AUSTRALIAN INDUSTRIAL HEMP ALLIANCE

SUBMISSION TO PRODUCTIVITY COMMISSION

INQUIRY INTO REGULATION OF AUSTRALIAN AGRICULTURE

Introduction

Industrial hemp (i-hemp) has been grown for thousands of years, with a mature global market for food and fibre products and ready supply of imported seeds and fibre material. However there is considerable evidence that i-hemp is experiencing a global resurgence in demand, due to a number of drivers including:

- the benefits that i-hemp can offer in responding to climate change, by sequestering carbon and as an energy efficient construction material;
- the growth of the bioeconomy; and
- new research and understanding of the many health benefits of hemp food.

Markets for hemp in Australia are undeveloped by comparison to other OECD countries, especially Europe, the UK and Canada. The past 15 years have seen significant global innovation, significant levels of research into agronomy and the development of high-performance hemp products. For example, Canada's exports of hemp products grew from C$10.4 million in 2010, to over C$90 million in the ten months to October 2015 (Source: Statistics Canada). Australia's industrial hemp industry by comparison is fledgling, with very little data available. The best indication of the size of Australia's industrial hemp industry was provided by a 2012 ABARES study, identifying 630 hectares planted in 2012 for both fibre and seed. At current prices the value of this production at farm gate would be around A$1.6 million.

I-hemp is a promising industry for rural Australia, as it is a high yielding and hardy, fast growing annual crop, fibre crops growing 4-5 metres in as many months. As fibre crops rapidly outgrow weeds, they require minimal (if any) herbicides and pesticides, reducing input and environmental costs. Food crops provide similar advantages although as these crops are not as dense, some herbicides that are approved for organic cultivation are used pre-emergence for weed control. The industry is keen to pursue an organic food seed industry as this is where the major market lies.

I-hemp can be grown and harvested using conventional farming equipment, with minimal capital entry barriers for farmers. It can be grown in rotation with other cereal crops, with some studies showing increased yield in wheat crops that follow a hemp crop. Its strong root system improves soil structure and adds soil carbon at around 1 tonne per hectare. Seed crops have recently been providing a similar return to canola at around $1,300/hectare. There are an estimated 25,000 products that can use hemp as a feedstock – therefore it offers a great source of diversification for Australian farmers.

Regulatory barriers to the development of the Australian i-hemp industry are significant, and include:

- the prohibition on human consumption of i-hemp seed, which has effectively restricted any domestic market development;
- the different licensing regimes between states and their associated compliance regimes; and

- Import controls – lengthy quarantine processes can add substantial costs and delays to i-hemp planting and production.

The Australian Industrial Hemp Alliance (AIHA) is a newly formed (established 2015) national industry association whose charter is to represent the total industry encompassing state based grower associations, processor/manufacturers and traders of i-hemp products. The AIHA's membership includes the majority of the state based organisations and grower groups, representing Australia's licensed hemp growers.

The AIHA recognise that due to its genetic relationship to medicinal cannabis, the production of i-hemp carries certain risks compared to other broadacre crops that need an appropriate regulatory response. This situation is similar to the challenges faced by the Australian poppy industry where the plants are also a source of opiates (arguably a much higher risk crop as it has been known to cause several deaths).

AIHA seeks an ongoing process of engagement with the Australian Government to develop a regulatory regime that would:

- provide a nationally consistent and risk-based approach to licensing, monitoring and trading hemp production by hemp researchers, growers, processors and import/exporters. This would include appropriate quarantine measures both for international and inter-state trade;
- remove restrictions on the sale of hemp food, backed up by an industry-led quality assurance program to ensure consumer safety and product labelling.

Addressing these issues would establish a supportive framework for investment by growers and processors, enabling market and seasonal conditions to be the key determinant of industry growth.

This submission is structured to expand on these key themes.

State based production licensing

I-hemp is a climate resilient food crop and suitable to be grown across many of Australia's regions. Agriculturally there is security in diversity and hemp is recognised as a valuable crop because it is very hardy and it improves soils for subsequent crops. Research in NSW has demonstrated that hemp crops are able to survive extreme weather events such as hailstorms where other crops such as soy are destroyed. In Japan hemp crops survive cyclonic events.

