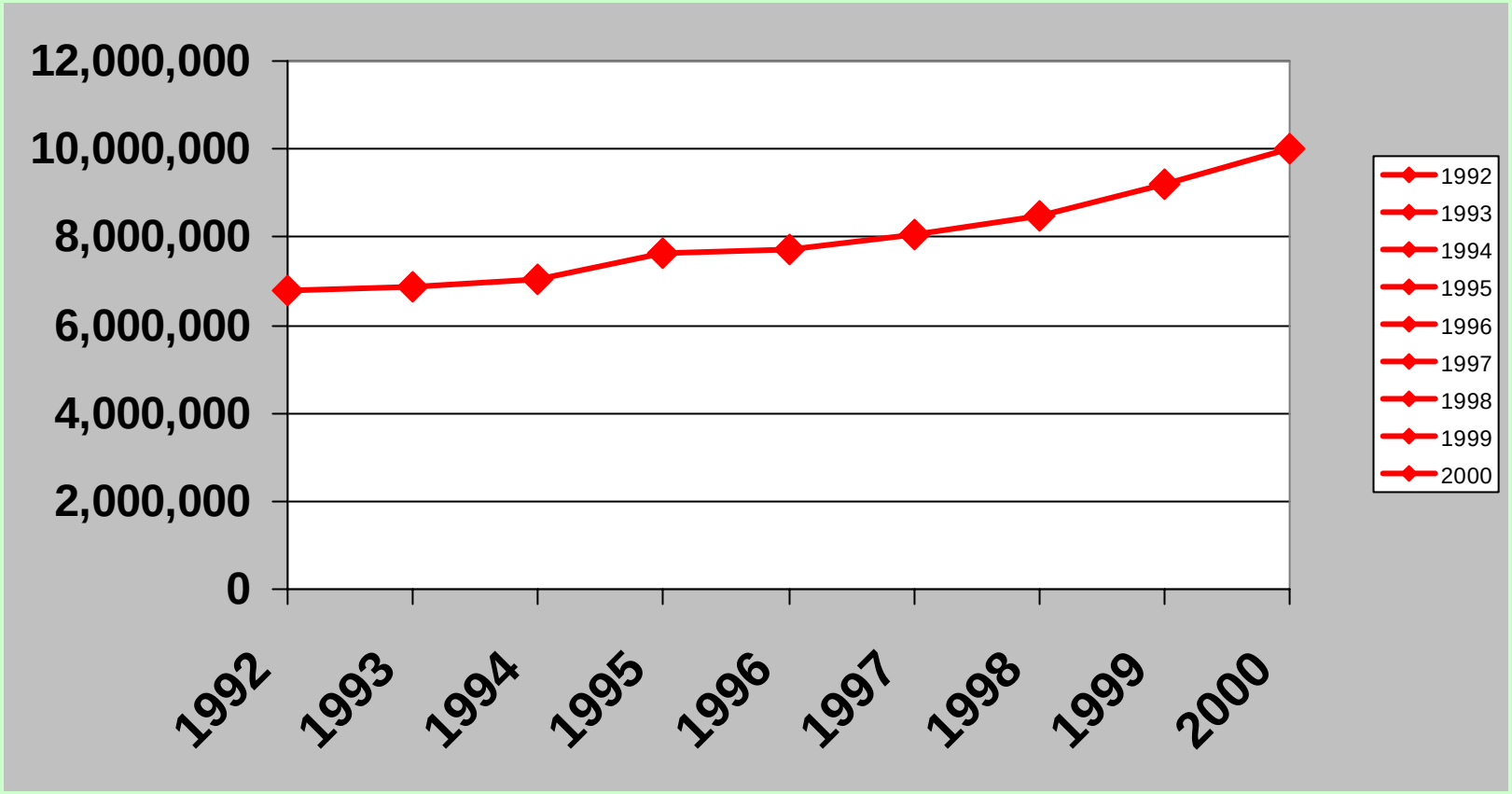
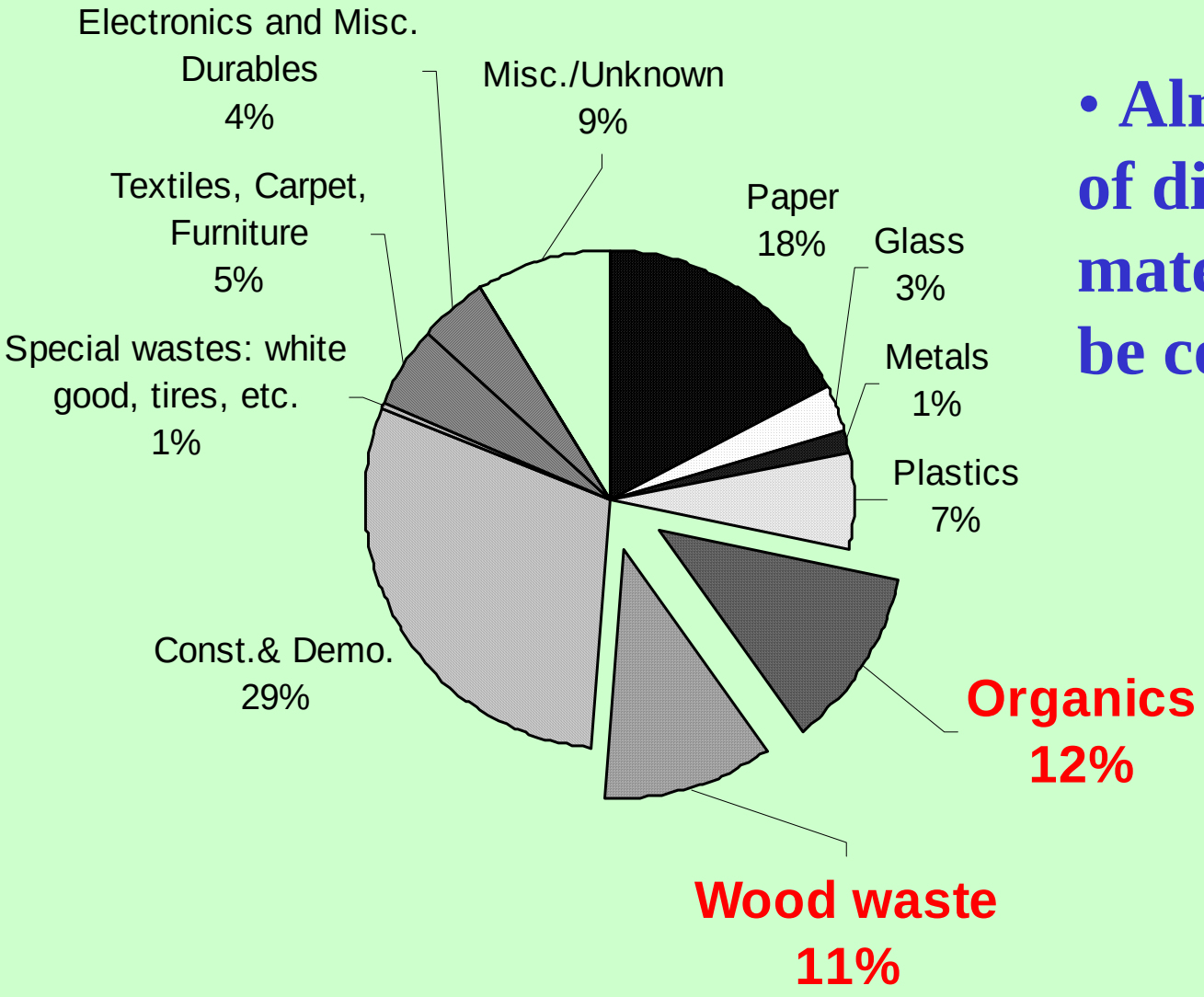
Disposal is Increasing in North Carolina: 45% increase in tons disposed in eight years



