COMPOSTING BASICS FOR URBAN FARMERS

University of California – Agriculture & Natural Resources

Regulations - State & Local

COLLECTION | TRANSPORTATION | PROCESSING

Compost Basics

RECIPE | TOOLS | URBAN COMPOSTING

Management of Vectors and Odors

- Recipe is carbon, nitrogen, oxygen and water
- Carbon provides energy for microbial activity. Structure, body and texture for finished compost
- Nitrogen provides food for the microbes.
- Too much carbon – pile won't heat up, compost with not much life, may attract rodents, cold pile.
- Too much nitrogen – not enough energy so will escape as ammonia.
- Too much water; too little water - ?

Temperatures & Tools

- Thermophilic bacteria >130 degrees
- Mesophilic bacteria <130 degrees
- Pre-consumer and post consumer foodscraps, vegetative and non-vegetative foodscraps, yard/ landscape waste and manure as feedstocks
- Tools- thermometer, moisture meter, pH meter
- Pathogens and weeds break down in temperatures greater than 150 degrees.

Other Methods

- Compost happens. Our job is to facilitate so that the material breaks down faster and we are utilizing our investment optimally.
- Compaction of > 50%
- Static piles, aerated static piles, windrows, hugelkultur,
- Aerobic process v/s anaerobic process
- Bokashi and other pickling methods are anaerobic processes.

Food Waste Stream

WHAT | WHO | HOW

WHAT'S IN THE FOOD WASTE STREAM

PRE-CONSUMER OR KITCHEN SCRAPS

POST-CONSUMER OR PLATE SCRAPS

VEGETATIVE SCRAPS

NON-VEGETATIVE SCRAPS
Eggs, Meat, Bones, Dairy

COFFEE GROUNDS

JUICE PULP

SPENT BREWERY GRAINS

CITRUS PEELS

Food2Soil Way

OPTIMIZE INVESTMENT | AUGMENT INCOME | CRAFT COMPOST

BIN SETUP

- Each bay is 1 cubic yard or 3 ft * 3 ft * 3 ft
- Temperatures go above 160 degrees if larger bay capacity
- Turning becomes difficult in larger bays as certain corners are hard to reach

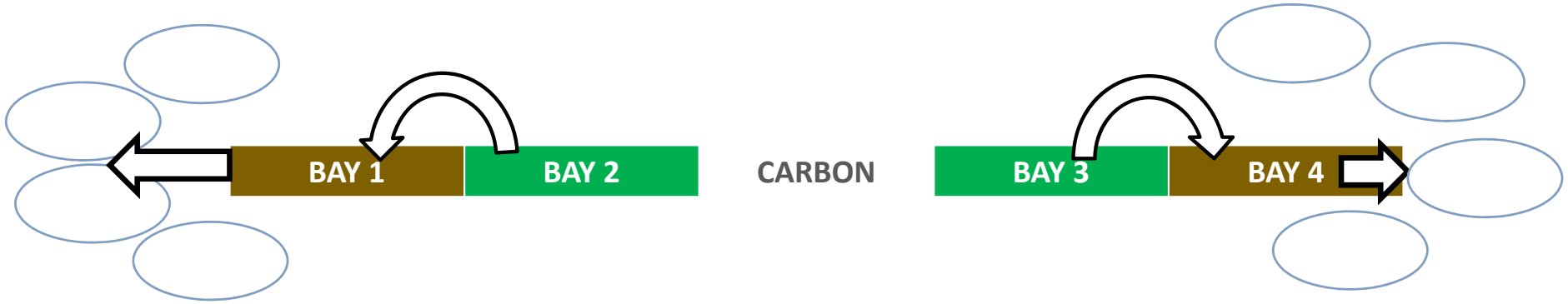
BEST PRACTICES

- Target C:N ratio is 30:1 on a weight basis.
- 2 turns; long curing period
- Temperatures should go above 130* to kill pathogens
- Temperatures above 160* is not favorable – anaerobic/kills beneficials
- Manure, spent brewery grains are very high nitrogen sources

