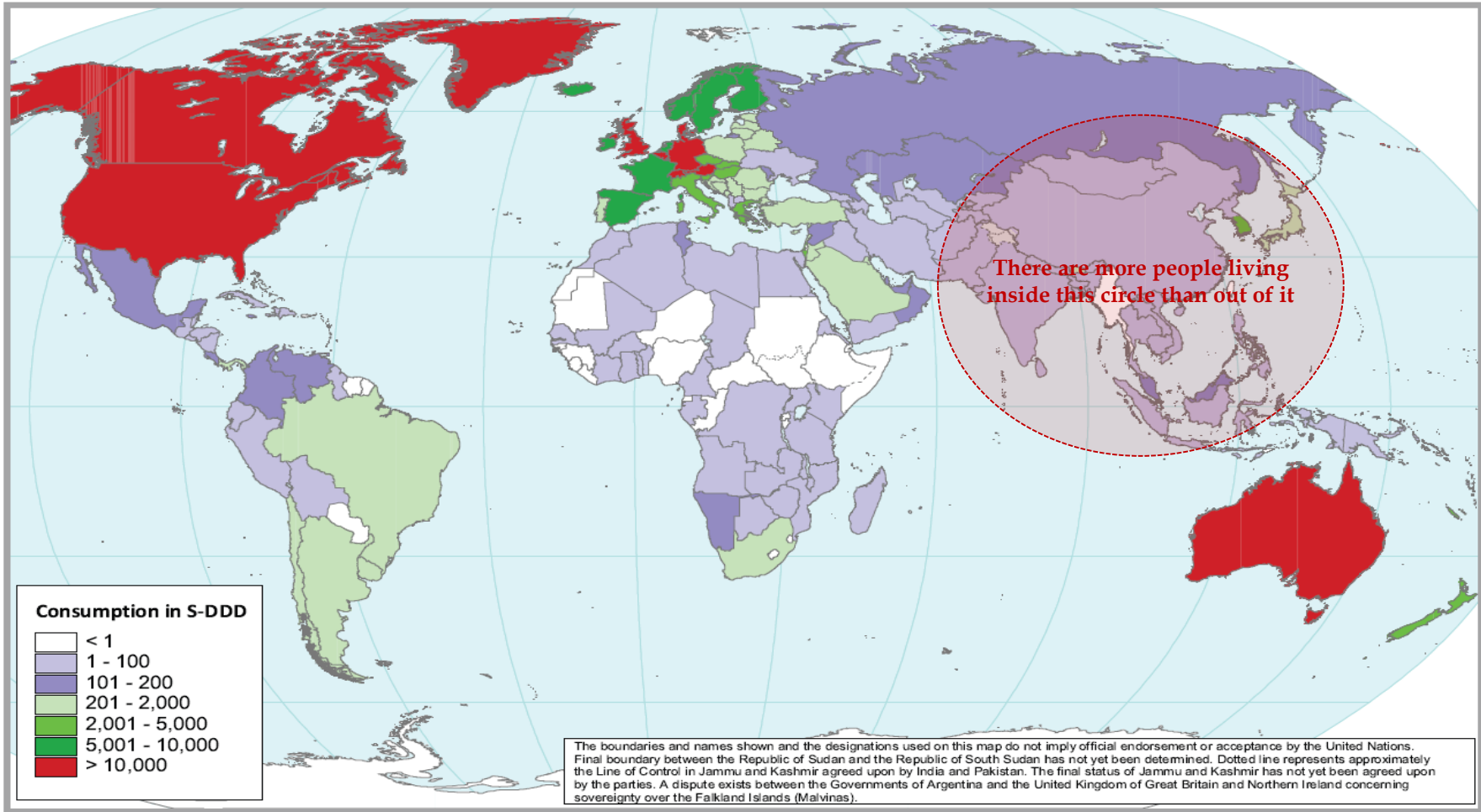
- Both WHO and INCB have drawn attention to a critical shortage of essential narcotic drugs
  - Six countries account for c.79% of global morphine consumption
  - Developing countries, which represent c.80% of the global population, account for only 6% of morphine consumption
  - WHO estimates 10 million cancer cases per year will occur in developing countries by 2015



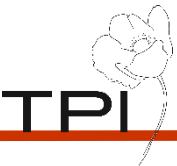


# Discrepancy in Global Availability

*5.5 Billion people (75%) have no or little access to pain relief*



\* Codeine, dextropropoxyphene, dihydrocodeine, fentanyl, hydromorphone, ketobemidone, morphine, oxycodone, pethidine, tilidine and trimeperidine.

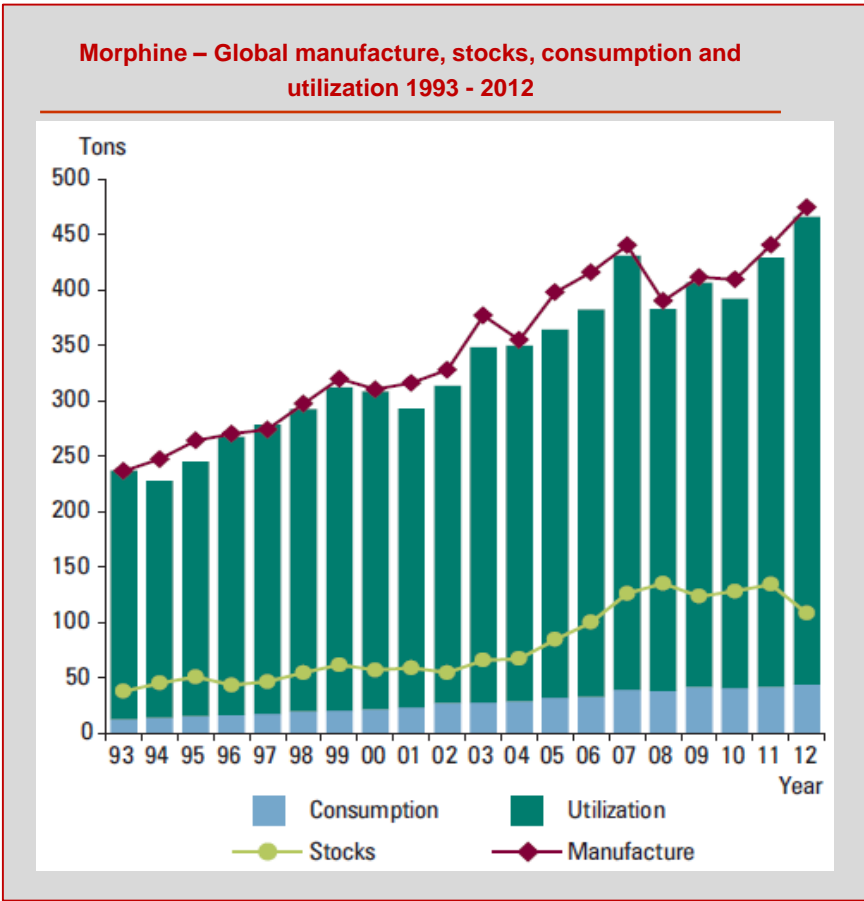




# Products - Morphine

## Morphine – stable long-term growth

- Global manufacture of morphine increased at c.3.7% CAGR over 20 years to 2009
- Consumption of morphine (non-derivative) represents only 10% of total manufacture
  - c.90% utilised in the manufacture of derivative product
- In 2009, the US was the leading global manufacturer of morphine, producing c.24% of global volume
- US imposes restrictions on the importation of morphine:
  - '80/20 Rule' requires a minimum 80% importation of morphine from 'traditional suppliers' (India and Turkey)
  - The 80/20 rule does not apply to importation of thebaine, codeine or oripavine
- Morphine accounts for ~80% of TPI production