Several states including NSW, Tasmania, Queensland, Victoria and WA have commercialised hemp production and have growing industries, despite the multiple regulatory obstacles which exist. However, this is not the case in all jurisdictions. Currently it is not possible to grow i-hemp in SA or NT.

I-hemp has been commercialised in NSW since 2009. All reports from DPI licensing officials confirm that the regulatory framework works effectively for both licensing officials and farmers. There have been no issues to cause concerns for police. Other states, while establishing licensing regimes, have limited resources for reviewing license applications, monitoring, and testing THC content of hemp produce. This can add major delays to planting and marketing of crops and acts as an effective deterrent to industry growth.

In the states where i-hemp has been commercialised, there are variations in how farmers in each state are licensed and variations to the low THC levels their crops are permitted to reach. These variations are from .035% to 1%. Low THC varieties have no potency as a drug. The following extract from the Tasmanian Industrial Hemp Bill 2015 Regulatory Impact Statement details the different state regulations:

Comparison of current regulation with proposed regulation

Table 1. Jurisdictional Comparison of Industrial Hemp Licensing Requirements

	TAS Current	TAS Proposed	QLD	WA	VIC	NSW	ACT
PORTFOLIO	Health	Agriculture	Health	Agriculture	Health	Agriculture	Agriculture
RESEARCH LICENCE							
Is research allowed?	Not specified	✓	✓	X	✓	✓	✓
Must purpose of research be specified?	Not specified	Can be requested	Can be requested	X	✓	✓	Can be requested
Is a licence required?	Not specified	✓	✓		✓	✓	✓
GROWING LICENCE							
Is a licence required?	✓	✓	✓	✓	✓	✓	✓
Head of power for licence fee?	✓	✓	✓	✓	✓	✓	✓
Does the applicant have to be identified?	✓	✓	✓	✓	✓	✓	✓
Is a police check required?	✓	✓	✓	✓	✓	✓	✓
Do other interested parties (close associates) need to be identified?	X	X	✓	X	✓	✓	✓
Is a description of intended use of the crop required?	✓	✓	Can be requested	X	✓	✓	Can be requested
Does property where hemp will be cultivated/stored (or processed/manufactured) have to be identified or assessed?	✓	✓	X	✓	✓	✓	
Is crop testing required to verify THC level?	✓	✓	✓	✓	✓	✓	✓
Duration of licence	Not specified	5 years	3 years	3 years	3 years	5 years	3 years
Conditions on a licence?	✓	✓	✓	✓	✓	✓	✓
Reporting requirements	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Is maximum THC threshold specified on a licence? (Cultivated plant material including seed (%))	✓ (<1.0-Head of power in licence as from 30/01/15)	✓ (<1.0- Head of power in legislation)	? (<1.0- Head of power in legislation)	? (<0.35- Head of power in legislation)	? (<0.35-Head of power in legislation)	✓ (<1.0- Head of power in legislation)	✓ (<1.0- Head of power in legislation)
Can a licence be transferred?	X	X	X	✓	X	✓	X

Variations in regulation related to low-THC levels between states are completely unnecessary and only create further barriers to different fibre and food varieties being trialled to identify optimal cultivars and yields. For example, Victorian farmers are not permitted to use 0.04%THC seeds from their NSW counterparts. With the current shortage of seed and difficulty importing, this seriously constrains activity in Victoria.

Recommendation:

1. Australian licensing authorities work with the AIHA to establish a jointly managed licensing regime, to establish consistent national regulations and streamlined compliance procedures based on appropriate risk management methods.

Food Regulation

Australia is one of the few countries in the world to ban the human consumption of hemp food products. Two submissions considered by the Australia New Zealand Food Authority (ANZFA) and Food Standards Australia New Zealand (FSANZ)[i1] have resulted in the food authority finding that hemp is an excellent food source and that there are no safety concerns associated with hemp food consumption.

There are extensive and expanding global markets for a wide variety of hemp food products manufactured from certified low THC i-hemp cultivars (> 1%). Amongst these are hemp milk (including for dairy-sensitive infants as a nutritious alternative formula), hemp cheese, hemp grain products such as pastas, cakes and breads, hemp

[1] http://www.foodstandards.gov.au/code/applications/Pages/applicationa1039lowt4708.aspx

nut butters and hemp oil and mayonnaise. The hulled seeds provide an excellent source of readily digestible plant-based protein and hemp protein powder is regarded as a super food by leading athletes.

