

Fishy Compost

North Central Regional Aquaculture Center
Missouri Aquaculture Association
Kansas Aquaculture Association

Presented by

Stan Slaughter

M.A. Biology

Missouri Organic Recycling

Thanks to KDHE and Cornell University for Slides



Compost is the product of rapid decomposition of organic materials. It is always deliberately man-made. Nature makes humus. People make compost.



Without the recycling of the bodies of plants and animals, Life would soon become impossible.

Composting is key in one of the first laws of
Nature,
allowing us to quickly and safely recycle dead plant
and animal materials.

Compost:
creates valuable ingredients for the life of plants,

avoids disease potential,

eliminates odors,

stops pollution,

reuses waste.

All waste is food for “somebody.”



Composting is a whole new way of thinking

Compost is like living Legos.



Compost is what's left at the end of the decomposition process.

Humus is similar to compost but is nature-made and more complex than compost.

Hummus is made from garbanzo beans

Building a Compost Pile

Browns

Carbon sources

Usually dry

Might burn

Can be stored

Greens

Nitrogen sources

Usually moist

Often smelly

Rot quickly

The Browns

- The energy food - Carbohydrates for the critters
- Contains fiber to maintain air spaces and absorb moisture and odor.
- 60-70% of the mass usually
- Low in moisture, high in fiber, might burn
- Change over slowly over time