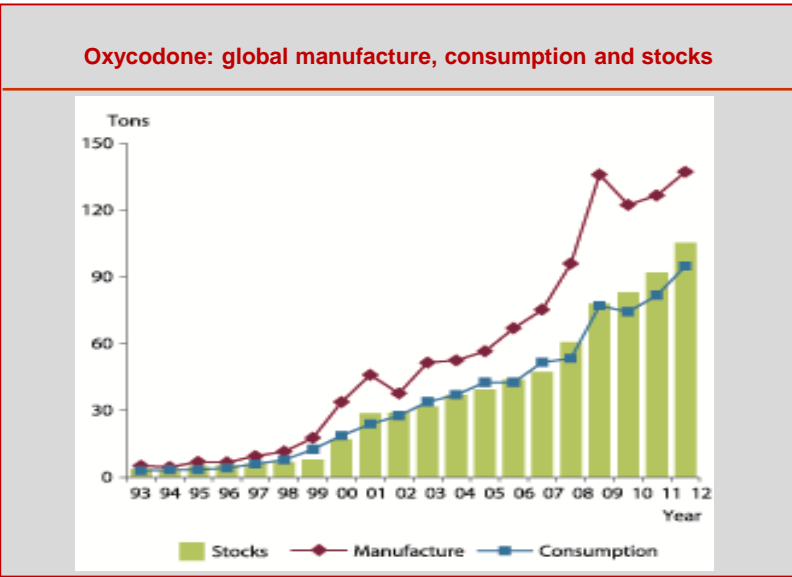


# New Products

## *Thebaine derivatives driving growth in pain management*

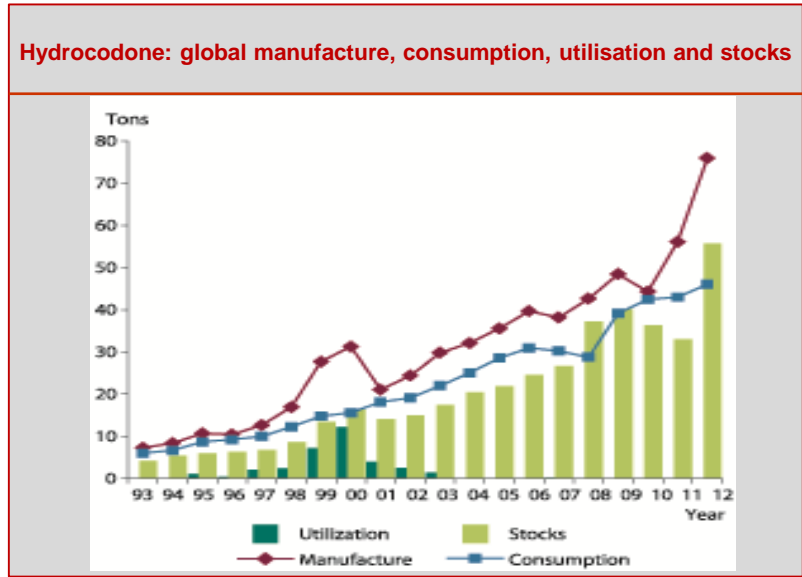
### Oxycodone

- Oxycodone is generally used in the treatment of moderate to severe pain
- Oxycodone has experienced c.17.1% CAGR in both manufacture and consumption over the decade to 2009
- In 2009, the US accounted for 71% of global manufacture, followed by France and the UK



### Hydrocodone

- Hydrocodone is an orally active narcotic analgesic (pain reliever) and antitussive (cough suppressant)
- Hydrocodone manufacture has shown c.10.8% CAGR in the decade to 2009
- The US accounted for more than 90% of global manufacture and use in 2012



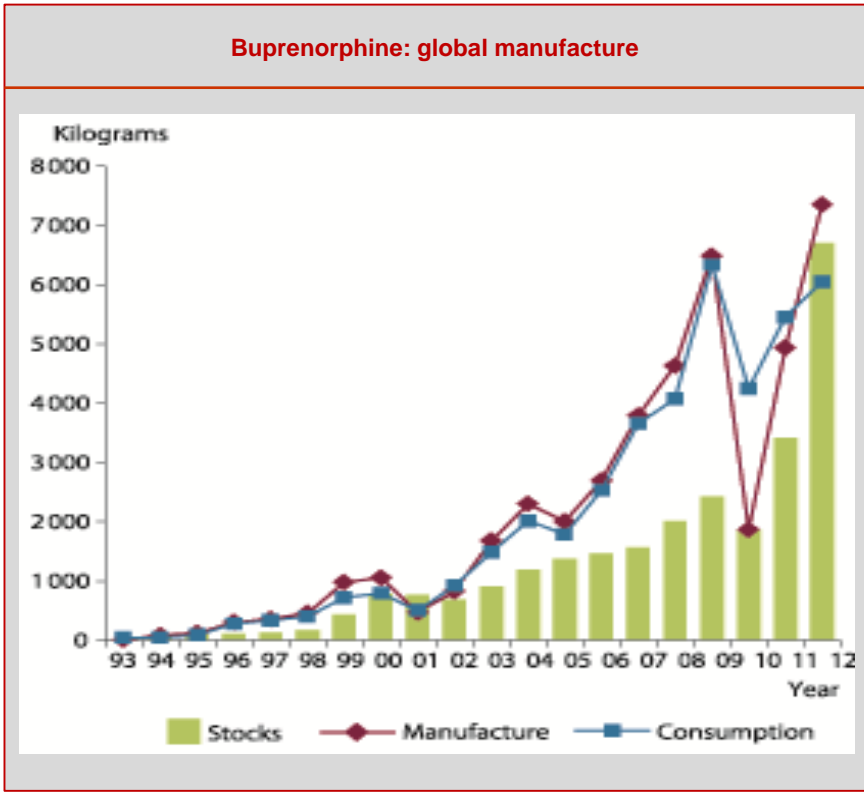


# New Products cont..

## *Thebaine derivatives in anti-abuse: the next step*

### Buprenorphine

- Buprenorphine is used in both pain management and detoxification and substitution treatment of narcotic dependence
- Buprenorphine has been a key development in the treatment of narcotic dependence and abuse
- In the past five years, buprenorphine manufacture and consumption has experienced c.36% CAGR
- Over 70 countries reported imports of buprenorphine in 2009, with leading importers (US, Germany, France and UK) accounting for 83% of global imports
- The UK accounted for c.86% of global manufacture in 2009 and was also the largest exporter of the substance





# Retreat from Non-Narcotic Pain Management Alternatives

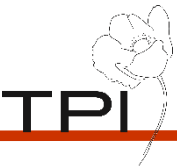
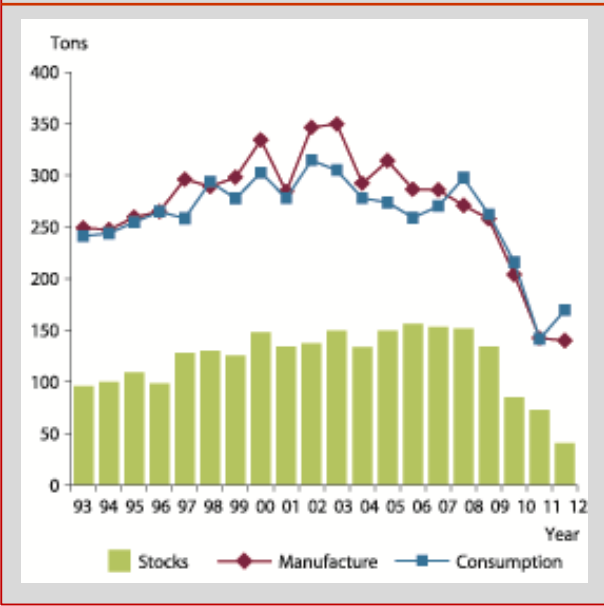
- A number of non-narcotic pain management drugs have been banned by the US Food and Drug Administration (FDA)
- Long-term use of Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) has been associated with gastric erosion
  - Common NSAIDs include aspirin, ibuprofen and naproxen
- Rofecoxib, an arthritis NSAID was withdrawn from market in 2004
  - Increased risk of heart attack and stroke
- Dextropropoxyphene, a consumer drug used to treat mild pain was removed from European and US markets in 2009
  - Affected 10 million users globally when withdrawn
  - Codeine most obvious replacement



**Report: Vioxx linked to thousands of deaths  
December 2004**

Merck & Co.'s arthritis drug Vioxx may have led to more than 27,000 heart attacks and sudden cardiac deaths before it was pulled from the market last week, the Wall Street Journal reported Wednesday, citing an unreleased study by government regulators.

