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1 September 2025
Rural and Regional Affairs and Transport References Committee

**Re: Opportunities for the development of a hemp industry in Australia**

Food Frontier thanks the Rural and Regional Affairs and Transport References Committee (the Committee) for the opportunity to provide a submission to its Inquiry into the Opportunities for the Development of a Hemp Industry in Australia.

Food Frontier is the independent think tank on alternative proteins in Australia and New Zealand. We are dedicated to advancing new, sustainable and nutritious protein options that create value for farmers, businesses and consumers. Since our founding in 2017, Food Frontier's research, reports, events, and engagements have driven critical dialogue, investment and collaboration in this fast-emerging field.

In August 2025, Food Frontier released *Unlocking Australia's potential: The case for national plant protein ingredient industry* (Attachment A). This report outlines the potential to build a globally competitive plant protein ingredient industry that strengthens food system resilience, drives regional economic growth and captures greater value from our world-class agricultural outputs. The report's evidence base was informed by extensive consultation with industry stakeholders, including Australia's only domestic manufacturer currently using fractionation technology to produce protein concentrates from industrial hemp.

Plant protein ingredients include protein isolates and concentrates, as well as starches, fibres, flours and oil derived from Australian grown crops—including cereals, pulses, and oilseeds. Produced through wet or dry fractionation technologies, these ingredients are increasingly being incorporated into food and beverage categories such as plant-based alternatives, snacking, baking, breakfast cereals, and sports nutrition. They are also used in pet food, nutraceuticals, personal care, livestock and aquaculture feed and industrial categories like packaging, and having emerging application opportunities as feedstock for biomanufacturing technologies.

As demonstrated in more mature, international markets like North America, industrial hemp is gaining traction with customers and consumers alike as a plant protein ingredient and has an important role to play in the growth of Australia's own industry. While still in its infancy here, industrial hemp more broadly is recognised as a rapidly growing sector with significant economic and sustainability potential owed to the crop's versatile applications into building, textiles, food and feed.[i] It is within the context of the latter two applications, and the findings of Food Frontier's report, that we provide this submission for the Committee's consideration.

## Report overview - Unlocking Australia's potential: The case for national plant protein ingredient industry

Food Frontier conducted in-depth consultation with Australia's five newest entrants into the plant protein ingredient manufacturing industry to inform the report's findings. This included Hemp Harvests, a Tasmanian company founded in 2016, focused on the development of hemp-based ingredients. The company operates a dedicated hemp processing facility in Red Hills, where it uses dry fractionation to produce hemp protein concentrate, alongside hemp oil and seeds (hearts).

Consultation revealed both common themes and important differences across the plant protein ingredient industry. Shared opportunities include growing domestic and export demand for plant protein ingredients, while challenges span capital intensity, market adoption barriers, and supply chain variability. Yet each company's opportunity set is also shaped by its unique crop inputs, technology platform, location, customer base, and market strategy. Experiences also diverge between startups and established agrifood businesses that have diversified into new manufacturing capabilities.

For this reason, we recommend the Committee engage with the full report, as hemp-specific insights are interwoven throughout the analysis of broader industry dynamics. The report also draws on consultations with stakeholders from across the agrifood supply chain, including oilseed industries, and is supplemented by extensive research into global market trends and policy settings. Together, the report provides a robust evidence base for decision-makers considering the future of hemp and other emerging protein-rich crops for this market.

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## Report major findings: opportunities and challenges

The report found five major opportunity areas for Australia should it unify around scaling a globally competitive domestic plant protein industry:

- **Diversification to meet global demand** – Australia can supply high-quality, functional ingredients that meet shifting consumer and manufacturer preferences, especially in Asia-Pacific markets where provenance is a key differentiator, valuing both quality and safety.
- **Import displacement to strengthen food security** – Replacing imported ingredients, including for animal feed, with local alternatives enhances supply chain resilience and reduces exposure to trade volatility.
- **Sustainable value-addition for the agriculture sector** – Domestic ingredient production can deliver significant additional value of otherwise unprocessed crops, provide greater economic certainty for growers and incentivise rotational cropping for on-farm sustainability.
- **Regional manufacturing to drive circularity** – Strategically located facilities can reduce freight costs, valorise co-products, and build regional supply chain resilience through co-location of complementary operations and shared infrastructure.
- **Integration with Australia's emerging bioeconomy** – Secondary ingredients could serve as feedstocks for biomanufacturing applications such as biofuel production—strategically linking plant protein manufacturing with Australia's broader bioeconomy ambitions.

However, consultation revealed manufacturers face persistent structural barriers that must be addressed:

- **High manufacturing costs and limited scale** – Domestic manufacturers face high input costs, inconsistent supply chains, and limited access to shared infrastructure. Compared to global incumbents with mature, scaled operations, Australian products struggle to compete on cost—even where functionality and quality are strong.
- **Investment risk and lack of catalytic funding** – Infrastructure and R&D are capital-intensive, yet early-stage manufacturers face difficulty attracting private investment at scale. Long time horizons and uncertain offtake deter investors—particularly in the absence of public co-investment mechanisms or strategy signals.
- **Low awareness and adoption barriers** – Australian final product manufacturers often lack the technical support, R&D budgets, and ingredient familiarity needed to incorporate local plant protein ingredients into formulations. In the absence of data, traceability systems, and reformulation incentives, imported ingredients remain the default.
- **Disconnected effort and policy fragmentation** –Industry progress is occurring in silos. Without coordinated national leadership, Australia's early-stage sector risks duplication of effort, inefficient capital deployment and missed opportunities to integrate with broader manufacturing and net zero economy strategies.

