

Helios Collective

<u>Team Member Name</u>	<u>Year</u>	<u>Major</u>
Isabella Lam	Junior	Economics
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Advisors: Hannah Widmaier, Colleen Hanson

Topic Title: ICLF Farming: Planting a Sustainable Future for Agriculture

Audience: Costco Wholesale Corporation Board of Directors

Sustainable Development Goals

SDG #12: Responsible consumption and production: Ensure sustainable consumption and production patterns

Executive Summary

Monoculture farming is the practice of clearing out large tracts of land for the exclusive production of one type of crop, and it is estimated that up to 80% of agricultural and arable land in the US is dedicated to monocultures alone. However, there are a number of long-term environmental drawbacks to this practice, including overreliance on fertilizers, increased vulnerability to pests and disease, and increased greenhouse gas emissions. Most proposed alternatives to monocultures fail on one of two fronts: they either don't adequately address the issues or they prove far too expensive for farmers to consider them.

Integrated crops, livestock, and forestry (ICLF) farming provides an affordable and holistic solution to these issues. In ICLF farms, crops, livestock, and forestry feed off one another, preventing wastefulness and maximizing productivity. ICLF farms are extremely popular across South America, with 84% of livestock farmers in Brazil being satisfied with integrated systems. Integrated farming helps eliminate numerous environmental externalities that would otherwise be produced by alternatives like monocultures.

As one of the largest suppliers of produce across America, Costco has an ethical responsibility to lead sustainable agriculture. Its continued reliance on monocultures will damage the environment beyond repair, which just pushes the problem onto future generations. Much like a parent, we as a society are ethically beholden to those generations. We are confident Costco can provide affordable, quality goods while shelving ICLF products. Given that Costco sources its produce from a few suppliers, it can also leverage its supply-side influence to popularize ICLF. Costco can thus position itself as a frontrunner in the push for sustainability, promoting an image of quality in both its products and environmental impact.