**Dextropropoxyphene: global manufacture**



Source: National Broadcasting Commission, 2004



# Competitors

<b>SunPharma</b>	<ul style="list-style-type: none"><li>Recently acquired GSK's opiate business</li></ul>
<b>Tasmanian Alkaloids</b>	<ul style="list-style-type: none"><li>Owned by Johnson and Johnson</li></ul>
<b>TMO</b>	<ul style="list-style-type: none"><li>Turkeys Opiates Board (TMO) is a state owned enterprise that manufacture manly Thebaine &amp; Moprhine for the US Market</li></ul>
<b>G.O.A.F</b>	<ul style="list-style-type: none"><li>Unlike other NRM manufacturers, India's Government Opium and Alkaloid Factories (GOAF) exports morphine in the form of opium</li></ul>
<b>Alcaliber</b>	<ul style="list-style-type: none"><li>Spanish company founded in 1973. Processing based on cultivation in Spain with ~80% of production destined for export. Maintains a global market share of approximately 15%</li></ul>
<b>Francopia</b>	<ul style="list-style-type: none"><li>Owned by Sanofi</li></ul>
<b>Macfarlan Smith</b>	<ul style="list-style-type: none"><li>Owned by Johnson Matthey</li></ul>





*Manufacturing facilities*





# TPI's Key IP Industrial Advantage

*c.33% FTE, c.20% capital cost, no toxic solvents*

## TPI Technology

- \$20 million Capital Investment (100 tonne facility)
- 1/3 of the FTE of competitors with similar capacity
- 8 Ha site
- Modular expansion capability
- No toxic solvents
- No wastewater treatment



## Competitors Technology

- \$100-150 million Capital Investment (100 tonne facility)
- 10 Ha site
- Toxic solvents
- Wastewater treatment required
- Old technology
- 3 year construction and approval timeline





# Victorian Processing Facility

## *Significant area to expand*

### Site Description

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- 100t capacity with modular expansion capability of up to three times existing size
- Headquarters for Victorian manufacturing with facilities in Tasmania and Europe
- Cost of facility approximately \$20 million
- 70-80 FTE

### Status of relocation

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- Blue Rectangle correlates to equivalent manufacturing area (including administration) of Tasmanian facility.
- Total Area under roof over 14000 m<sup>2</sup>
- Total Area for Straw storage in Tasmania 5600 m<sup>2</sup>





# European Expansion

## API capability

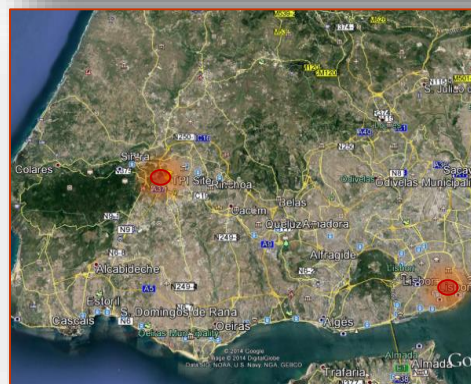
### Site Description

- Pharmaceutical grade production facility
- Site will initially be used for:
  - De-seeding of straw
  - Straw storage
- Enables TPI to implement API manufacturing



### API Manufacturing

- Poppies grown in Portugal will be exported to Australia
- NRM will then be exported back to Europe for API manufacturing
- Estimated capital expenditure of \$8million
- High calibre experienced staff already sourced to setup and run this facility





# Tasmanian Operations

## *Straw Storage and de-seeding*

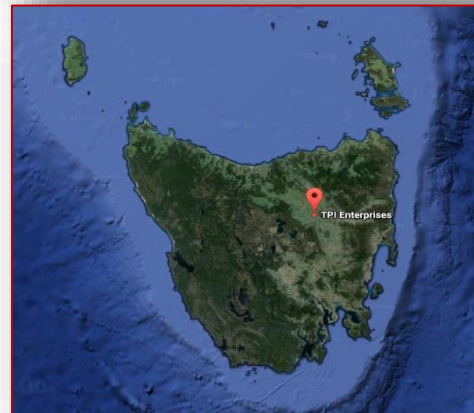
### Site Description

- 5 FTE
- Original manufacturing facility before being relocated to Victoria
- Site will be used for:
  - De-seeding of straw
  - Straw storage
- Enables TPI to continuing growing in Tasmania



### Asset utilisation

- Continue to investigate alternate uses for the site
- Possible sale of some of the disused assets being explored

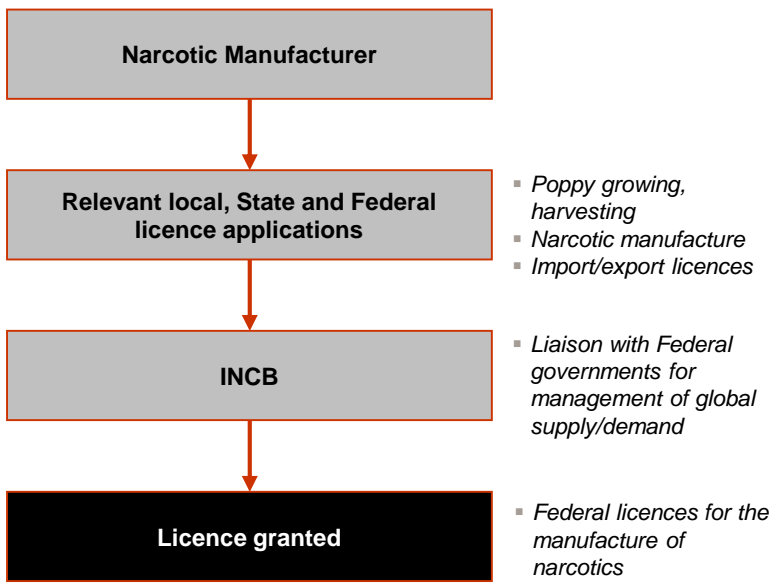




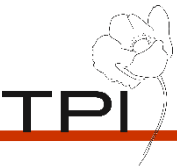
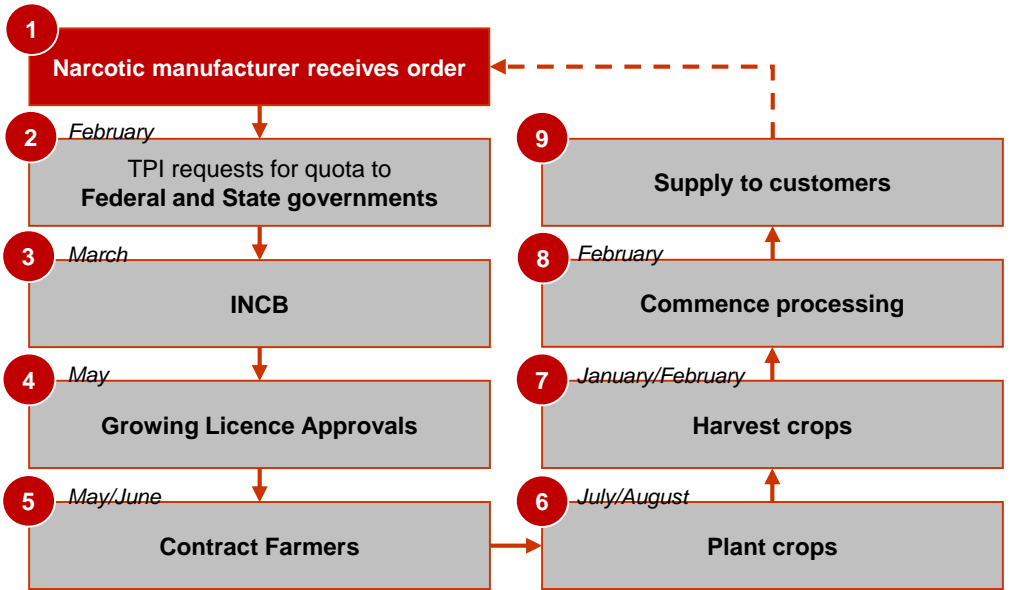
# Regulation – Licences and Manufacturing