Australia is struggling with a huge and growing economic burden related to healthcare and there is need for a shift to preventative health. I-hemp has been recognized for thousands of years as a highly nutritious food with exceptional preventative health benefits. It was and is widely used as a staple in Asia and India because of these values.

A 1954 research report details that children were found to have been successfully treated for tuberculosis with traditional hempseed porridge during the 1930s and 1940s in Czechoslovakia, in the absence of antibiotics (Sirek 1954). This report emphasized the importance of hempseed protein. Subsequent research has since revealed the dietary significance of the *omega*-3 and -6 fatty acids in hempseed oil.

There is currently a major imbalance in the *omega*-3/6 ratio in the Western diet, with too much *omega*- 6, now considered an important contributor to the high occurrence of various inflammatory, cardiovascular, skin and even mental disorders. As a balanced source of these fatty acids, hempseed oil and seeds can be used to help reduce their occurrence. http://eiha.org/media/2015/08/15-07-24-Report-Scientifically-Safe-Guidelines-THC-Food-nova-EIHA.pdf

Dehulled low THC hemp seeds contain no THC at all. Minute traces of THC (.03% - 1%) exist in the tough, woody hulls that surround the seed. To manufacture hemp flours and butters, hempseeds are hulled. There is low level risk attached to contamination as manufacturers realise that the hull is gritty and detrimentally affects the texture, appearance and quality of high market value grain products. The hulled seed is exported as “hemp hearts” from Canada.

Hemp milk like almond milk and other nut products is an extract from the seeds and is used as an excellent dairy milk alternative where children have dairy intolerance. In the “milk” manufacturing process washed hemp seeds or dehulled hemp seeds are blended with water (at a ratio of 1:3) and strained.

In the UK and Israel where certified organic low THC seeds are readily available, they are sprouted for baking sprouted breads or to make a similar product to wheatgrass juice (In this process the low THC seeds are soaked for 4 – 12 hours in water and then washed and drained several times over a 6 day period during which time they have sprouted and they are then juiced).

FSANZ has concluded that any risk of contamination can be effectively managed in Australia just as it is effectively managed throughout Europe and Canada. In Europe a system of certified low THC hemp varieties accompanied by industry regulation measures to ensure proper seed cleaning have ensured that there are no regulatory or health concerns.

Internationally the hemp food industry has established stringent standards. The Australian industry seeks to comply with these international standards and the Australian Industrial Hemp Alliance has written to the Australia and New Zealand Ministerial Forum on Food Regulation indicating the industry’s willingness to work with government to develop processes and regulations to ensure this.

Australia is known for its high quality food production and Standards will give Australian farmers a marketing edge and maximise returns and industry. There are significant export markets for hemp seed products including cross-seasonal opportunities to supply hempseed to Canada where there is a higher demand for organic hemp seed for consumption than Canadian farmers can meet.

In Europe, two countries, Switzerland and Belgium have actual scientifically based government-backed low THC limits. The latter are considered safe for the consumer and friendly to the industry, while many consider the German safe, albeit too conservative.

Outside of Europe, Canada stands out as it only has limits on THC at the hemp raw material level, rather than the common approach of THC in finished goods. To date, there have not been complaints from customers or government, to suggest that the Canadian limits for THC in hemp foods could be too high. This system is pragmatic and designed to help the industry. Its efficiency can also be partially attributed to the country's more homogeneous administrative character across states, and experience implementing highly technical regulations. http://eiha.org/media/2015/08/15-07-24-Report-Scientifically-Safe-Guidelines-THC-Food-nova-EIHA.pdf

CASE STUDY – CANADIAN HEMP INDUSTRY SELF-REGULATION

In Canada the industry has established its own standards that are voluntary but have been widely adopted. The goal was primarily to avoid any issues with drug testing and false positives for cannabis. For this effect, in the early 2000s several North American companies got together to create "Test Pledge", a voluntary regulatory agreement created by members of the industry. Pledge companies have made a commitment to implement quality control measures which limit the amount of trace residual THC in hulled hemp nuts and oil, thus eliminating the risk of positive drug tests. Producers and processors of hemp oil and hulled hemp nuts must commission THC tests on each and every lot of hulled hemp nuts and oil, performed by a properly accredited laboratory following the official Health Canada protocol.

