PACKAGING COVERAGE IN FSTA®

Trusted by researchers, scientists, students and government bodies in over 150 countries across the globe, FSTA is the definitive way to search over fifty years of historic and emerging research in the sciences of food and health.

Covering a wide range of interdisciplinary material, FSTA includes a wealth of international packaging content including:

General aspects of the packaging industry as relevant to foods and beverages

- Food industry waste reduction
- Environmental impact of food/beverage packaging
- Storage facilities for packaged foods/beverages

Packaging equipment and processes

- Food/beverage packaging lines
- Installations for canning, bottling, filling, sealing, etc.
- Aseptic/modified atmosphere/vacuum packaging for food products

Packaging materials and containers

- Function of food/beverage packaging materials in terms of: characterisation, physical/mechanical properties and thermal stability, antimicrobial activity, shelf-life extension, quality profile retention and product safety
- Active and intelligent packaging
- Containers and closures for food
- Shelf-life and migration studies
- Properties of labels i.e. adhesion/removal, printing
- Sustainability of various food packaging materials
- Nanotechnology applications to food packaging

Packaging design

- Impact on consumer purchasing behaviour
- Consumer convenience
- Food packaging cues and consumer perception

Labelling information

- Nutritional information
- Allergens
- Storage/cooking information
- Best-before/use-by information
- Health/nutrition claims displayed on packaging

Handling and transport

- Food/beverage transport containers and palletization
- Logistics and distribution
- Product quality maintenance during transportation
- Equipment cleaning and sanitation procedures
- Effects of transport and handling on food packaging durability

Patents

- Specifics of the design of food packaging and closures
- Food packaging devices to optimise food and beverage safety/quality
- Food/beverage packaging apparatus

Novel food packaging

USING FSTA FOR YOUR PACKAGING RESEARCH

Example search questions

- What are current challenges for converting agricultural waste into biodegradable polymers for food packaging? *(Sample record on following page)*
- How can nanocellulose enhance active packaging?
- What packaging materials can potentially transfer estrogenic compounds into food?
- What are the mechanical properties, including tensile and tear strength, of environmentally friendly packing films manufactured from starch?

SOURCE EXAMPLES

Packaging content is drawn from a wide variety of sources including journals, patents, books, reports and more. Here are just some of the many packaging-focused journals included within FSTA, chosen to illustrate the diversity and breadth of content:

- Journal of Food Protection
- Food Packaging and Shelf Life
- International Bottler and Packer
- Food Engineering
- Italian Food & Packaging Technology
- Journal of Food Safety and Quality
- Journal of Food Processing and Preservation
- Journal of Packaging Technology and Research
- Packaging and Food Machinery
- Packaging Technology and Science

SAMPLE FSTA RECORD FOCUSED ON PACKAGING

Production of sustainable and biodegradable polymers from agricultural waste.

Author: Maraveas, C.
Correspondence Address: Department of Civil Engineering, University of Patras, 26500 Patra, Greece.
Source: Polymers, Volume: 12, Issue: 5, Pages: 1127
DOI: 10.3390/polym12051127 **Published:** 2020 **Document Type:** Journal Article

Abstract: Agro-wastes are derived from diverse sources including grape pomace, tomato pomace, pineapple, orange, and lemon peels, sugarcane bagasse, rice husks, wheat straw, and palm oil fibers, among other affordable and commonly available materials. The carbon-rich precursors are used in the production bio-based polymers through microbial, biopolymer blending, and chemical methods. The Food and Agriculture Organization (FAO) estimates that 20-30% of fruits and vegetables are discarded as waste during post-harvest handling. The development of bio-based polymers is essential, considering the scale of global environmental pollution that is directly linked to the production of synthetic plastics such as polypropylene (PP) and polyethylene (PET). Globally, 400 million tons of synthetic plastics are produced each year, and less than 9% are recycled. The optical, mechanical, and chemical properties such as ultraviolet (UV) absorbance, tensile strength, and water permeability are influenced by the synthetic route. The production of bio-based polymers from renewable sources and microbial synthesis are scalable, facile, and pose a minimal impact on the environment compared to chemical synthesis methods that rely on alkali and acid treatment or co-polymer blending. Despite the development of advanced synthetic methods and the application of biofilms in smart/intelligent food packaging, construction, exclusion nets, and medicine, commercial production is limited by cost, the economics of production, useful life, and biodegradation concerns, and the availability of adequate agro-wastes. New and cost-effective production techniques are critical to facilitate the commercial production of bio-based polymers and the replacement of synthetic polymers.

Keywords: AVAILABILITY; BIOAVAILABILITY; CONTAMINATION; COSTS; ECONOMICS; ENVIRONMENTAL POLLUTION; FOOD AND AGRICULTURE ORGANIZATION; FRUITS; HANDLING; PACKAGING; PLASTICS; POLYETHYLENE; POLYMERS; POLYPROPYLENE; PRODUCTION; SOCIOECONOMIC FACTORS; SUSTAINABILITY; VEGETABLES

FURTHER INFORMATION

Visit the IFIS Publishing YouTube channel to view training videos or join a training webinar at www.ifis.org/fsta-user-training.

If you would like more detailed information or to set up a training session, please contact Angela Ball **a.ball@ifis.org** (existing customers) or Carol Durham **c.durham@ifis.org** (non-customers).

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