*Highly complex regulated industry with both licencing and manufacturing volume controls*

## Licencing process



## Manufacturing process (Vic/Tas/NT crop)

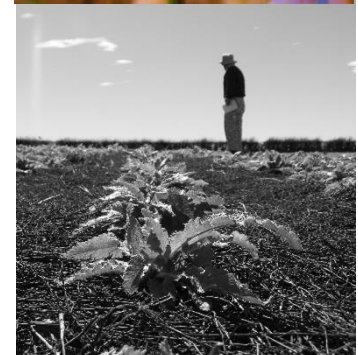




# Regulation – Licences and Manufacturing

## *Heavily regulated industry with both licencing and manufacturing volume controls*

- Due to the sensitive nature of the product, narcotic manufacturers are subject to local, State and Federal Government regulation, with international monitoring
  - INCB, a quasi-judicial branch of the United Nations, monitors the global supply and demand of narcotics
- Only eight companies in the world hold requisite licences for the manufacture of narcotics
- Individual farmers are contracted by narcotic manufacturers to grow poppy crops
  - Prior to growing, farmers must have a specific farmer licence from the State Government, and ratified contracts from licenced narcotic manufacturers
  - Prior to contracting farmers, narcotic manufacturers must have ratified orders from pharmaceutical manufacturers

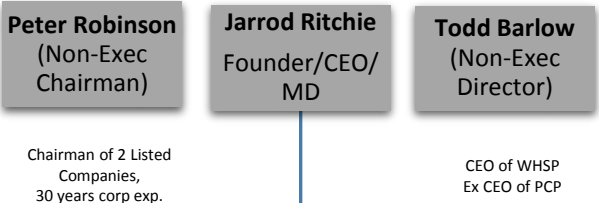




# Experienced Board and Senior Management Team

*Over 100 years of cumulative narcotic industry experience*

## TPI Board



## TPI Executive team





## *Agricultural overview*





# Raw Material Supply

*Tasmanian monopoly has held industry and TPI back*

Friday, March 4, 2011

News

Anger

Flop goes poppy season

KAROLIN MacGREGOR


TASMANIA'S poppy industry is battling through one of its worst harvest seasons as constant wet weather takes its toll.  
Unseasonable summer weather, including heavy rain and strong winds, has caused extensive crop damage around the state, particularly in the North-West.  
Poppy companies are trying to get crops off as quickly as the weather conditions allow, but this year's harvest is proving extremely difficult. Crop quality is also being affected because the rain leaches out valuable alkaloid.  
Tasmanian Alkaloids field

POPPY CRISIS

By LIBBY BINGHAM

Oct. 3, 2013, 10:30 p.m. The Advocate

POPPY CRISIS



WEATHER WORRY: Poppy Growers Tasmania president and North Motton farmer Glynn Williams looks at the soggy soil that is waiting for a poppy crop to be planted. Picture: Stuart Wilson.

WEATHER WORRY: Poppy Growers Tasmania president and North Motton farmer Glynn Williams looks at the soggy soil that is waiting for a poppy crop to be planted. Picture: Stuart Wilson.

THE Tasmanian poppy industry is within 12 days of facing its biggest crisis since inception.

A systemic mildew that's causing entire paddock losses in poppy crops across Tasmania has sparked an industry-wide response.

ABC Rural By Alex Blucher

Print Email Facebook Tweet 12 More 21

Updated 7 Nov 2014, 12:24pm

A fungal disease, a systemic form of downy mildew, is causing entire paddock losses in poppy growing regions across Tasmania.

Downy mildew stunts plant growth, yellows the leaves and has spores that can travel hundreds of kilometres in the air.

Poppy Growers Tasmania president Glynn Williams says that while mildew has been in Tasmania for over a decade, it's behaving differently this season.

"It seems to be popping up in places where it might not be expected to be."

The presence of the disease has sparked a co-ordinated, industry-wide response.

The Tasmanian Department of Primary Industries, companies Tasmanian Alkaloids, GlaxoSmithKline, TPI Enterprises, the Tasmanian Institute of Agriculture, and Poppy Growers Tasmania met in




PHOTO: Damage to poppy crops from systemic mildew is becoming more widespread in Tasmania (Supplied)

MAP: Burnie 7320

00:00 00:00

AUDIO: Mildew wiping out poppy crops in Tasmania sparks co-ordinated industry-wide rapid response (ABC Rural)





# TIAR Report into Tasmanian Land Availability

*83% of land identified as suitable the reports states is “Land marginally suitable for cropping”*

Elevation	≤300m	≤400m	≤300m
Rainfall	≤1250mm	≤1250mm	No Limit
Class 1 (1 in 3 yr rotation)	490 Ha	490 Ha	490 Ha
Class 2 (1 in 3 yr rotation)	1,932 Ha	1,933 Ha	2,587 Ha
Class 3 (1 in 4 yr rotation)	7,592 Ha	7,798 Ha	9,998 Ha
Class 4 (1 in 6 yr rotation)	50,245 Ha	54,845 Ha	58,014 Ha
<b>Total</b>	<b>60,259 Ha</b>	<b>65,066 Ha</b>	<b>71,090 Ha</b>

## Key Facts

- 83% of land identified in the report is Class 4 land
- The nature of class 4 land means that as area is expanded greater volatility in return to processors will occur.
- A significant amount of area to poppies is being processed on either 2 year of back to back rotations as opposed to ideally 1 to 3
- Of the 1 to 3 rotation area identified it contributes 4% of the area identified.

Class 4 land described as *“Land marginally suitable for cropping. Frequently has severe limitations of both physical and structural nature. Cropping rotations should be restricted to 1 or 2 years in 10.”*



# Raw Material Supply-The Game Changer

Victoria, Northern Territory and Portugal



aicep Portugal Global

REGISTADA c/a.R.

Exmo. Senhor  
Mr. Jarrod David Ritchie  
Diretor Geral  
TPI Enterprises  
Av. da Liberdade, 224, Edifício  
Eurolex  
1250-148 Lisboa

Ref.: 2014 / ENWUXAMBUNAM

**Assunto:** Memorando de Entendimento celebrado entre a AICEP e a TPI Enterprises.

Junto se envia a V.Exª os dois originais do Memorando de Entendimento em epígrafe, já assinados e rubricados pela AICEP, para efeitos de assinatura e rubrica por parte dos representantes legais da TPI Enterprises e respetivo reconhecimento notarial na qualidade e com poderes para o ato.

Com os melhores cumprimentos,



José Vital Morgado  
Administrador Executivo

geDOC: AICEP, S-07/04/2014-07623



WILLEM WESTRA VAN HOLTHE MLA | Member for KATHERINE  
MINISTER FOR PRIMARY INDUSTRY AND FISHERIES

**POPPY LEGISLATION PASSED**

15 May 2014

Legislation has been passed in the Northern Territory Parliament today to allow for the cultivation and processing of opium poppies in the NT under a strict licensing regime.

