



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Waste to Worth: Sustainable Processing Solutions



Tara H. McHugh, Ph.D.
Research Leader

Healthy Processed Foods Research Unit

Western Regional Research Center, USDA/ARS, Albany, CA



AGRICULTURAL RESEARCH SERVICE

MISSION

ARS conducts research to develop and transfer solutions to agricultural problems of high national priority and provides information access and dissemination to:

- **Ensure high-quality, safe food and other agricultural products,**
- **Assess the nutritional needs of Americans,**
- **Sustain a competitive agricultural economy,**
- **Enhance the natural resource base and the environment, and**
- **Provide economic opportunities for rural citizens, communities, and society as a whole.**

WASTE TO WORTH



National Program Leader: Dr. Gene Lester

NP306: Quality and Utilization of Agricultural Products

- **Add Value to Lower Grade Agricultural Products**
- **Utilize Agricultural Co-Products**
- **Enhance Sustainability of Food Supply**
- **Develop Novel Health Promoting Foods**
- **Provide Economic Opportunities for Rural Communities**
- **Reduce Food Insecurity**

Processing Solutions Result in Novel Food and Nonfood Products

FOOD WASTE

Undersized or Blemished Produce



Convert to Puree and Process into Healthy Foods

Forming Technology



100% Fruit Bars



100% Fruit Bars



- Sell Just Fruit bars and other labels annually
- Amounts to half million pounds of fresh fruit annually
- Sold around globe – Iran, Japan, Mexico, Canada, Peru, etc.

Casting Technology



Fruit and Vegetable Edible Films



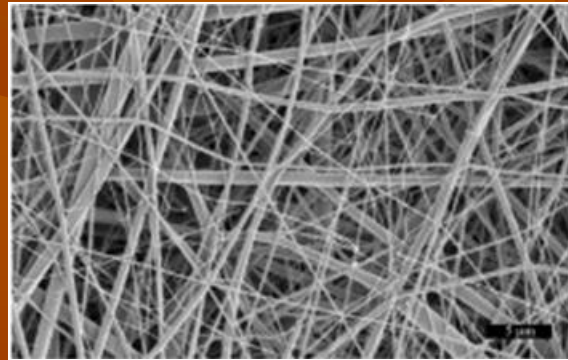
FOOD WASTE

Fish Processing Co-Products



Extract Gelatin and Process into Value Added Products

Fish Gelatin Films and Nanofibers



HPFR and BRU, Albany, CA

FOOD WASTE

Potato Skins



Rice Hulls



Process into Bioproducts

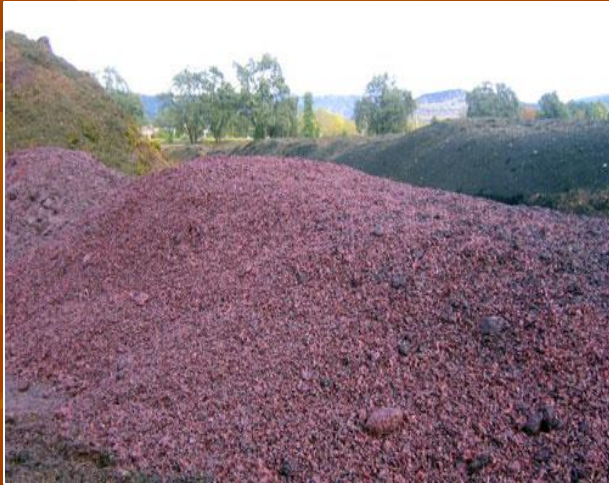
Biodegradable Plates and Utensils



Lin Shu Liu, Wyndmore, PA
Bill Orts, Albany, CA

FOOD WASTE

Wine Grape Pomace



Olive Pomace



Process into Healthy Food Ingredients



WholeVine™ Products



**Grape Skin
and Seed Flours**



Crackers



Grape Seed Oil



Cookies

Wine Grape Pomace

The Washington Post

I'll have the chardonnay

By Lenny Bernstein Updated: April 25 at 7:00 am



Olive Pomace, Leaves and Water



McEVOY
RANCH



UC Davis Olive Center
at the Robert Mondavi Institute

The background of the slide is a solid orange-brown color, overlaid with a pattern of stylized, darker brown leaves and branches. The leaves are of various shapes, some resembling maple leaves, and are scattered across the entire frame, creating a textured, autumnal feel.

Turning Waste into Worth Through Innovation

Thank you.