PROCESS

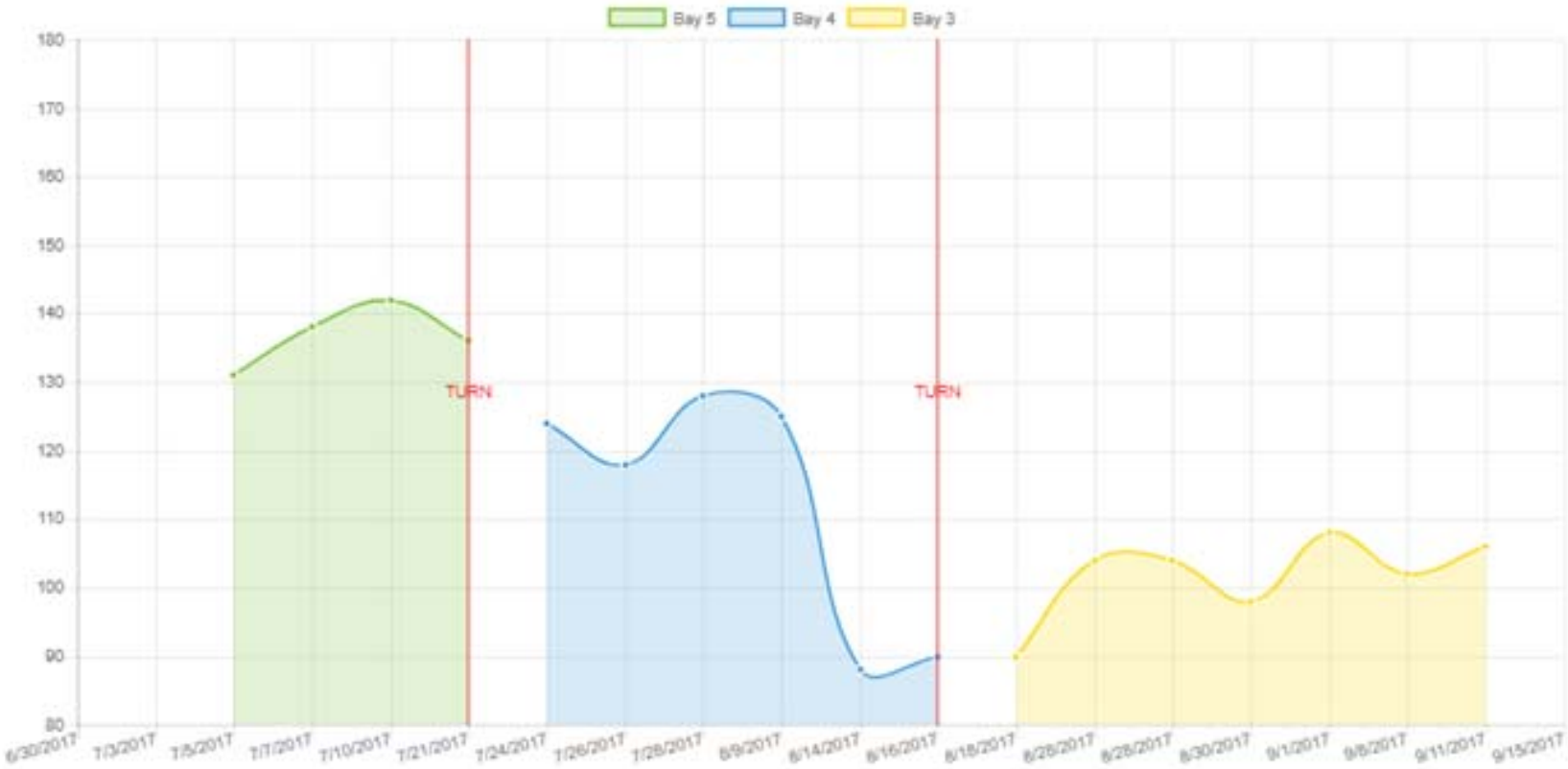
- Start each bay with a 6-8 inch layer of mulch
- Layer of scraps i.e. nitrogen
- Sprinkling of innoculant **(optional)**
- Layer of **saturated** leaf mulch i.e. carbon
- Repeat layers of green, followed by innoculant, followed by brown
- Top with one extra layer of mulch
- Cover with pine needles

PROCESS



- Each batch is turned atleast 2x. Total life from scraps to compost is 12-15 weeks
- Turn 1 in first or second week.
- Turn 2 in fourth or sixth week. In place turn or into curing area.
- Compost could stay in holding area for 4-6 weeks.

TEMPERATURES



SITE SELECTION

- Bins on dirt area
- 3-5 foot clearance on all sides
- Access to running water. Priority of use.
- Proximity of scrap generation point or scrap drop off point to bins
- Proximity of bins to mulch/straw storage area
- Access to tools – pitchfork, shovel, wheelbarrow
- Proximity of bins to parking area

CARBON SOURCES

Regular Mulch

Leaf Mulch

Straw/ Shredded straw

Animal bedding / wood shavings

Saturate your carbon