Minister for Primary Industry and Fisheries Willem Westra van Holthe said this now paves the way for the establishment of a potential \$30 million industry in the NT.

"This industry will ultimately be able to supply the international pharmaceutical industry with opium which is a key ingredient in pain-relief medicines that include morphine, thebaine, codeine, papaverine and noscapine," Mr Westra van Holthe said.

## Poppy output blossoms as new state joins in

- by: *RICK WALLACE*
- From: *The Australian* 22<sup>nd</sup> March 2014



Farmer Mike Badcock, in his poppy crop in northwest Tasmania, says the state has plenty of extra capacity but Victorian competition is healthy. Picture: Chris Kidd Source: TheAustralian

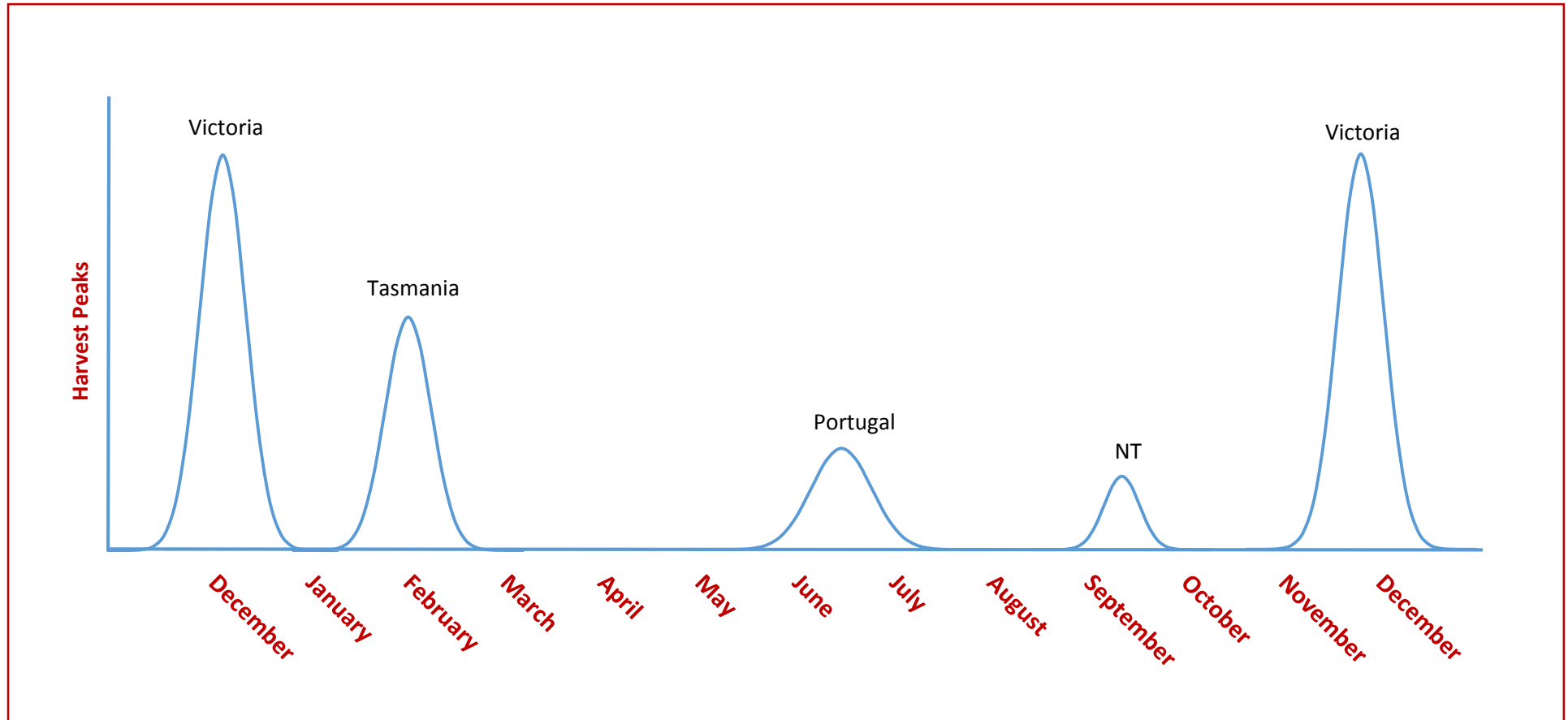
**AUSTRALIA** is poised to dominate the global poppy supply with Victoria joining Tasmania as one of the few jurisdictions in the world licensed to grow the crop for pain relief medication production.

New laws passed last week will help create a \$100 million a year industry in Victoria, tapping into booming demand for painkillers in Asia, according to the state government.



# Lowering Risk and Inventory Peaks

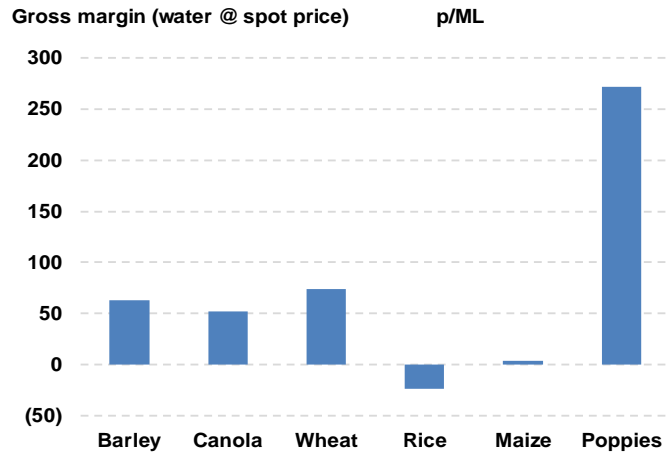
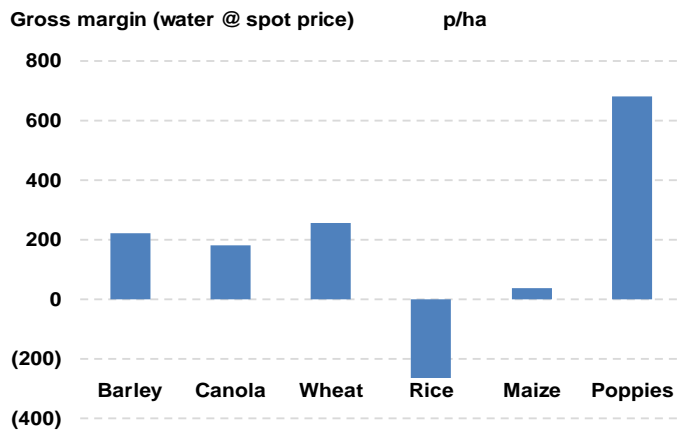
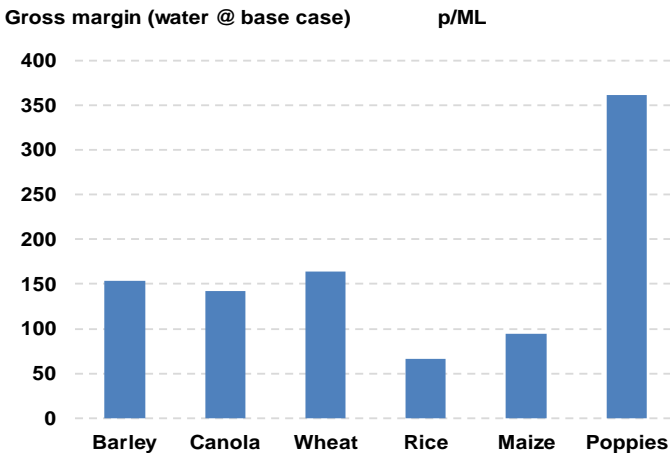
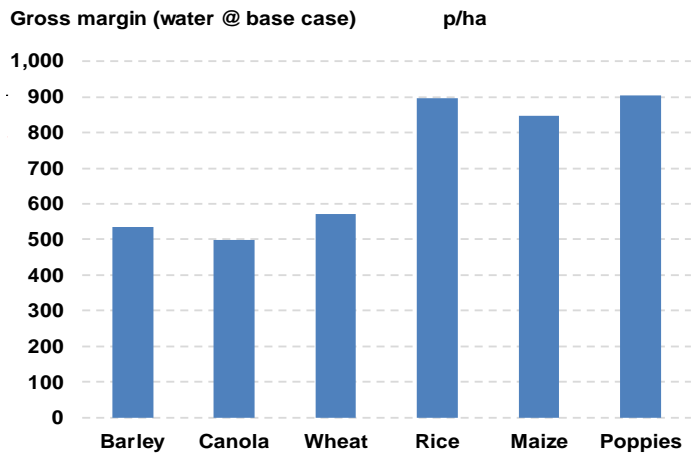
*Reducing the time between harvests*





