



Economic Research Service  
U.S. DEPARTMENT OF AGRICULTURE

# Plastics in Agricultural Transportation

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# Where are plastics found in transportation?

- Structural and reusable
- Individual retail containers
- Bulk packaging and transportation materials
- Chemical storage



# Structural

- Insulating foams
- Plastic parts of vehicles and facilities
- Reusable, but have lifespans
- Perform checks to identify damaged parts
- Use care when disposing of discarded materials



# Retail packaging

- Individual bags, clamshells, bottles, etc.
- Single-use, recyclable in some cases
- Larger sizes or bulk display can reduce use
- For some containers, glass, paper, or metal can be substitutes
- Plant-based plastics present an additional alternative



# Transportation packaging

- Bags and nets
- Pallet wrapping



- AMS recommends some commodities be held in bags or nets
- Pallet wrapping protects goods from vibration damage and spills
- Some wraps are airtight and modified atmosphere added to prevent spoilage
- Bags, nets, and straps can be made of materials besides plastics, but wraps may need to be plastic



# Chemical storage

- Individual containers
- Containment pallets
- Some chemicals can only be stored in plastic, or they will damage the container
- For safety, chemicals should be shipped and stored using specialized plastic pallets to contain spills
- Pallets can be reused in most cases, as can some containers.



## Further reading:

### Protecting Perishable Foods During Transport by Truck and Rail

Jeffrey K. Brecht, Steven A. Sargent, Patrick E. Brecht,  
Jorge Saenz, and Leonard Rodowick

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Download the handbook or FoodTransport app

Or contact the USDA Agricultural Marketing  
Service Transportation Service Division



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