Determination of Sustainability Indicators of Potato Production and their Preferred Level

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Beside safe food that should also be healthy and tasty, consumers increasingly are interested in the impact food production has on the environment. This tendency is shown in the role of organic production with its own certification standards and internationally recognized labels but also in many other 'green' labels issued by retail or farmers' organizations. The claim of food safety through standardized HACCP analysis ISO-certification is pre-competitive whereas taste and health claims are fiercely competitive. The environment-friendliness of production still is a matter of competition between companies and groups of producers trying to attract buyers. Attempts at making it a pre-competitive issue are made by e.g. the SAI-Platform, a consortium of large food-processing companies. Where food safety is easily organized by assuring that levels of foreign bodies (e.g., glass particles) or substances (e.g., nitrate) are zero or below predetermined threshold levels, sustainability is less easily defined and standardized. A supply chain of food is sustainable when benefits for people, planet and profit are assured. This paper outlines an approach where the planet aspects of sustainability are defined in terms of sustainability indicators expressed as the use efficiencies of resources drawn from the environment: land, water, energy, minerals and biocides and the emissions associated with them. Three mutually synergizing approaches apply: surveying a group of representative growers in an area about their practices regarding soil preparation, crop husbandry including mechanical and chemical treatments and irrigation and benchmarking performance of individual growers against 1) their average, 2) data taken from a national standard, and 3) calculations carried out with a crop growth model. The first approach reveals which growers have the highest efficiencies of resource use (i.e. best practices), the second how the target groups or areas perform compared with the national average and the third how close efficiencies approach theoretically obtainable ones.

The Influence of GA_3 Concentration and Tuber Age on Dormancy Breaking at Post-harvest Control

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The use of healthy potato seed is essential for achieving high potato yields of high quality. The health control of seed lots in final post-harvest control is a key factor to guarantee high grade potato seed. Since potato tubers are still dormant when the