

# Agriculture, land and emissions

## Collective Fashion Justice submission to the Australian Government

Collective Fashion Justice is grateful to the Australian Government for its focus on agriculture and land in relation to climate mitigation opportunities. This is a critical area for action, and one that relates to the fashion industry, as highlighted in our submission. Australia is the most significant exporter of merino wool in the world,<sup>1</sup> tied as the eighth most significant cattle skin exporter for the leather industry,<sup>2</sup> and is also a major cotton producer and exporter.<sup>3</sup> Australia also has the opportunity to develop existing and justly transition into new agricultural industries benefiting land and climate, while producing valuable materials to the local and global fashion industry.

Collective Fashion Justice is a registered Australian charity working towards a total ethics fashion system which prioritises the life and wellbeing of people, animals and the planet ahead of profit. We have consulted with and been called as experts by the United Nations Environment Programme, the Victorian Parliament, the City of Melbourne, the British Fashion Council, the Italian Fashion Council (Camera Moda), and many brands and retailers, from Gucci to The Iconic. Below we respond to questions put forward by the Department of Agriculture, Fisheries and Forestry.

### What are the opportunities to reduce emissions and build carbon stores in agriculture and the land? What are the main barriers to action?

The Department's discussion paper highlights that 78.5% of the agricultural sector's emissions are associated with the rearing of farmed animals, particularly cattle and sheep. This is largely due to methane associated with enteric fermentation (69.3% of the sector's emissions) as well as waste from farmed animals and associated emissions.<sup>4</sup> The significance of these emissions highlights a clear need for the Government to prioritise

---

<sup>1</sup> <https://www.woolmark.com/fibre/woolgrowers/where-wool-comes-from/>

<sup>2</sup> <https://leather-council.org/information/statistics-sources-of-information/>

<sup>3</sup> <https://www.agriculture.gov.au/sites/default/files/documents/cotton-snapshot.pdf>

<sup>4</sup>

[https://ehq-production-australia.s3.ap-southeast-2.amazonaws.com/0034b2c3d575222a75e0aa388af4c25fef01e572/original/1699249359/19d10193581ae8c77bb049f73592de97\\_Agriculture\\_\\_land\\_and\\_emissions\\_-\\_discussion\\_paper.pdf?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIA4KKNQAKIOR7VAOP4%2F20231219%2Fap-southeast-2%2Fs3%2Faws4\\_request&X-Amz-Date=20231219T223412Z&X-Amz-Expires=300&X-Amz-SignedHeaders=host&X-Amz-Signature=e9980ec3e191704897d2cdf64998bb2be76380829aa34594804c3c26e9b7f805](https://ehq-production-australia.s3.ap-southeast-2.amazonaws.com/0034b2c3d575222a75e0aa388af4c25fef01e572/original/1699249359/19d10193581ae8c77bb049f73592de97_Agriculture__land_and_emissions_-_discussion_paper.pdf?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIA4KKNQAKIOR7VAOP4%2F20231219%2Fap-southeast-2%2Fs3%2Faws4_request&X-Amz-Date=20231219T223412Z&X-Amz-Expires=300&X-Amz-SignedHeaders=host&X-Amz-Signature=e9980ec3e191704897d2cdf64998bb2be76380829aa34594804c3c26e9b7f805)

action to reduce emissions associated with animal agriculture over other potential areas for emissions reductions.

## Opportunities to reduce emissions related to animal agriculture

### **Asparagopsis and methane reducing feed**

The discussion paper highlights the use of ‘methane reducing feed supplements and forage feeds’ as one emerging technology capable of reducing emissions, and this is a technology heavily promoted by Meat and Livestock Australia. However, MLA’s recent trial report – the longest trial run using Asparagopsis seaweed as a methane-reducing feed supplement yet – did not deliver as hoped by the industry. While some experiments had suggested Asparagopsis could deliver methane reductions of 80-90%, the Australian trial produced a lower 28% reduction.<sup>5</sup>

Additionally, a key concern with this proposed solution to methane emissions is that it is only suitable for a feedlot setting, where the supplement can be added to feed. There are a number of concerns with this:

1. According to a 2023 MLA report, feedlot production contributes just 5.8% of total greenhouse gas emissions associated with cattle production, as compared to 90% of emissions associated with grazing and land management.<sup>6</sup> Methane reducing feed supplements are unable to address the latter 90% of emissions. Most enteric methane from cattle and sheep is produced due to “their gut microbes breaking down the indigestible grass, leaves, and roughage they eat on the pastures beforehand, and not from feedlot” feed, as noted by environmental scientists and animal agricultural climate impact experts Dr Matthew Hayek and Dr Jan Dutkiewicz in WIRED.<sup>7</sup> Even if the earlier suggested 80-90% emissions reductions from Asparagopsis feed could be delivered, this would only impact 5.8% of the sector’s overall emissions.
2. There is a risk that feed-related solutions could be only short-term solutions, as research has found that the gut microbes inside cattle and sheep may adapt and adjust, resulting in high methane emissions yet again.<sup>8</sup>
3. Relying on a primarily feedlot-based solution is irresponsible when considering the United Nations’ ‘one health’ approach to sustainability, in which animal welfare is a