# Competing with other Crops

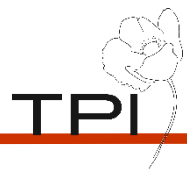
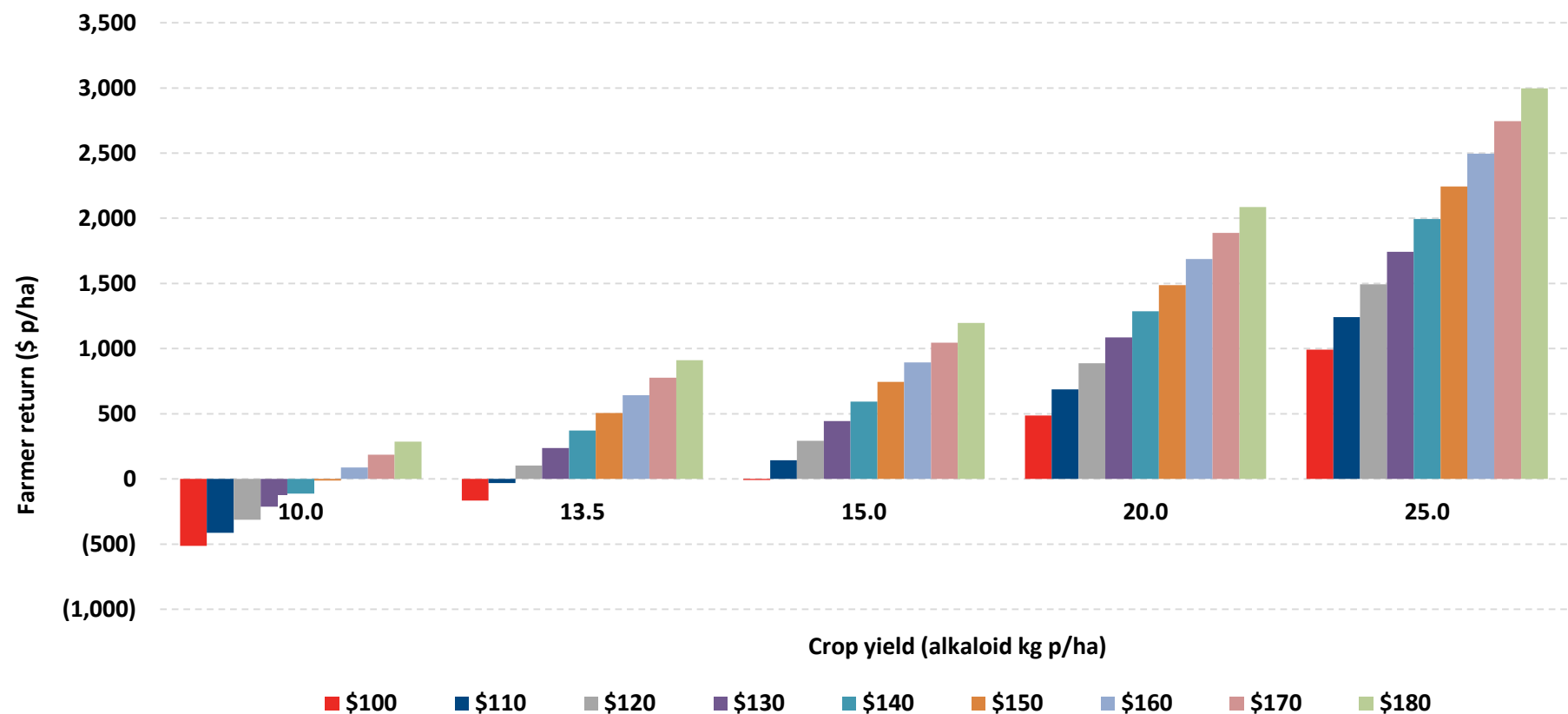
*As water increases in cost, poppies become more profitable*





# Farmer returns at various \$/Kg payments

*Expansion into marginal land inflates \$/Kg to maintain farmer Net returns*



Source: Wilson HTM equities research, TPI Enterprises Ltd (TPE), 14<sup>th</sup> August 2015



# Victorian Growing (main growing region)

*2nd commercial scale crop growing very well*



- Currently sown over 50% of our contracted area.
- Much better start to season than last season
- 4 field officers employed with another 2 to be added before end of calendar year
- Much more timely sowing with harvest expected to start mid-late December





# NT Growing

*1<sup>st</sup> commercial scale crop showing promise*



- Results to date look promising for 1<sup>st</sup> commercial scale crop (110 Ha)
- Despite some patchiness, crop is looking good with weed and pest control currently well managed
- Expect to harvest in Mid-Late October



# Portugal Growing

*1<sup>st</sup> commercial crop in Europe has been harvested*



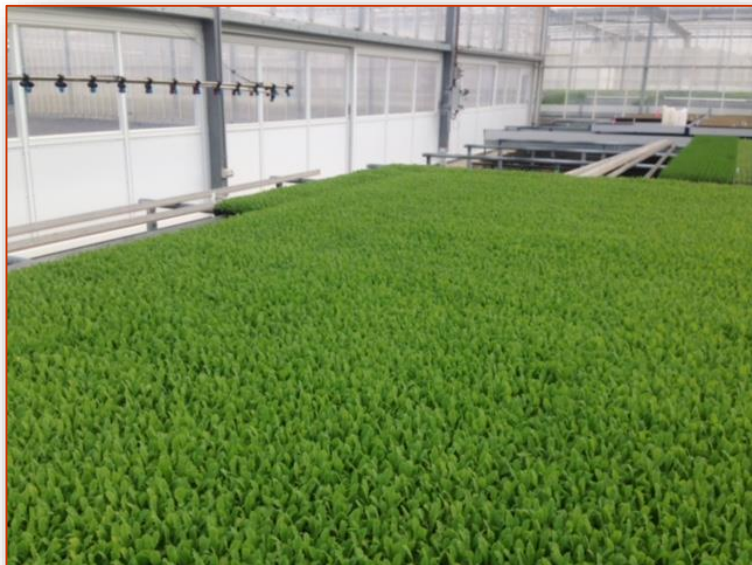
- Harvested completed 3<sup>rd</sup> week of August.
- Approx 400 Ha in the Alentejo region (Sth of Lisboa) in Portugal
- Will increase European growing in 2016.
- Expect to import in November 2015





# Agricultural R&D

*Continuing to develop new varieties and seed lines*





# Agriculture continues to be a key focus for the business

## Expansion plans

1. Continue to resource Agri expansion
  - Vic field officers
  - Portugal FTE's
  - NT contractors
2. Increasing % Alkaloid content
  - Cross breeding
  - Less straw at Harvest
3. Develop supply models to optimise supply chains from diverse areas
4. Reduce Crop inputs costs
  - Reduce Mildew requirements
  - Consider Basta/Roundup resistance
5. Other
  - Explore regions showing interest
  - Investigating different payment schemes





# Summary

*TPI offers one of the few opportunities globally to invest directly in the licit narcotics sector*

1.

