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## **Biofortified and phyto-products may be essential for sustainability and implementation of phytoremediation strategies**

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Regions of central California are threatened by high concentrations of soluble trace elements in the soil and groundwater and by non-compliance with air quality regulations related to ground-level ozone and particulate matter. Research has demonstrated that a major oil producing crop, canola and even broccoli, can be used for the bioremediation of selenium (Se) via accumulation and volatilization. Plant products from canola grown for phytoremediation of Se include canola oil, which is considered a clean and high-value biofuel. Replacing a portion of fossil fuels in environmentally-sensitive regions with a canola-based biofuel may reduce air pollutants, e.g., CO, VOC's, and hydrocarbons and hence improve air quality. Moreover, Se-enriched broccoli and the seed by-products after extraction of oil may be used as a nutritious source of organic Se that is essential for human health and for the dairy, sheep, and cattle industries, respectively. Successful implementation of a plant-based remediation system in conjunction with the production of beneficial end products will demonstrate a balanced and environmentally-friendly strategy for trace element contaminated regions similar to those found in Central California.