All TestPledge distribution and/or manufacturing companies downstream must obtain and keep copies of THC tests on each and every lot of hulled hemp nuts and oil that is bought, used and/or sold. It only covers hulled hemp nuts and hemp oil, as these are currently the most commonly consumed hemp products in the US market. Even Test Pledge products containing 10 ppm or less have not caused employees to fail workplace drug tests; they have been allowed to be imported as a product and so the limit is seen somewhat as a reference. Higher THC values would still be accepted on the market and are commonly traded, with no known problems to the consumer.

Backed by scientific research, TestPledge requires that pledging companies achieve and commit to the following THC guidance values:
Hemp oil: 5.0 mg/kg
Hulled hemp nuts: 1.5 mg/kg

The more stringent THC limit in hulled hemp nut compared to oil was set because hulled hemp nuts are more palatable and may be eaten in larger quantities. THC guidance values for TestPledge were set low enough to allow for the extensive daily consumption of both hemp oil and hulled hemp nuts without any problems. Canada's hemp food regulations stand out as they only have limits on THC at the hemp raw material level, rather than the common approach of THC in finished goods. To date, there have not been complaints from customers or government, to suggest that the Canadian limits for THC in hemp foods could be too high.

Australia's domestic demand for hemp foods is growing at a rapid rate because after 12 years of scrutiny by statutory bodies and nutritionists via several industry submissions to FSANZ, Australians understand hemp's food value. The expanding domestic market is currently being met through i-hemp seed imports from Asia, central Europe and Canada.

Based on their submission to the Tasmanian Senate Inquiry in Hemp, Tasmanian company Hemp Australia Pty Ltd also "has a long-standing national customer base for cold-pressed hemp-seed oil. Currently, hemp seed grown in Tasmania is an export-earner for the state with customers including health product companies, competition fishing organizations, an organic pork producer and cosmetics manufacturers … Cold-pressed hemp-seed oil is the primary product exported from Tasmania but there is strong demand for byproducts including hemp meal (the flakey leftovers from pressing), which is ground into a high-protein flour". Hemp Australia Pty Ltd believe that if legislation is expedited, initial demand would take annual seed exports from

Tasmania from the current dozens of tonnes to many hundreds of tonnes and beyond.

The absence of action to legislate for hemp food consumption in Australia raises a number of regulatory anomolies:

- Despite the illegality of hemp food consumption the Australian Customs and Border Protection Service have done little to restrict hempseed imports for human consumption into Australia. Hemp food products are readily available through health food outlets in all states and territories;
- According to Hemp Australia Pty Ltd evidence to the Tasmanian Senate enquiry, the oil produced in Tasmania is labeled according to the current federal laws, ie, that it is a food-grade oil but that it is illegal to consume it in Australia. Despite the labeling, the company believes the majority of consumers buy the oil for consumption.

Recommendation:

2. The Australia and New Zealand Ministerial Forum on Food Regulation approve the use of *Cannabis sativa* with low levels of tetrahydrocannabinal (THC), in both seed and seed oil, as a food by removing the Australia New Zealand Food Standard Code prohibition.

3. The Australian Government work with the Australian Industrial Hemp Alliance to develop an industry based quality assurance regime to manage the safe handling and testing of hemp food inputs thereby ensuring only low THC products enter the food marketing system.

Along with prohibition for human consumption to date Australia has prohibited hempseed being used to feed livestock despite the fact that the seed meal would be useful in aquaculture and raising animals. It is an excellent animal feed and in Europe this is its major market (Hempro 2014; EIHA 2014, nova-Institute 2014). This is due to the fact that some farm animals need lipids with a high share of omega-3 and omega-6 fatty acids for optimum development.

Australia also prohibits i-hemp leaves being used as a fodder crop despite successful European models such as in Holland where the leaves are dried and pelletised as a fodder supplement for livestock https://www.youtube.com/watch?v=GJKnz9hlB3Q.

Recommendation:

4. The Australian Government work with the Australian Industrial Hemp Alliance to develop an industry based quality assurance regime to manage the safe handling and testing of hemp food inputs thereby ensuring only low THC products enter the food marketing system to enable both seed and seed oil to be used as a feed and supplement for livestock and in aquaculture.