---

<sup>5</sup>

<https://www.theguardian.com/environment/2023/jul/13/seaweed-cow-feed-trial-fails-methane-reduction-australia>

<sup>6</sup>

[https://www.mla.com.au/research-and-development/reports/2023/b.cch.2301---greenhouse-gas-footprint-of-the-australian-red-meat-production-and-processing-sectors-2020/:~:text=More%20than%2090%20of%20red,industry%20GHG%20emissions%20\(88.2%\).](https://www.mla.com.au/research-and-development/reports/2023/b.cch.2301---greenhouse-gas-footprint-of-the-australian-red-meat-production-and-processing-sectors-2020/:~:text=More%20than%2090%20of%20red,industry%20GHG%20emissions%20(88.2%).)

<sup>7</sup> <https://www.wired.com/story/carbon-neutral-cows-algae/>

<sup>8</sup> <https://www.sciencedaily.com/releases/2019/06/190617164642.htm>

critical and interconnected consideration to planetary and societal wellbeing.<sup>9</sup> On feedlots, both cattle and sheep are unable to display all of their natural behaviours, and face a range of serious welfare issues. These include increased risks of respiratory disease, lameness, hoof pain and lesions, heat stress, and digestive disorders.<sup>10</sup> As a result, antibiotics are frequently used in feedlots, even preventatively. Antibiotic resistance is a serious danger, and research from the University of New England has found that this high antibiotic use could cause resistance in humans.<sup>11</sup> A move beyond feedlot production is essential to improving animal welfare and protecting human health, and also aligns with global sentiment: 86% of internationally polled people believe animal protection should be a key priority for fashion brands, including those using leather.<sup>12</sup>

With such a short amount of time left to ensure Paris Agreement commitments are met, solutions already proven to be more effective and feasible today would be more sensibly followed and invested in.

### **Herd reduction support, just transition initiatives and incentives**

An undoubtedly effective way to address the primary cause of the agricultural sector's emissions and harmful use of land is to support farmers in reducing their herd sizes and moving into more climate and land positive production with plants.

A massive 54% of land in Australia is currently used for grazing,<sup>13</sup> and the major driver of tree-clearing in the country is also grazing.<sup>14</sup> This serious problem presents a major opportunity.

The Department's discussion paper states that land use, land use change and forestry (LULUCF) is 'currently a net carbon sink in Australia', mainly due to declines in land clearing for agricultural use and associated natural regeneration of previously cleared land. Research published in the journal *Science* found that global agricultural land could be reduced by 75% in a transition beyond animal-based agriculture, towards plant production able to feed and clothe the world.<sup>15</sup> Additionally, research from the journal *Nature* found that if this transition was made by 2050, it would allow for rewilding and natural regeneration of no longer required grazing lands so significant that the associated carbon sequestration could equal to

---

<sup>9</sup> <https://www.who.int/news-room/questions-and-answers/item/one-health>

<sup>10</sup>

<https://static1.squarespace.com/static/5f5f02dd9b510014eef4fc4f/t/63fe6c7a4305dc76ee40a43c/1677618365889/Leather%27s+impact+on+animals+report.pdf>

<sup>11</sup> <https://www.abc.net.au/news/2022-01-12/cattle-feedlots-antibiotics-resistance-/100751470>

<sup>12</sup>

<https://www.collectivefashionjustice.org/articles/heres-how-fashion-purchases-have-changed-since-the-pandemic>

<sup>13</sup>

<https://www.agriculture.gov.au/sites/default/files/abares/aclump/documents/Land%20use%20in%20Australia%20at%20a%20glance%202016.pdf>

<sup>14</sup>

<https://wwf.org.au/what-we-do/species/tree-clearing/#:~:text=In%20Australia%2C%20agricultural%20expansion%2C%20particularly,major%20driver%20of%20tree%2Dclearing.>

<sup>15</sup> <https://josephpoore.com/Science%20360%206392%20987%20-%20Accepted%20Manuscript.pdf>

99-163% of our carbon emissions budget consistent to 1.5C.<sup>16</sup> In other words, emissions associated with the last 9 to 16 years of global fossil fuels could be naturally sequestered. The significance of this opportunity to reduce emissions, which also greatly benefits biodiversity, cannot be overlooked.

