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Characterising strengths, weaknesses, opportunities and threats in producing naked oat as a novel crop for northern growing conditions

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Abstract

Naked oat (*Avena sativa* ssp. *nuda* L.) is the highest quality small-grain cereal that can be grown at the northernmost margin of cereal production. It remains an under-utilised crop and it contributes less than 0.1% to the total oat area in Finland. In general, limited interest in growing naked oat more extensively is attributed to its weaknesses, which ironically result from nakedness that improves the quality of the crop. This paper reviews the available literature and assesses the balance of the arguments for and against naked oats. Results from the study were transformed into quantitative variables and analysed for strengths, weaknesses, opportunities and threats (SWOT) using an analytical hierarchical process. As the importance of different SWOT-factors depends largely on targeted end-use of yield, separate analyses were done for use of naked oats as on-farm feed and as an input for the feed and food industry. If we aim at increasing area under naked oat in Finland, the most feasible starting point would be on-farm feed. In this case, strengths (high nutritional quality and energy content) outweighed weaknesses (sensitivity to grain damage) and threats (problems in germination). Increasing naked oat production in this respect is likely to encourage solving the remaining problems that deter industry. Threats (availability) regarding the feed industry and weaknesses (incomplete expression of nakedness) in the food industry out-weighed strengths (high nutritional quality and storability) and opportunities (potential niches).

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