

## Backyard Composting Basics

Carrie Knutson, M.S.  
NDSU Extension Grand Forks County

EXTENDING KNOWLEDGE >> CHANGING LIVES

**NDSU** | EXTENSION

---

---

---

---

---

---

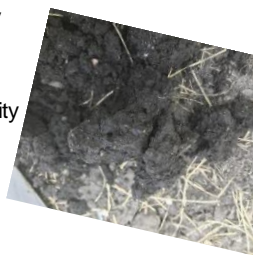
---

---

## Soil Benefits



- Water holding capacity
- Drainage
- Nutrients
- Nutrient holding capacity
- Aggregation



NDSU | EXTENSION

Photo Credit: Knutson 2020

---

---

---

---

---

---

---

---

## Compost Ingredients

### Brow ns (Carbon Rich)

- Dry leaves
- Nut and eggshells
- Dry flow ers
- New spaper
- Shredded cardboard and paper
- Dry grass and garden trimmings
- Straw

### Greens (Nitrogen Rich)

- Fruit and Vegetable Scraps
- Coffee and tea
- Fresh grass and garden trimmings
- Manure

NDSU | EXTENSION

---

---

---

---

---

---

---

---

## Ingredients to Avoid

- Diseased plants
- Bird and pet feces
- Toxic plants or other materials
- Weeds w ith seeds
- Meats, bones, dairy, fats and oils
- Ashes



NDSU | EXTENSION

---

---

---

---

---

---

---

---

## The Recipe

2:1



NDSU | EXTENSION

---

---

---

---

---


---

---

---

## The Recipe

- Particle Size
- Aeration
- Moisture
- Volume
- Temperature and Time
- Curing



NDSU | EXTENSION

---

---

---

---

---

---

---

---

## Methods



- Hot and Fast Method
  - Intensive
  - Made all at once
  - Temperature is monitored
- Cool and Slow Method
  - Low Maintenance
  - Materials can be added after the initial pile is formed
  - Can take a long time

NDSU EXTENSION

---

---

---

---

---

---

---

---

## Compost Systems

- Three things to consider
  - Amount of material
  - Amount of space
  - Amount of time



Photos by Unknown author are licensed under [CC BY-SA](#).

NDSU EXTENSION

---

---

---

---

---

---

---

---

## Compost Bin Options



- Wire
- Wood
- Plastic
- Metal
- Other
  - Straw
  - Concrete blocks
- Multi-bin systems

NDSU EXTENSION

---

---

---

---

---

---

---

---

## Compost Piles and Windrows



by Unknown author is licensed under CC BY

NDSU | EXTENSION

---

---

---

---

---


---

---

---

## Other Methods

- Pit Composting
  - 3 row method
- Sheet or Lasagna Composting
  - Create new garden spaces or improve soil



by Unknown author is licensed under CC BY

NDSU | EXTENSION

---

---

---

---


---

---

---

---

## Compost System Placement



- Factors
  - Existing structures
  - Water Drainage and access
  - Part-Sun
  - Appearance

by Unknown author is licensed under CC BY

NDSU | EXTENSION

---

---

---

---

---

---

---

---

## Tools

- Chopping or Shredding Tools
- Mixing or Turning Tools
- Watering Tools
- Harvesting Tools



These Photos by Unknown author are licensed under CC BY-NC-SA

NDSU | EXTENSION

---

---

---

---

---

---

---

---

## Common Issues

- Odor
- Compost isn't heating
- Non-decomposed layers
- Non-decomposed items
- Insect pests and rodents



Photo Credit: iStockphoto.com/John G. Goff

NDSU | EXTENSION

---

---

---

---

---

---

---

---

## Winter Composting



Photo Credit: Knutson 2020

NDSU | EXTENSION

---

---

---

---

---

---

---

---



Carrie.Knutson@ndsu.edu  
701-780-8229

This Photo by Unknown author is licensed under CC BY-NC.

**NDSU** | EXTENSION

---

---

---

---

---

---

---


---

---

---

### Nondiscrimination Statement

NDSU does not discriminate in its programs and activities on the basis of age, color, gender expression/identity, genetic information, marital status, national origin, participation in lawful off-campus activity, physical or mental disability, pregnancy, public assistance status, race, religion, sex, sexual orientation, spousal relationship to current employee, or veteran status, as applicable. Direct inquiries to Vice Provost, Title IX/ADA Coordinator, Old Main 201, (701) 231-7708, ndsu.eoaa@ndsu.edu.



**NDSU** | EXTENSION

---

---

---

---

---

---

---

---

---

---

### Resources

- Vermont Master Composter Resource Manual. State of Vermont Agency of Natural Resources. September 2017.
- NYC Master Composter Manual. NYC Department of Sanitation. February 2015.

**NDSU** | EXTENSION

---

---

---

---

---

---

---

---

---

---