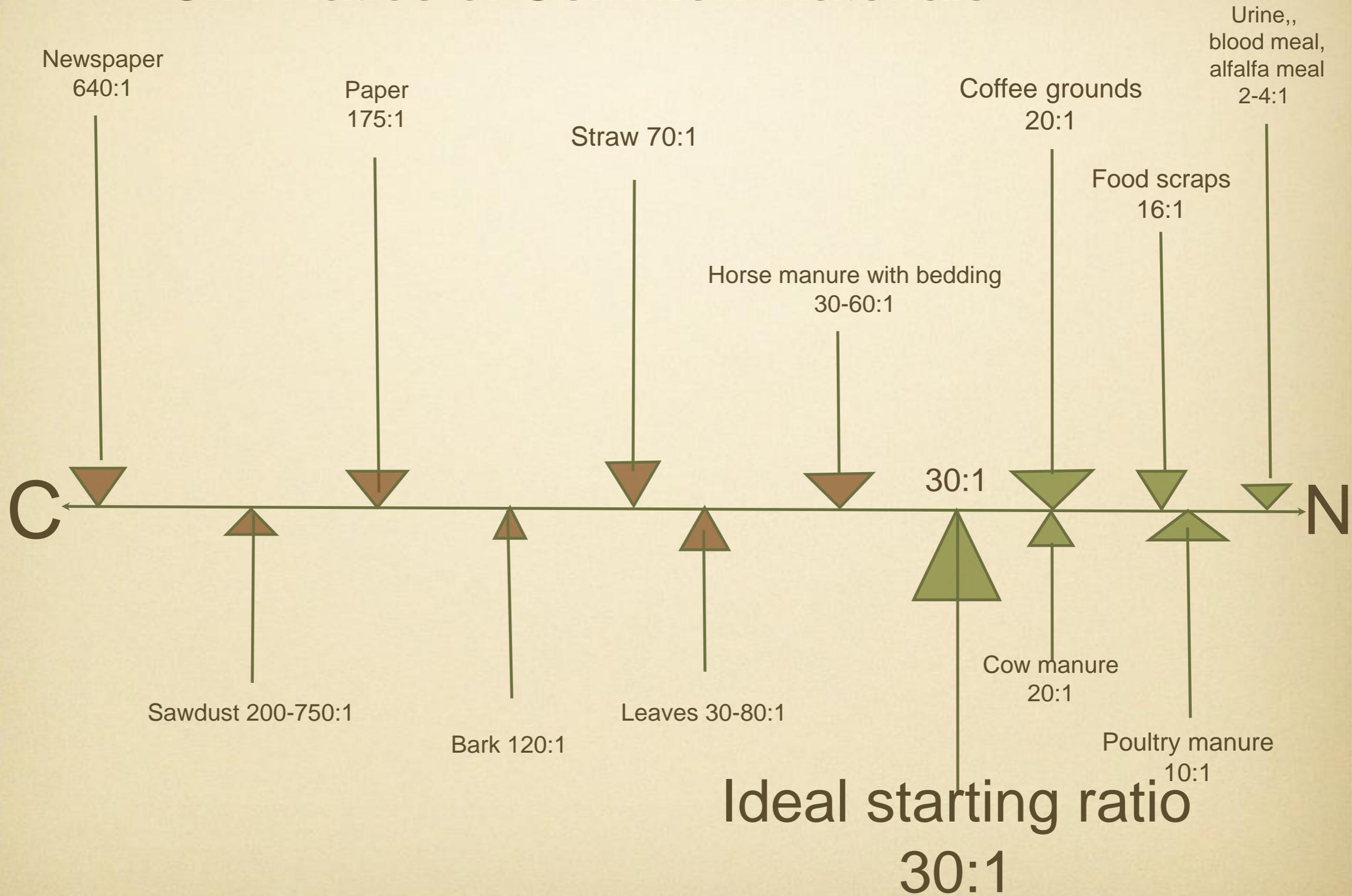
The Greens

- Relatively high in Nitrogen
- Source for the proteins bacteria need to multiply
- Low in fiber, high in moisture
- Decompose rapidly, may cause odors
- Change a lot over time, unstable

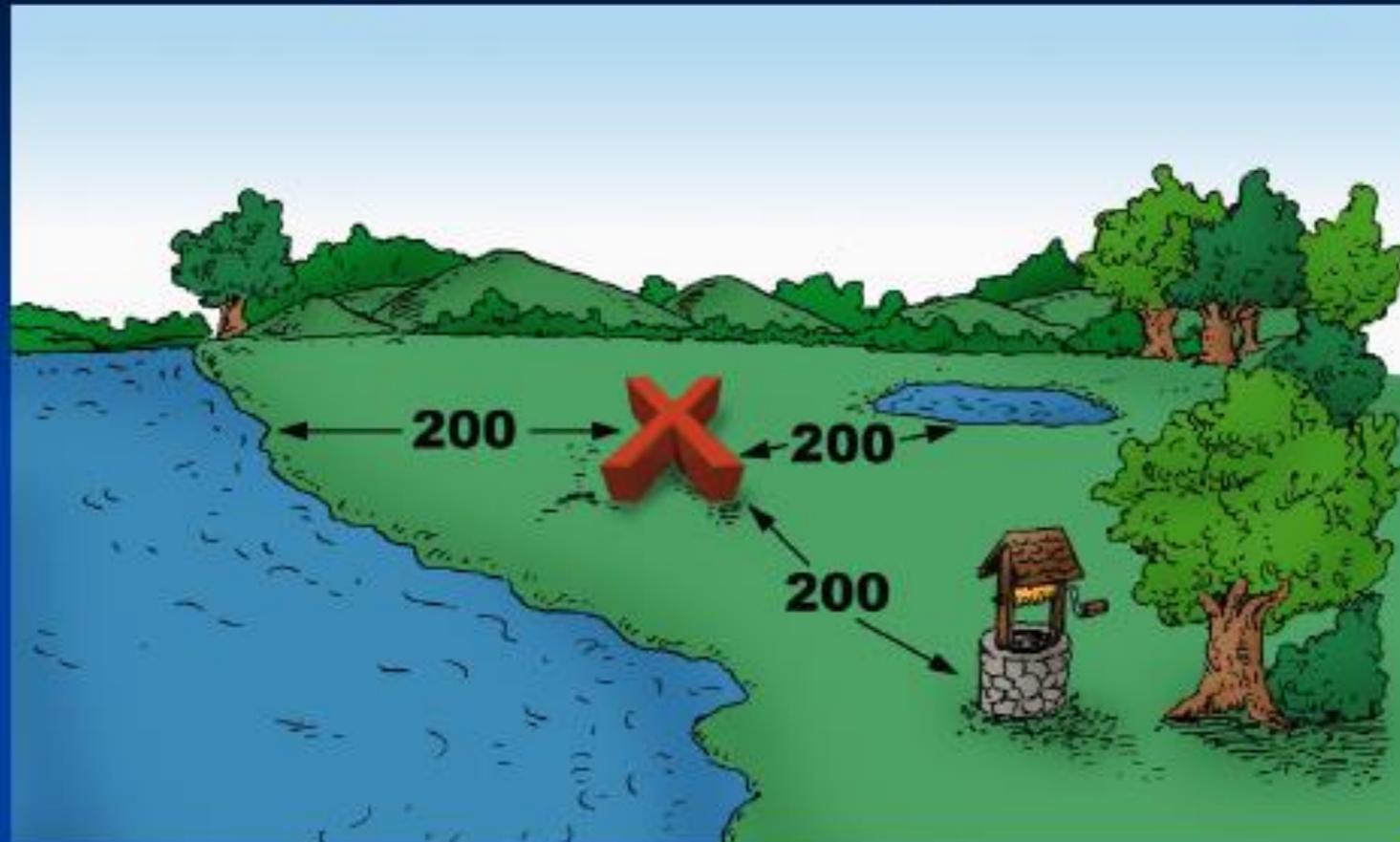
Odor



C:N Ratios of Common Materials



Siting for Composting



Well-drained, at least 200 ft from water courses, sinkholes, seasonal seeps or other landscape features that indicate the area is hydrologically sensitive.