5. The Australian Government work with the Australian Industrial Hemp Alliance to develop an industry based quality assurance regime to manage the safe handling and testing of low THC i-hemp leaf matter to enable the production of dried pelletised fodder for livestock.

Police concerns and law enforcement issues:

State Police Forces are the major objectors to domestic consumption of hemp seed. Reasons identified in interviews with FSANZ (Supporting document 4 - FSANZ discussions with police agencies and forensic analysts) are as follows:

a) their perception that it will interfere with drug testing despite the fact that manufactured hemp seed food products contain minute if any traces of THC.
b) New South Wales Police indicated there have been cases of illicit cannabis being grown within licenced hemp crops.
c) Western Australian police are concerned that the hemp leaf on food products will send a confused message about illicit cannabis
d) Police agencies also expressed concern that hemp seeds may be used to disguise the trafficking of illicit cannabis seeds.

These objections are discussed below.

(a) Swab Testing

As noted by FSANZ:

> *At present, cannabis consumption is prohibited, and the presence of THC in the oral fluid of a driver is an offence. The presence of THC does not relate to impairment of a driver, merely to the presence of the illicit substance. Accordingly, police have not investigated levels of THC detection in oral fluid that may be indicative of impairment.* (ibid)

The treatment of THC as a prohibited substance is out of perspective to the comparative risk it poses. This situation requires urgent review, particularly in light of recent changes to Therapeutic Goods Administration Schedules allowing prescription access to medicinal cannabis. There is also a need for further scrutiny in relation to how in the future a more accurate drug swab test might be administered more equitably. Currently testing is pursued by police officers in different ways in different states. The detection thresholds appear to vary between jurisdictions, which may impact on the likelihood of positive screening test results in different jurisdictions.

Where swab testing is rigorously administered such as in NSW, it is used to detect minute traces of THC, well below the levels recommended in the testing or recommended by any advisory body. Studies have shown that such minute trace levels of THC can be detected if someone has been in the presence of someone smoking high THC cannabis as well as in individuals who have consumed or smoked high THC cannabis themselves.

The particular testing instrument currently used presents a disproportionately high number of false positive and false negatives. Because of this high level of inaccuracy, countries such as New Zealand do not use the swab tests that Australian police use. Police forces in developed nations in which hemp food is consumed have dealt with this issue and there are no known problems with false readings in drug tests used in these jurisdictions.

Two studies by Oxford University, in 2001 and 2008, assessed the extended ingestion of 79 Canadian-made hemp food items over four successive 10-day periods. The ingested hemp was equivalent to daily intakes of 125ml of pure hemp-seed oil and though it was an exceptionally high intake, none of the test subjects screened positive to THC when the test cutoff limit was 50 ng/ml. The Oxford Journal of Analytical Toxicology and the Oxford Journal of Chromatography reported: "The highest THC level found in any of the specimens was 5.2 ng/ml, well below the 15 ng/ml confirmation cutoff used in (US) federal drug-testing programs."

The university study used hemp consumption rates and cannabis detection rates that were much more rigorous than those of the actual road rules, meaning the chances of drivers testing positive to cannabis under British law after consuming hemp food was not just unlikely, it was not possible.

In the United States in 2003, the Federal Workplace Drug-Testing Program raised the test screening concentration cutoff for opiates (heroin, morphine and codeine) in urine from 300 ng/ml to 2000 ng/ml because the ingestion of poppy seeds in bread was found to be causing positive test results for morphine. The significant increase in the opiate test limit overcame the detection dilemma without altering the public health risk. There were no reported false readings regarding ingested hemp foods.

Determining a nationally consistent acceptably low level of THC is further complicated by the fact that high THC Cannabis has been decriminalised and has not been considered to be high risk drug in the Australian Capital Territory, South Australia and the Northern Territory for varying numbers of years.

According to the National Cannabis Prevention and Information Centre, the Australian Capital Territory introduced a civil penalty system for the possession of 'small amounts' of cannabis in 1993. If someone is caught with up to two non-hydroponic cannabis plants, or up to 25 grams of marijuana (cannabis plant material), they receive a $100 fine with 60 days to expiate (pay the fine) instead of a criminal charge. Instead of paying the fine, the person may choose to attend a drug assessment and treatment program.