With Australia's biodiversity in serious and dangerous decline,<sup>17</sup> supporting the nation's agricultural sector to reduce its herd sizes, move into dual-purpose production more focussed on crops than animals, and justly transition beyond animal enterprises is an effective way to mitigate climate change and further biodiversity destruction.

Such a transition also slashes the leading cause of agricultural emissions: methane from enteric fermentation. As a signatory to the Global Methane Pledge, Australia has an obligation to act effectively and swiftly to dramatically curb methane emissions, and supporting a shift towards a more plant-focussed agricultural sector is a clear, proven and immediately actionable solution.

Current Government subsidies committed to research and development for animal agricultural industries, provided largely through dollar to dollar matched levy funding,<sup>18</sup> should support education, training and land transitions that allow farmers to reduce their herd sizes and develop crop production that has a far lower climate and land impact.

While the Government has a very light hand on the agricultural sector through subsidies due to a noted eagerness to avoid market distortion that can impact agricultural security,<sup>19</sup> industries producing sustainable fibres (such as hemp), as well as plant proteins with waste products able to be used by fashion (such as soybeans which, when processed for soy milk, tofu and other protein-rich foods, leaves a waste that can be transformed into a wool-like fibre) receive far less (or no) support as compared to industries producing animal wool and skins.<sup>20</sup> Given the destabilising impact of the climate crisis and animal agriculture's contribution to it, redistributing support to allow for commodities that better align with emissions reduction and biodiversity conservation is sensible.

In the Victorian Parliament's recent inquiry exploring how developing the hemp industry could support climate mitigation, Collective Fashion Justice's recommendation that farmers producing wool be provided support to transition into hemp production was noted in the final report. This is just one example of an opportunity to reduce land and climate impacts: Victorian wool can have an average carbon-equivalent footprint over 42 times higher than that of hemp, while requiring as much as 3,670 square metres more land per kilogram to be produced.<sup>21</sup>

In 2021, Denmark passed a climate agreement that included large investment into the development of plant-based production in an effort to reduce emissions. A total of US\$195 million is available up to 2030 to support grants for farmers and companies innovating in a

---

<sup>16</sup> <https://www.nature.com/articles/s41893-020-00603-4>

<sup>17</sup> <https://soe.dcceew.gov.au>

<sup>18</sup> [https://www.aph.gov.au/Parliamentary\\_Business/Bills\\_Legislation/bd/bd2324a/24bd29](https://www.aph.gov.au/Parliamentary_Business/Bills_Legislation/bd/bd2324a/24bd29)

<sup>19</sup> [https://daff.ent.sirsidynix.net.au/client/en\\_AU/search/asset/1030322/0](https://daff.ent.sirsidynix.net.au/client/en_AU/search/asset/1030322/0)

<sup>20</sup> [https://www.aph.gov.au/Parliamentary\\_Business/Bills\\_Legislation/bd/bd2324a/24bd29](https://www.aph.gov.au/Parliamentary_Business/Bills_Legislation/bd/bd2324a/24bd29)

<sup>21</sup> <https://new.parliament.vic.gov.au/hempindustry>

way that supports plant-based production development. An additional annual fund of US\$11.7 million supports transitioning to plant-based production.<sup>22</sup> Given the massive emissions associated with cattle and sheep production in Australia, funding to support transition opportunities for the sector would be a valuable way to support reduced emissions and biodiversity impacts.

Funding could also support the development of infrastructure that would allow Australian agricultural lands to be used more efficiently, producing more from less land, benefiting the economy and environment alike. For example, Australia already grows a significant amount of plant proteins and foods, as well as crops which currently have large waste streams that could, with investment, be utilised by the fashion industry. Bio-materials designed to replace animal-derived and synthetic leather used in the fashion industry are made from the waste of the following agricultural products grown in Australia: pineapples (plant leaves), apples (skins, seeds and cores from juice waste), oranges (skins and seeds from juice waste), rice (hulls), cotton (waste lint and recycled fibre), tomato (discarded produce), mango (discarded produce), bananas (peels), avocado (peels) beans (pods), olives (pits), and persimmons (skins).<sup>23</sup>

As Australian fruit farmers have called for solutions to address the economic losses associated with fruit waste, this poses an exciting opportunity to reduce waste and strengthen the economic viability of fruit, vegetable and other crop production in Australia, as an additional income stream could be created from 'waste'.<sup>24</sup> Support from the Government to allow for this 'waste' to be used would have long-term positive impacts on the economic and environmental outcomes of the agricultural sector.

Support and retraining to encourage current cattle and sheep farmers to diversify their production with plants, to better utilise existing agricultural lands and crops, and to support rewilding would be valuable.