Estimated Breakdown of Discarded Materials



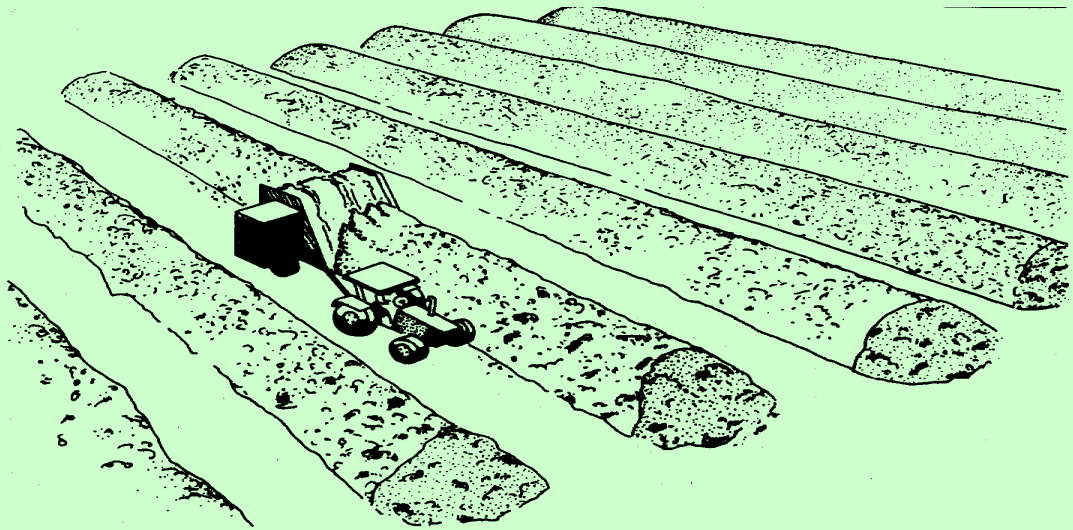
- **Almost a quarter of discarded materials can easily be composted**
- **Paper and some construction wastes can also be composted**

