

Using Technology To Make Low-Fat Pecans

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Pecans are one of the top ten agricultural industries in Oklahoma, and production is estimated to increase in coming years. However, market expansion has met significant resistance due to 1) problems in quality maintenance caused by fatty acid oxidation, and 2) the high fat content of the pecan, seen as negative by a weight-conscious public.

We are designing, constructing, and testing a small bench-size continuous-flow Supercritical Flow Extractor (SFE) which will remove some of the oil from pecans to alleviate both of these problems and open new marketing opportunities for pecan producers and pecan confectioners. SFE is currently used

to decaffeinate coffee and extract some spices.

SFE uses high pressure fluid to extract oil from pecans. We are using partial extraction to reduce fat content while keeping the good flavor. Reducing the oil content also reduces the caloric value and allows inclusion of pecans as an ingredient in calorie-wise food products.

Low-fat pecans will allow unique product development opportunities for confectioners, enhance product variety for consumers, provide a new market for producers, and offer market diversification for retail distribution. By working with Oklahoma pecan confectioners during the development and refinement of the pecan partial oil extraction process, we place them at a competitive advantage for rapidly filling the low-calorie pecan market.

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We invite you to submit questions, comments, articles, or ideas to:

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