In 1987, South Australia was the first state to decriminalise minor cannabis offences. The possession of up to 100 grams of marijuana, 20 grams of hash (the resin from the cannabis plant), one non-hydroponic plant or cannabis smoking equipment leads to a fine from $50 to $150 with 60 days to expiate.

Since 1996, in the Northern Territory adults found in possession of up to 50 grams of marijuana, one gram of hash oil, 10 grams of hash or cannabis seed, or two non-hydroponic plants can be fined $200 with 28 days to expiate rather than face a criminal charge.

In the rest of Australia, any cannabis offence is a criminal offence. If someone is charged with possession of cannabis in these areas and found guilty, they could receive a large fine or jail time and will have a criminal record. It is usually up to the police officer whether or not to 'divert' the offender or charge them.

With varying conditions, cautions can be issued at police discretion for possession of 50 grams of high THC cannabis in Victoria, Queensland and Tasmania. In NSW that amount is reduced to 15 grams.

This lack of a uniform approach to policing has major social and economic impacts. In itself it presents a very confusing message to Australians – if the Australian Government considers cannabis to be a high risk drug why has it been decriminalised in ACT, SA and NT for years?

Regardless, the confusion created by lack of uniform policing has resulted in police incorrectly identifying a risk associated with hemp foods and as a result they have obstructed the consumption of an extreme healthy food and development of a major agricultural market opportunity.

Recommendation:

6. Australian authorities need to identify the equipment, detection limits and equipment calibrations used overseas to detect drug-drivers in jurisdictions that have hemp-based food, and to assess the suitability of current equipment used by the state's authorities.

(b) New South Wales Police indicated there have been cases of illicit cannabis being grown within licenced hemp crops.

Discussions with NSWDPI contradict this claim. NSW DPI has again recently confirmed that since commercialisation of industrial hemp in 2008 in NSW there has never been a single case of someone growing a low THC industrial hemp crop as a front for a high THC cannabis crop. Samples are undertaken of all crops in the field by accredited inspectors, and any high THC hemp would be easily detected.

(c) Western Australian police concerns that the hemp leaf on food products will send a confused message about illicit cannabis

It is in both the hemp industry and the general population's interest to ensure that hemp foods are differentiated from illicit cannabis. The market for hemp foods stems from the nutritional profile of hemp seed and this is the food hemp industry's primary marketing tool.

It would be counterproductive for i-hemp product manufacturers to suggest or imply that hempfoods are mind-altering. This would negatively impact demand from the major target market – health conscious consumers.

There is no international evidence to suggest any increase in illicit cannabis use anywhere, as a result of the promotion of hemp foods. Low THC hemp is not a drug plant and hemp foods can and are manufactured globally without affecting the management of illicit drugs.

(d) Police agency concerns that hemp seeds may be used to disguise the trafficking of illicit cannabis seeds.

Internationally there is no evidence to suggest that hemp food consumption has increased the trafficking of illicit cannabis seeds. Unhulled hemp seeds are approved for the manufacture of sprouted hemp foods in the UK and in Israel and they are a readily available source of grain in their unhulled form throughout Asia and India where hemp is a common food source.

Australian i-hemp crops are highly regulated. Licence applicants and their close associates (anyone working on the farm) are subject to a National Crime Check. Licencing compliance requires that farmers advise their State Department of Agriculture's licensing body of planting dates, varieties planted, source of certified low THC seed, the address and co-ordinates of the site and the size of the planting area.

Farmers who freight i-hemp farming seed are obliged to record all seed transactions, quantities and seed movements. Documentation certifying the low THC variety must accompany the seed and be retained by the farmer and by the supplier.

Farmers are obliged to notify DPI when the i-crops are nearing maturity so they are sampled. The sampling regime is stringent. A DPI sampler takes multiple random samples (proportionate to the area planted) for testing by a NATA accredited laboratory. There is no advantage to the farmer to delay testing and the licence is subject to sampling and testing.

Despite the consensus that i-hemp is not a drug crop, the existing regulatory frameworks for i-hemp are already as rigorous as for the production of opium poppies for drug manufacture.

In NSW where the majority of i-hemp is grown, farmers respect the rigour of the regulation and have given feedback to DPI that it is administered effectively and workable.