Principles of Composting

- **What Is Compost?**
  - **The product resulting from the controlled biological decomposition of organic materials**
  - **Sanitized through the generation of heat**
  - **Stabilized to the point where it is beneficial to plant growth**
  - **Provides humus, nutrients, and trace elements to soils**
- **Organic Materials That Can Be Composted**
  - **Landfilled wastes (food, wood, textiles, sludges, etc.)**
  - **Agricultural wastes (plant or animal)**
  - **Industrial manufacturing byproducts**
  - **Yard trimmings**
  - **Seafood processing wastes**
  - **In short, anything that can be biodegraded**

Windrow Composting

- Materials mixed and formed into windrows
- Windrows 7’ –8’ wide, 5’ – 6’ tall, varying lengths
- Compost turned and mixed periodically
- Aeration by natural/passive air movement
- Composting time : 3 – 6 months



Compost Benefits

- **Physical Benefits**
  - **Improved soil structure, reduced density, increased permeability (less erosion potential)**
  - **Resists compaction, increased water holding capacity**
- **Chemical Benefits**
  - **Modifies and stabilizes pH**
  - **Increases cation exchange capacity (enables soils to retain nutrients longer, reduces nutrient leaching)**
- **Biological Benefits**
  - **Provides soil biota – healthier soils**
  - **Suppresses plant diseases**

Annual Volume of Organic Waste Generated in NC

- **1997 – 862,500 tons of food residuals from commercial, institutional, and residential sources**
- **By 2000 – over 900,000 tons**
- **12% of total municipal waste stream**
- **Current recovery is less than 2%**

Which Kinds of Facilities Produce Organic Waste?

- Grocery stores
- Restaurants & Caterers
- Hotels/Motels
- Bakeries
- Hospitals
- Retirement Homes
- Produce Markets & Green Grocers
- Food Processors & Converters
- Food Distributors & Vendors
- Defense Installations
- Academic Institutions
- Correctional Facilities
- Any Business operating a Cafeteria

Food Waste → Edible Food Waste → Diversion through Food Rescue & Recovery Programs

↓

Inedible Food Waste

↓

Animal Feeds
Rendering
Composting
Land Application
Waste Exchange

→

Yields a Valuable Soil Amendment

Furniture Processing → Wood Waste → Landfill

Wood Waste ↓ Incineration ↓ Wood Ash → Composting Operation ↓

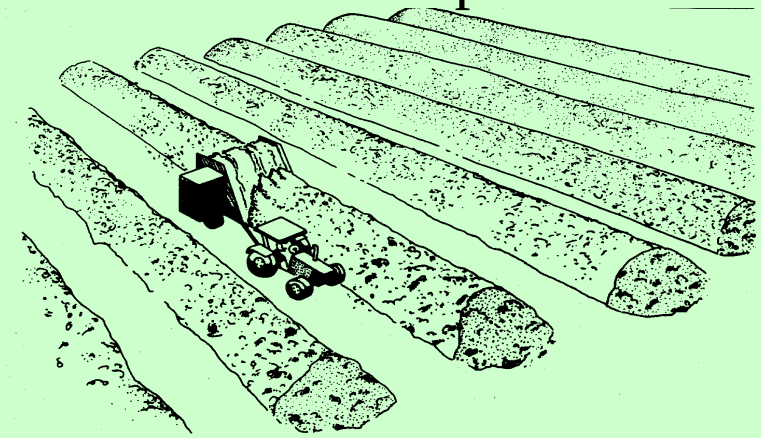
When used in the composting process, wood ash controls odors and adjusts for the pH in the windrows

Cotton is grown and picked

Cotton made into jeans….

Which you buy in the store.

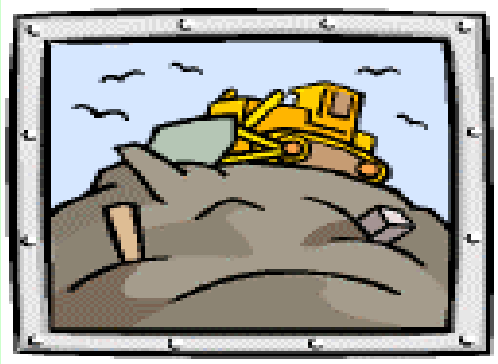
"Gin trash" from the processing of cotton is composted….



…then, bagged…

And sold to gardeners and landscapers

No gin trash goes into landfills!



What's Wrong with Landfilling Organics?

- **Organic wastes decompose anaerobically in landfills and produce methane.**
- **Methane is a leading contributor to global warming, and landfills are leading sources of methane in the U.S.**
- **Methane is expensive to manage at landfills**
- **Organics also contribute to "leachate" (the liquids that seep through landfills) which is also expensive to manage.**

- **Composting produces neither methane nor leachate!**

What’s Good About Composting Organics?

- **Composting creates a value-added product with excellent environmental benefits**
- **Reduces dependence on expensive and polluting landfills and helps postpone need for new landfills.**
- **Saves money for companies and communities that discard organics.**
- **Creates jobs, tax base, and capital investment.**
- **Compost improves soil “tilth”, provides nutrients, and helps control plant disease.**