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Total Utilization Flax Genomics (TUFGEN)

Integrated GE³LS Research Assessing the Impact of Canadian Regulations Regarding Plants with Novel Traits (PNTs).

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Summary

The aim of this genomics research project is to enable and improve flax breeding so as to produce both seeds and straw products of high quality and value. However, the application of genomic methods to enhance crop plants raises important considerations that touch on the interaction of science and society.

We will assess the impact of the current Canadian approach to the regulation of Plants with Novel Traits (PNT). Canada is unique in the world in how it regulates crop varieties developed through mutagenic breeding techniques. Unlike most other countries, the Canadian Food Inspection Agency requires regulatory scrutiny when a plant acquires a new trait, even if it is not a product of recombinant-DNA techniques. In addition, the definition of what constitutes a PNT is relatively complex and many Canadian plant breeders believe that the current regulations adversely affect their ability to market Canadian-developed crop varieties internationally. We will attempt to quantify the impacts of applying PNT regulations to mutagenic breeding and suggest alternatives where that is appropriate.