Neighbor Relations



Trailer made to dump butcher waste onto bed



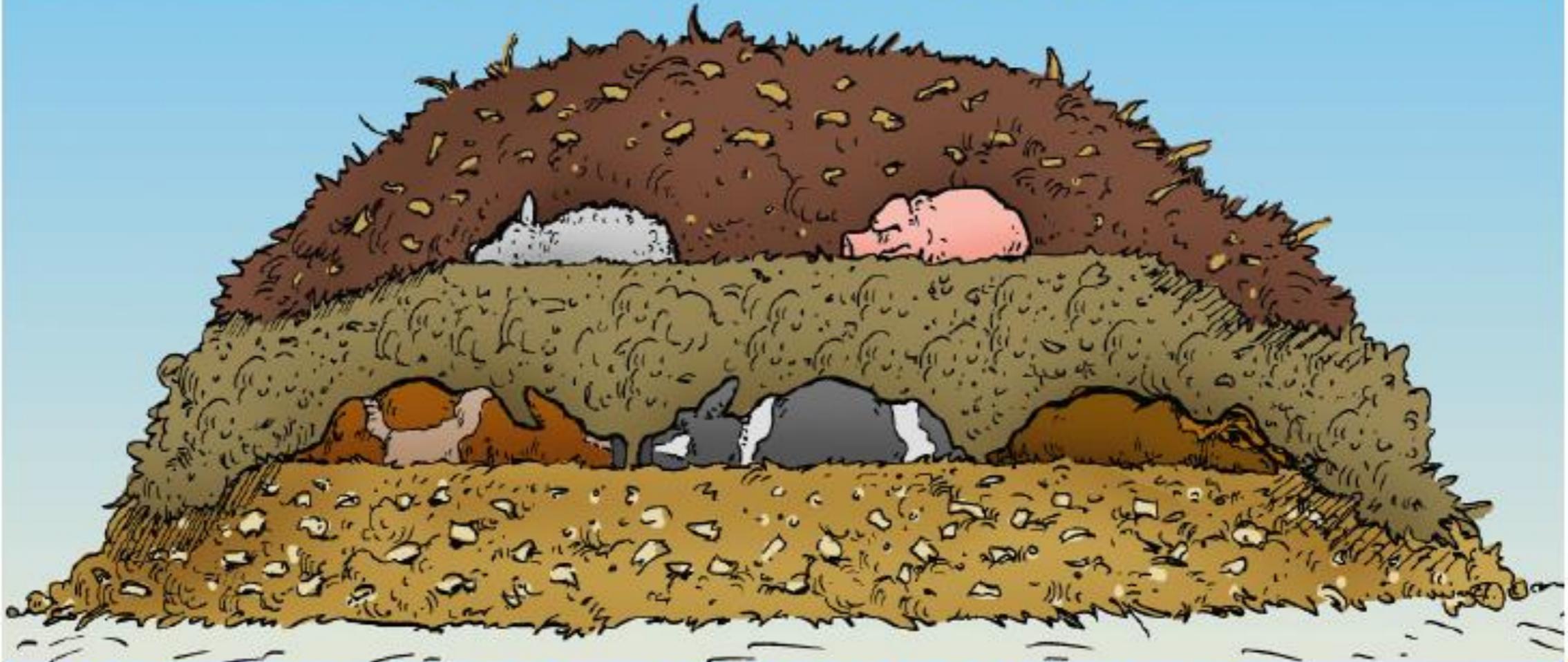
Make sure it is contained in a bowl of chunking carbon then cover—flesh waste compost is layered and not turned much if at all