Growing industry

2.

Manufacturing advantage

3.

Highly regulated / significant barriers to entry

4.

Established business, experienced Management team

5.

Diversity of supply



## *Industry myths*





# Recent Media - Enzymatic Biosynthesis of Narcotics

## *Commercially unviable*

- Alkaloids are notorious for their resistance to microbial attack
- Lack of enzyme activity, selectivity and specificity leads to expensive and time-consuming product purification/s
- Most bacteria and fungi cannot be cultivated as pure cultures in the laboratory let alone at commercial scale
- Enzymatic synthesis has to be carried out under very strict reaction conditions at very low substrate concentrations making commercialisation uneconomic (requirement for very large reactors => high capital investment)

**Science**express

## **Complete biosynthesis of opioids in yeast**

**Stephanie Galanie,<sup>1</sup> Kate Thodey,<sup>2</sup> Isis J. Trenchard,<sup>2</sup> Maria Filsinger Interrante,<sup>2</sup> Christina D. Smolke<sup>2\*</sup>**

Thus,  
as a rough estimate, a strain that converts sugar to morphine would require over a 7 million-fold improvement (100,000/1.5%) in overall yield relative to the work reported here.





## *Appendix A* KEY INVESTMENT RISKS





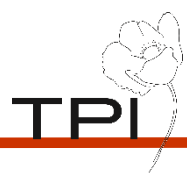
# Appendix A: Key Investment Risks

Government licences	TPI is required to obtain licences and permits across many jurisdictions. The majority of the licences are renewed either annually or biannually. There is a risk that laws or regulations may be amended in Australia or elsewhere in a manner that restricts TPI's markets for saleable product and for raw material supply. Any such change may affect the ability of TPI to carry on its business and may have a material impact on TPI's financial performance and future prospects of the business.
Agricultural Risk	<p>TPI's supply of poppy straw is subject to risks commensurate with any agricultural enterprise. A number of factors may adversely affect both supply volume and alkaloid content. The most common adverse environmental conditions that could affect the poppy crops are flood, frosts, hail, wind, storms, fires and excessive heat and/or rain during critical physiological periods.</p> <p>The company is seeking to manage agricultural risk through the diversification of supply, however poor poppy crops may have a detrimental impact on TPI's operational and financial performance, including reputational risk associated with failing to deliver on key supply contracts.</p>
Sovereign risk	The narcotics industry in which TPI operates is highly regulated. Changes, whether as a result of changes in government or otherwise, in international, national or state conventions, laws or regulations relating to the growing, manufacture, export or sale of narcotic raw materials could materially impact TPI's ability to operate. This may adversely affect TPI's financial performance and future prospects. The Therapeutic Goods Administration's Advisory Committee on Medicines Scheduling is currently considering making approximately 150 codeine products prescription only medicine. It is unclear whether or to what extent this change will occur and if it does, whether this will have a material effect on the supply of NRM. This would bring Australia in line with the pharmaceutical regimes currently existing in the US and Europe.
Loss of key personnel	The manufacturers in the licit NRM sector and API sector are relatively small in number and, as a consequence, the number of people skilled in the industry is lower than other pharmaceutical sectors. TPI is currently operating as a relatively flat organisation and is reliant on a few key staff. TPI operates across two countries and has facilities in three jurisdictions. Management of a complex business that operates globally has a higher employee risk/complexity than a business which operates in one jurisdiction. Loss of a few key personnel could have a material impact on TPI's operations and may impact the financial performance and future prospects of the business.
Sensitisation	Licit NRMs are by their nature toxic. If used inappropriately, they can lead to death and excessive exposure can lead to long term sensitisation, which can result in employee or other claims. Any claims may be costly and may impact TPI's ability to manufacture and the financial performance and future prospects of the business.
Changes in accounting standards	Australian Accounting Standards are issued by the Australian Accounting Standards Board and are not within the control of TPI and its Directors. Any changes to the accounting standards or to the interpretation of those standards may have an adverse effect on the reported financial performance and position of TPI.



# Appendix A: Key Investment Risks, cont...

Introduction of competing products	Companies are continually exploring new products which provide pain relief and may not exhibit side effects related to the use of opiate based pain relief (such as respiratory depression and/or addiction). An introduction of a non-narcotic opiate without adverse side effects could have a material impact on TPI's ability to compete and may impact the financial performance and future prospects of the business.
Subsidisation of competing crops	Some countries (including the European Union) currently grant subsidies for certain crops. Should existing subsidies increase or new subsidies be introduced by relevant countries (including the European Union) for crops that compete with opium poppies for returns, this may have a material impact on TPI's ability to obtain raw material at a commercially viable price. This would impact TPI's ability to compete and may impact the financial performance and future prospects of the business.
Manufacturing	TPI is currently relocating its facility from Tasmania to Victoria. While the move is approximately 80% completed. The installation and commissioning of the facility could be delayed which would have an effect on TPI's ability to supply to its customers. Any substantial delay could have a material impact on TPI's operations and may impact the financial performance and future prospect of the business. TPI is currently yet to achieve all necessary approvals for its manufacturing site in Victoria. TPI may be delayed or prevented from obtaining its Commonwealth licence which would have a material impact on TPI's operations and may impact TPI's financial performance and future prospects.
IP protection	TPI's low cost water based, solvent-free extraction process is not protected by patents but rather by confidentiality agreements. TPI protects its intellectual property based on a trade secret approach. This may result in a competitor developing a similar low cost extraction process which would compete with TPI's main competitive strengths. Any new competitor with similar intellectual property may have a material impact on TPI's competitive position and may impact TPI's financial performance and future prospects.
Competing with SOE	Two of TPI's competitors are enterprises owned by the Indian and Turkish governments. While these competitors have a protected position in, and focus primarily on, the US market, there is a possibility that they could compete in markets in which TPI has a presence. Large state owned enterprises have an ability to run at a loss for a long period of time. A price war could have a material impact on TPI and its ability to compete and may impact the financial performance and future prospects of the business. Currently, a significant quantity of codeine is being sold into India. It is possible that, in time, the Indian government will cease its historical opium manufacturing and create a NRM business similar to that occurring in Australia and Europe. Such a change may have a material impact on TPI's ability to compete and may impact the financial performance and future prospects of the business.
Diversion of material	TPI employs state of the art security and has a highly regulated and monitored security system at its facilities. Despite this, any diversion (theft or illicit use) of material during manufacture, storage or freight could result in a loss of an operating licence or substantial fine and/or reputational damage. This may have a material impact on TPI's ability to compete and may impact the financial performance and future prospects of the business.