The existing regulatory frameworks for i-hemp effectively manage seed movement and any risk of any increased trafficking of illicit high THC cannabis seed. There is no evidence to support police claims of likely increased illicit seed trafficking as a result of hemp food regulation.

It is worth noting the differing growth habits of high THC cannabis and i-hemp crops:

a) high THC cannabis growers aim to grow leafy heads not seed crops. A high THC cannabis crop contaminated with seed would be a very low value crop for an illegal grower.
b) Low THC farmers aim to produce seed or woody fibre not leafy matter.

c) High THC cannabis seeds are traded on the international blackmarket through the internet and it is very likely that as in the USA, a very significant percentage of illicit cannabis in Australia is grown hydroponically from cuttings rather than seed.

FSANZ's response to police concerns about i-hemp seeds being used to disguise the trafficking of illicit cannabis seeds in *Supporting document 4 - FSANZ discussions with police agencies and forensic analysts (at Approval) – Application A1039 Low THC Hemp as a Food* is detailed below.

> "FSANZ's preferred position was to only approve hulled and non-viable hemp seeds. In response to this concern, FSANZ noted this position and questioned the effectiveness of trafficking hulled illicit cannabis seeds that are not likely to be viable.
>
> Police questioned whether hulled hemp seeds were actually non-viable and maintained this concern. FSANZ has not obtained any definitive advice on whether hulled hemp seeds are totally non-viable, although it is likely that most hulled seeds would not be viable.
>
> FSANZ is satisfied that the requirement for seeds to be hulled and non-viable is sufficient to address this concern. FSANZ questions the likelihood of criminals attempting to pass hulled marijuana seeds off as hemp seeds. The hulled seeds would generally be non-viable and the seeds of all cannabis varieties do not produce THC, so it is questionable as to whether there would any benefit for illicit drug users in attempting to disguise hulled marijuana seeds as hemp seeds.
>
> Police did question how viability of seed would be ascertained at an enforcement level, with FSANZ noting that a germination test is currently possible. FSANZ also noted that DNA testing techniques are being investigated (by Queensland Health Scientific Services) as a relatively quick method of differentiating between hemp and high THC varieties of cannabis."

It is the AIHA's view that FSANZ's response and recommendation has overlooked the already rigorous regulation of i-hemp production and its effectiveness. Further the AIHA would recommend that there is no reason to insist on all seed for food production being hulled or rendered non-viable.

Technically there should be no reason to prevent a farm which is already subject to rigorous evaluation producing particular food products such as sprouted breads or hemp milk from whole low THC seed. Both products involve the seeds being washed repeatedly and soaked in water - for days in the case of sprouted foods.

Given the excellent nutritional value of sprouted hemp seeds in sprouted breads and in a wheatgrass like green superfood shot, it would be valuable to reconsider whether the existing regulatory frameworks for industrial hemp production such as the NSW Framework, are already sufficiently effective to regulate the manufacture of all hemp foods including sprouted foods.

Import controls

Despite the illegality of food for consumption, currently the Australian Customs and Border Protection Service (Customs) allows the majority of hemp seed being imported by retailers to enter the country with few if any obstacles.

Farmers trying to import seed for farming on the other hand face multiple obstacles and costs even when farming seed is bought from certified suppliers. Understandably Customs and Quarantine require each bag of seed to have a red stamp denoting the seed's origin and require accompanying paperwork to identify the seed source and supplier. However the varying import legislations between states can mean delays of weeks between seed that is imported from a certified supplier being sent from NSW to WA. Quarantine restrictions have also wrongly considered industrial hemp seeds as an anthrax carrier, adding further delays and costs to its importation. There have been considerable delays in importing seed from countries that are known to be disease free and therefore present a negligible biosecurity risk.

Recommendation

7: The Australian and state/territory quarantine authorities undertake the development of appropriate risk controls on the inter-state and international importation of hemp seed.

Concluding Remarks

The industrial hemp industry is emerging globally as a promising alternative food and fibre feedstock, with many compelling value propositions from therapeutics and healthy food alternatives, to construction and renewable energy markets. Australian farmers could capitalise on these opportunities as they develop, but require a more supportive and co-ordinated regulatory framework. The AIHA look forward to the opportunity of progressing these issues with the relevant authorities as a matter of priority.