## What are the main barriers to action?

While the average Australian farm rearing animals is estimated to have decreased by 16% in the last year,<sup>25</sup> climate related costs for the sector are set to soar,<sup>26</sup> and the climate and biodiversity impacts of animal-based agriculture are clear, there is still a lack of understanding of this issue in Australia. This is in part due to industry lobbying and

---

<sup>22</sup>

<https://www.forbes.com/sites/danieladelorenzo/2023/09/10/denmarks-195-millions-plant-based-fund-receives-overwhelming-number-of-applicants/?sh=67988f3ab034>

<sup>23</sup>

<https://static1.squarespace.com/static/5f5f02dd9b510014eef4fc4f/t/6447013fc313933929b754c0/1682375029994/CFJ+a+just+transition+beyond+leather.pdf>

<sup>24</sup>

<https://static1.squarespace.com/static/5f5f02dd9b510014eef4fc4f/t/6447013fc313933929b754c0/1682375029994/CFJ+a+just+transition+beyond+leather.pdf>

<sup>25</sup> <https://www.agriculture.gov.au/abares/research-topics/surveys/livestock>

<sup>26</sup> <https://www.fairr.org/news-events/press-releases/climate-risks-to-push-livestock-to-operating-loss>

green-washing. For example, a new metric, GWP\*, is currently being promoted by the cattle and sheep industries, designed to distort their impact. A report on the metric by Changing Markets Foundation highlights the serious shortcomings of this metric, which is already being used by Meat and Livestock Australia, and Fonterra, which works with farms producing both dairy and valuable calf skins for the fashion industry.<sup>27, 28</sup>

Many cattle and sheep farmers in the country have been in the business for many generations, and without being provided with the best available data and information regarding methane, the benefits of plant-based transitions and herd reductions, action to make these changes will be slow.

The same is true for consumers who impact the industry. Green-washing of animal-derived materials in the Australian and global fashion industry inflates the purchasing of these. 38% of the fashion industry's climate impact is associated with raw material production, and thus often, agricultural commodities.<sup>29</sup> If green-washing were more seriously penalised and prevented by the Government, the fashion market would have a greater impact on the agricultural sector, as agricultural commodities that were more sustainable (such as plant-based materials) would be purchased more than those with greater negative impacts.<sup>30</sup> Both Australian and global polling shows that people increasingly expect and want fashion to be sustainable, as well as for Governments to be involved in ensuring sustainable purchasing – including through green-washing prevention.<sup>31, 32</sup> Collective Fashion Justice has supplied recommendations to the Federal Inquiry into Greenwashing.<sup>33</sup>

---

<sup>27</sup> <https://changingmarkets.org/wp-content/uploads/2023/11/Seeing-stars-final-9-11-2023.pdf>

<sup>28</sup>

[https://www.mla.com.au/news-and-events/from-the-mds-desk/productivity-profitability-and-sustainability--delving-deeper-into-the-cn30-goal/~:text=GWP\\*%20and%20GWP100&text=In%20some%20commentary,%20the%20GWP,lived%20greenhouse%20gases%20over%20GWP100.](https://www.mla.com.au/news-and-events/from-the-mds-desk/productivity-profitability-and-sustainability--delving-deeper-into-the-cn30-goal/~:text=GWP*%20and%20GWP100&text=In%20some%20commentary,%20the%20GWP,lived%20greenhouse%20gases%20over%20GWP100.)

<sup>29</sup>

[https://static1.squarespace.com/static/5f5f02dd9b510014eef4fc4f/t/64c85b1c17de8d52c3973721/1690852125314/CFJ+submission\\_+inquiry+into+the+industrial+hemp+industry+in+Victoria.pdf](https://static1.squarespace.com/static/5f5f02dd9b510014eef4fc4f/t/64c85b1c17de8d52c3973721/1690852125314/CFJ+submission_+inquiry+into+the+industrial+hemp+industry+in+Victoria.pdf)

<sup>30</sup>

<https://static1.squarespace.com/static/5f5f02dd9b510014eef4fc4f/t/647e937c7fa3b60f56446420/1686017099598/Collective+Fashion+Justice+submission+into+the+Australian+Parliamentary+inquiry+into+greenwashing.pdf>

<sup>31</sup>

<https://static1.squarespace.com/static/5f5f02dd9b510014eef4fc4f/t/647e937c7fa3b60f56446420/1686017099598/Collective+Fashion+Justice+submission+into+the+Australian+Parliamentary+inquiry+into+greenwashing.pdf>

<sup>32</sup>

<https://static1.squarespace.com/static/5f5f02dd9b510014eef4fc4f/t/643f37a8bf6ca25a45a0a736/1681864617764/CFJ%27s+FTC+Green+Guides+commentary.pdf>

<sup>33</sup>

<https://static1.squarespace.com/static/5f5f02dd9b510014eef4fc4f/t/647e937c7fa3b60f56446420/1686017099598/Collective+Fashion+Justice+submission+into+the+Australian+Parliamentary+inquiry+into+greenwashing.pdf>