## Appendix A: Key Investment Risks, cont...

Change in regulation to limit supply into the US and other markets	The US government has, from time to time, restricted the quota issued for importation of NRMs in response to the abuse of prescription medication. This restriction on quota could limit the opportunities for expansion in the US market. Other countries may take a similar view and/or change the scheduling and/or availability of pain relief medication. Such changes or quota restrictions may have a material impact on TPI's ability to operate and may impact the financial performance and future prospects of the business.
Competition	TPI competes against both SOE and large multinationals. Both have a capacity to operate at a loss or compete aggressively for market share for a longer period than TPI. This may place pricing pressure on TPI and may impact TPI's ability to retain existing customers or attract new customers. If TPI cannot compete successfully, TPI's financial performance and the future prospects of the business may be adversely affected.
Foreign exchange	TPI sells NRM in US dollars and poppy seed in Euros. It buys its raw material (opium poppies) predominantly in Australian dollars and Euros. Any adverse change in currency could have a material impact on TPI's financial performance and future prospects of the business.
Poppy seed price volatility	Poppy seed is a commodity based product the price of which varies in response to supply and demand. The revenue derived from poppy seed contributes to a proportion of the cost of the raw material and hence contributes a material amount to TPI's revenue and profit. The poppy seed market can be volatile and pricing can change rapidly. This volatility, in combination with €/AUD foreign exchange changes, could have a material impact on TPI's ability to compete and may impact the financial performance and future prospects of the business.
Poppy seed purity	Some countries, including the Czech Republic, are lobbying the EU to decrease the residual poppy straw dust (morphine content) in poppy seed. This would restrict the importation of poppy seed from high alkaloid countries, such as Australia and Spain. Should the EU accede to these demands the cost of purifying poppy seed could materially change. This may have a material impact on TPI's ability to compete and may impact the financial performance and future prospects of the business.
API expansion and product recalls	If TPI expands into API manufacturing, the regulatory requirements for selling product will increase above the already significant regulatory hurdles. Product produced at an API level must be fit for human consumption and any manufacturing, documentation or regulatory errors will increase the risk of an adverse financial outcome including that associated with a public recall and enforcement actions. This may impact the financial performance and future prospects of the business.
Changes in tax rules or their interpretation	Changes in tax law, or changes in the way tax laws are interpreted may impact the tax liabilities of TPI, Shareholder returns, or the tax treatment of a Shareholder's investment. In particular, both the level and basis of taxation may change. The tax information provided in this Information Memorandum is based on current taxation law as at the Information Memorandum Date. Tax law is frequently being changed, both prospectively and retrospectively. Any actual or alleged failure to comply with, or any change in the application or interpretation of tax rules applied in respect of such transactions, may increase TPI's tax liabilities or expose it to legal, regulatory or other actions.



## Appendix A: Key Investment Risks, cont...

<b>Litigation</b>	In the ordinary course of business, TPI may be involved in possible disputes. These disputes could give rise to litigation. While the extent of any disputes and litigation cannot be ascertained at this time, any dispute or litigation may be costly and may adversely affect the operational and financial results of TPI.
<b>Counterparties</b>	There is always a risk that, notwithstanding appropriate safeguards, a party with whom TPI has dealings may experience financial or other difficulties which may affect that party's ability to perform its obligations to TPI. This may affect the value of, and returns from, an investment in Shares.
<b>Absence of dividends</b>	The Board has yet to establish a dividend policy, and does not expect to pay dividends in the near term. While TPI continues to expand its business operations, TPI expects to continue to reinvest in its growth rather than distribute profits in the form of dividends. The ability of TPI to pay any dividend in the future is dependent on many factors. The Directors do not give any assurance regarding the payment of dividends in the future.
<b>Market conditions</b>	If TPI is admitted to the official list of ASX, the price at which Shares are quoted on ASX may increase or decrease due to a number of factors outside TPI's control and which are not explained by the fundamental operations and activities of TPI. These factors may cause the Shares to trade at prices above or below the price at which the Shares were initially acquired. There is no assurance that the price of the Shares will increase if they are quoted on ASX.
<b>Additional requirements for capital</b>	The future capital requirements of TPI will depend on many factors including its business development activities. However, TPI will not raise capital for three months from the date of this Information Memorandum. Should TPI seek to raise further funds after three months, there can be no assurance that additional financing will be available when needed or, if available, on terms acceptable to TPI. Any inability to obtain additional finance, if required, may have a material adverse effect on TPI's business and its financial condition and performance. Further, any additional finance raised may dilute Shareholders' interests in TPI.
<b>Force Majeure</b>	Events may occur within or outside Australia that could affect investor sentiment or impact upon the global and Australian economies, the operations of TPI and the price of the Shares. These events include acts of terrorism, an outbreak of international hostilities, fires, floods, earthquakes, labour strikes, civil wars, natural disasters, outbreaks of disease or other man-made or natural events. These events can have an adverse effect on the demand for TPI's goods and services and its ability to conduct business. TPI has only a limited ability to insure against some of these risks.
<b>Insurance</b>	TPI insures its business and operations. However, TPI's insurance may not be of a nature or level to provide adequate insurance cover to insure against the occurrence of all events that may impact on the operations of TPI. The occurrence of an event that is not covered or fully covered by insurance could have a material adverse effect on the business, financial conditions and results of TPI.
<b>Market access</b>	If TPI expands into API manufacturing, restrictions imposed by some countries on the sale of APIs which have not been manufactured in that country or region may impact TPI's ability to compete. If TPI cannot compete successfully, this would impact TPI's financial performance and future prospect.



## *Appendix B* COMPANY HISTORY





# Significant investment in IP, licences and supply diversification

*TPI has invested heavily in leveraging our intellectual property through extensive research and development*

<b>2004</b>	<ul style="list-style-type: none"><li>Jarrod Ritchie establishes TPI to exploit a novel water-based extraction technology</li><li>TPI receives letter of support from Tasmanian Government</li></ul>
<b>2005</b>	<ul style="list-style-type: none"><li>TPI receives grant to develop a perennial thebaine poppy obtained from Israel</li><li>TPI receives licence to grow a trial crop in north east Tasmania</li><li>TPI starts construction of manufacturing facility in Cressy Tasmania</li></ul>
<b>2006</b>	<ul style="list-style-type: none"><li>TPI receives first commercial order</li><li>TPI applies for first commercial licence</li></ul>
<b>2007</b>	<ul style="list-style-type: none"><li>TPI receives full operational licences from Tasmanian and Federal Government</li><li>TPI plants 500Ha of commercial poppies in Tasmania</li></ul>
<b>2008</b>	<ul style="list-style-type: none"><li>TPI acquires 250Ha of farmland to research and develop novel poppy varieties including its perennial poppy <i>Papaver bracteatum</i></li></ul>
<b>2009</b>	<ul style="list-style-type: none"><li>TPI delivers first commercial supplies of morphine to European customers</li></ul>
<b>2010</b>	<ul style="list-style-type: none"><li>TPI sales increase 5 fold</li><li>Poppy breeding focuses on different varieties including codeine, oripavine and thebaine</li></ul>
<b>2011</b>	<ul style="list-style-type: none"><li>TPI expands customer base in narcotic raw materials and poppy seeds</li><li>TPI commences lobbying of Federal and State Governments to permit opium poppies (<i>Papaver somniferum</i>) to be grown on mainland Australia</li></ul>

<b>2012</b>	<ul style="list-style-type: none"><li>TPI commences discussions with European countries to permit northern hemisphere growing</li><li>TPI invests in further cost reduction technology through Federal Government grant</li></ul>
<b>2013</b>	<ul style="list-style-type: none"><li>TPI receives trial licence to grow a small plot in Victoria (approx. one hectare)</li><li>TPI identifies Portugal as ideal growing and processing opportunity</li></ul>
<b>2014</b>	<ul style="list-style-type: none"><li>Laws introduced to permit commercial growing in Victoria and Northern Territory and raw material to be brought into Victoria from other jurisdictions</li><li>TPI receives grant to relocate manufacturing facility to Victoria and commences relocation</li><li>TPI grows a successful trial crop in Northern Territory</li><li>TPI receives licence to grow poppies to Portugal</li><li>TPI acquires facility in Portugal for processing</li></ul>
<b>2015</b>	<ul style="list-style-type: none"><li>TPI relocates manufacturing facility to Melbourne, Victoria</li><li>TPI commences harvest of first commercial crop in Victoria</li><li>TPI commences sowing its first northern hemisphere crop in Portugal</li><li>TPI receives its first international licence in Europe to grow and export opium poppies (<i>Papaver somniferum</i>) from Portugal</li><li>TPI commence ASX listing process</li></ul>