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"Plant Molecular Farming: Early Stakeholder Assessments"

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ABSTRACT

Plant molecular farming (PMF), representing the merger of medical and agricultural biotechnology, involves the production of pharmaceutical and industrial products in genetically engineered plants. This technology promises many benefits, but also carries many risks. Policy and research papers have emphasized the importance of stakeholder and public participation in technology assessment, especially at earlier stages of technology development. Such a consultation and assessment was carried out in Canada to explore perceptions and assessments of different policy options on PMF. A series of key informant interviews were conducted with representatives from the PMF industry, agriculture industry, food industry, scientists, regulators, and NGOs. This stakeholder study was complemented by a series of consultations with members of the general public in four regions in Canada, using modified focus groups and a scenario assessment approach.

An analysis of the results generally indicate that across all the stakeholder groups except for the advocacy groups, PMF was met with a cautiously favorable assessment, with members of the general public slightly less favorably predisposed than stakeholder participants. NGO representatives found PMF to be unacceptable due to the inherent risks to human health and the environment. For members of the public, the consensus position was that it was acceptable to go forward with health or environmental applications of PMF, with the following provisos: Respondents favoured greenhouse-only conditions until thorough testing was complete. They favoured non-flowering

versions of plants and had a strong preference for non-food over food crops, with the exception of edible vaccines. Significant concerns were expressed about regulatory capacity for monitoring, particularly for surveillance for long term impacts.

The paper will conclude with a discussion of implications for policy and regulation.