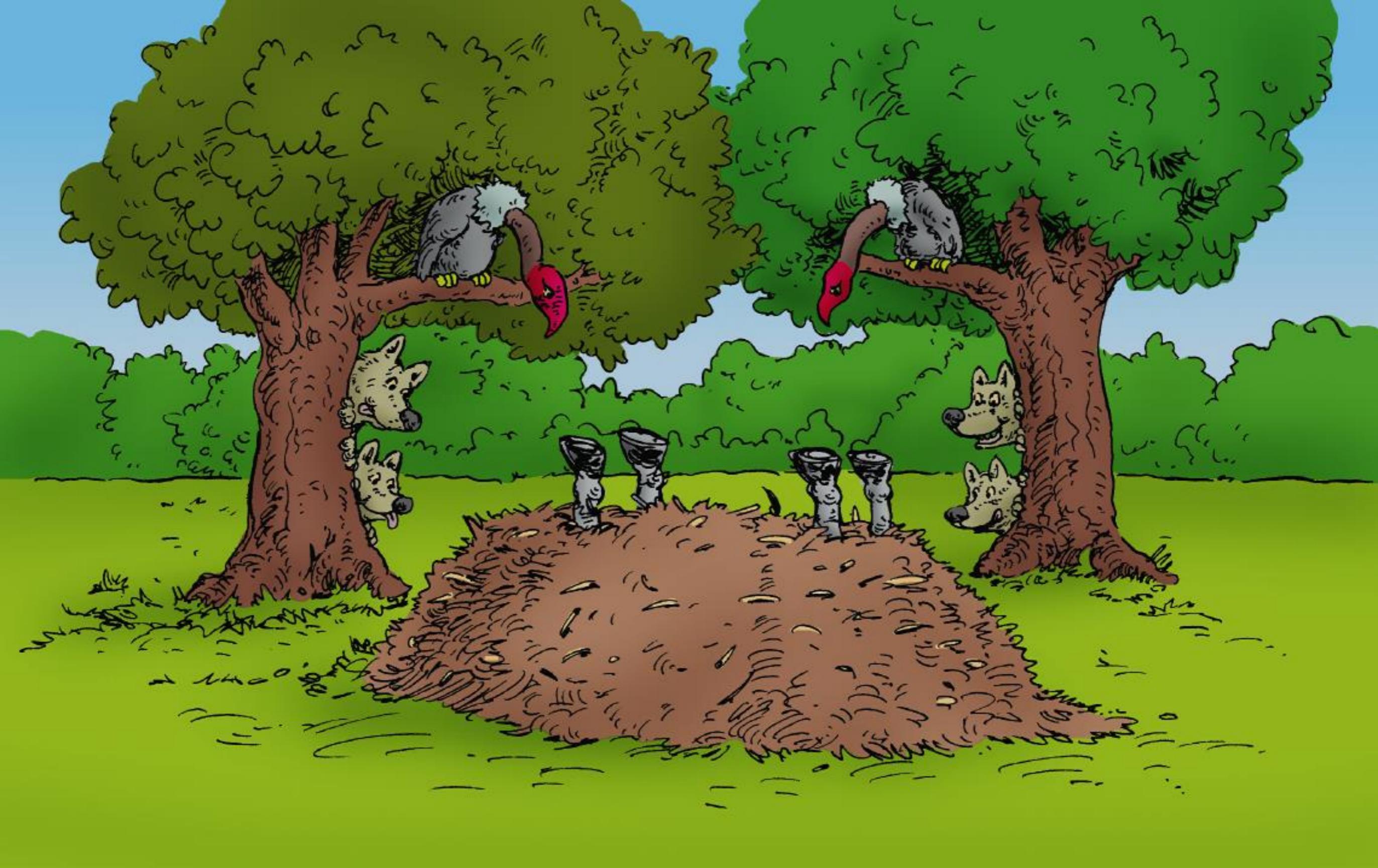
Recipe for Small Animals & Butcher Residual



For young and small animals, layer mortalities with a minimum of 2 feet of co-composting material.



The wood chips are good, but this layer is not enough for large animals



Enough Cover?



Layering parts and pieces into a compost container



This is a good design for a small-scale fish waste operation.



Food scraps can be composted at home. Dairy and meat products should not be composted in small piles, they attract your pets, rodents and other pests.

Lobster waste on dewatered paper pulp



What conditions are needed for good Composting?

- Moisture- 50% by weight
- Materials- mix of Greens and Browns
- Mass- 3 ft x 3ft x 3ft (minimum)
- Oxygen- turning/open sided bin
- Time- 3-4 months to 1 year

Rotary in-vessel units can
handle food scraps or
even
....dead turkeys



Slow roasted turkey in
only four days.

Only Joking



Figure 3. 590 lb. of litter to add to composter (left) and the moist compost beginning to cover the turkey carcasses inside the composter (right).

Advanced Technology Applications
Corporation
Aikens, South Carolina



Figure 6. Finished turkey/litter compost and a 6-gallon bucket of bones that were removed from pile.

When is compost finished?

- When it doesn't look like what it used to be.
- When all particles are brown throughout. There may be small pieces of wood but they're all brown.
- When the structure is crumbly and sweet smelling.

NATURE'S WAY

8/13/04
facing North

uncovered pile



Inner Pile Exposed
compost material; hot, gray