## Hemp-specific report findings

Within these broader dynamics, industrial hemp faces its own set of challenges, many compounded by outdated regulatory frameworks.[ii]

**Regulatory complexities**

The historical condemnation of drug-type cannabis, combined with a lack of nuanced policymaker understanding, has led to industrial hemp being conflated with medical and recreational cannabis in legislation.[iii] This has created unnecessary regulatory complexity for farmers and manufacturers seeking to engage with what is otherwise a high-potential crop sector.

It was only in 2016 that the Federal Government enacted the Narcotic Drugs Amendment Bill enabling states to regulate low-tetrahydrocannabinol (THC) hemp production (not exceeding 1.0% THC levels).[iv] The following year, Australia's Food Standards Code was amended to permit the sale of hemp seed food products for consumption.[v] After sustained advocacy from the hemp industry, the Australian Pesticides and Veterinary Medicines Authority

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(APVMA) also approved the sale of hemp seed products and byproducts seed hulls and seed cake for use in livestock and pet feed in just May 2025.[vi] While this approval does not extend to oil products, it reversed the APVMA's 2023 position classifying all hemp-based products as Veterinary Chemical Products requiring formal registration before sale—a major market barrier.[vii, viii]

However, the industry has strict licensing requirements that compel growers and processors to obtain licenses from state governments before they can cultivate, process and supply industrial hemp products.[ix] While mutual recognition laws generally allow industrial hemp license holders to operate nationally, variations between state regulations also create confusion and complexity for businesses operating across borders.[x]

**Hampered marketing, market access, and investment**

In this stigmatised regulatory environment, a flow-on effect is the heavy restrictions placed on manufacturers that hamstring sales. Marketing is a serious challenge for the industry, as online advertising in Australia is severely restricted by major social media platforms' regular practice of banning ads involving hemp, misclassifying it as related to narcotic drugs.[xi] This limits marketing options to more resource-intensive alternatives, stifling businesses' abilities to effectively build awareness, educate new customers about the benefits of hemp and successfully compete in the market.[xii]

Similarly, this association also creates hesitancy in some domestic food and beverage manufacturers to use hemp as an ingredient, and for some consumers to consume it.[xiii] In terms of accessing export opportunities, some international markets present prohibitively high regulatory barriers to entry, further limiting manufacturers' customer options. The industry's persistent stigma has also made it challenging for businesses to secure funding from traditional financial institutions, including banks and brokerage firms. Consequently, startups have frequently had to rely on venture capital investment or financial support from personal networks.[xiv]

**High cost of supply**

Nascent demand coupled with stringent licensing regulations also means access to industrial hemp in Australia is currently limited and often only available under contract.[xv] These grower contracts can also be relatively expensive, as they must be attractive enough to: enable farmers to rationalise the regulatory and cost hurdles of becoming a licensed industrial hemp contractor; overcome cannabis-related misconceptions and market opportunity scepticism; and, stave off competition from other rotational crops that might offer better returns.

As a result, Australian industrial hemp and its seeds–which are used to make protein ingredients–can carry a high input cost for manufacturers, especially as the domestic markets and accompanying demand to use the remainder of the crop (the stalk, flowers and leaves) are still being iterated under current regulatory and industry settings.[xvi, xvii] The flow on effect is that manufacturers seeking to use Australian hemp must compete with potentially cheaper products made from imported hemp.

Greater market access, regulatory reform and investments into diverse, downstream manufacturing capability are some of the factors that must be progressed to drive greater production and ultimately bring down the commodity cost of Australian industrial hemp.[xviii,xix]

## Recommendations

Unlocking hemp's potential, including as a plant protein ingredient, requires specific action on regulation, market activation, and investment. Food Frontier recommends:

- **Regulatory harmonisation and simplification** – Streamline and align licensing requirements nationally, clarify formal distinctions between industrial hemp and drug-type cannabis, and work to remove outdated restrictions that constrain marketing, sales and access to traditional finance.
- **Targeted market activation** – Support industry-led efforts to build awareness and adoption, including enabling online advertising, export market facilitation, and education for food manufacturers and consumers.

- **Catalytic investment in R&D and processing** – Invest in crop, processing and product application R&D, including to improve crop yields, and support the scale-up of downstream hemp processing facilities.
- **Invest in regional manufacturing hubs** – Establish shared and multi-capability regional facilities, supporting smaller and medium hemp businesses to sidestep high capital infrastructure costs, lower input costs and valorise by-products for optimised company commercial viability.

These hemp-specific priorities complement the broader strategic actions identified in Food Frontier's report to build a national plant protein industry:

I. **Establish a national taskforce** to set a national strategy for the plant protein ingredient industry, coordinate efforts and align cross-jurisdictional policy, infrastructure and investment.

II. **Invest in shared R&D platforms** for crop breeding, processing optimisation, ingredient functionality and product application, and byproduct valorisation.

III. **Drive demand and reduce adoption barriers** through targeted marketing, reformulation incentives, traceability systems, and data on ingredient usage and trade flows.

IV. **Scale manufacturing** via strategic investment in regional hubs, shared infrastructure and capital co-investment frameworks.

V. **Build workforce and regional supply chains** through targeted training, grower engagement, crop contracting and regional ecosystem development.

Australia has the crops, capability and credibility to become a preferred global supplier of plant protein ingredients and lead in the emerging wave of plant protein diversification. If similarly enabled, hemp could be a key player in this opportunity.

With coordinated leadership, strategic investment and whole-of-government planning, Australia can transform its protein-rich crops into high-value ingredients, drive resilient regional growth and secure a differentiated position in rapidly growing global market.

Yours sincerely,

**Megan Redmond**
Director
Government and Strategic Engagement
Food Frontier

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