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## **Biodegradable films from cereal arabinoxylans**

Utilization of agrobiomass in packaging films is an environmentally friendly alternative to oil-based products. Agrobiomass residues like by-products of cereal processing contain large amount of arabinoxylans. For example straws, husks and bran contain 10-25 %, 15-40 % and 15-25 % of xylans, respectively. In spite of their abundance, xylans are not yet as effectively utilized as starch and cellulose. Xylans have shown promising properties for manufacturing of biodegradable films and coatings. Especially they have shown promising oxygen barrier properties.

In this work the material properties of cereal arabinoxylan films are evaluated. The mechanical, thermal, and barrier properties of films determine their applicability as protective coatings or packages. The aim is to understand the structure-function relationship of arabinoxylans. Arabinoxylans from different cereal sources are studied. Enzymes are used in specific structural modifications of arabinoxylans.