

Preemergence Weed Control

Before Weeds Emerge

-- more importantly --

Before Weeds Germinate

Preemergence weed control options

✱ Mulches prevent germination and establishment by excluding light

✱ Preemergence Herbicides
Prevent seedling establishment

Mulches : #1 defense against annual weeds



Bare ground

Mulched

Mulches

- ✠ Control many annual weeds from seed
- ✠ Do not control perennial weeds from roots, tubers or rhizomes
- ✠ Must be replenished yearly



Pigweed:
an annual
weed
controlled
by
mulches



Horsenettle: a perennial weed not
controlled by mulches

Mulches

- ✦ Types: organic, inorganic, geotextile
- ✦ Function: exclude light to prevent seed germination and seedling establishment
- ✦ Also, holds moisture and improves aesthetics



Kinds of mulches





What makes a good Mulch?

- ✠ Coarse texture to dry out
- ✠ Aesthetically pleasing
- ✠ Will not wash
- ✠ Relatively weed free
- ✠ Not phytotoxic



Lava rock – some like it,
some don't



Bark nuggets wash easily

Phytotoxic mulch?

✠ Anaerobic mulches can burn tender plants. Make sure mulches are properly composted and stored

✠ Pine straw can stunt pansy growth



Hand Weeded



Pine Straw Mulch

Pansy beds



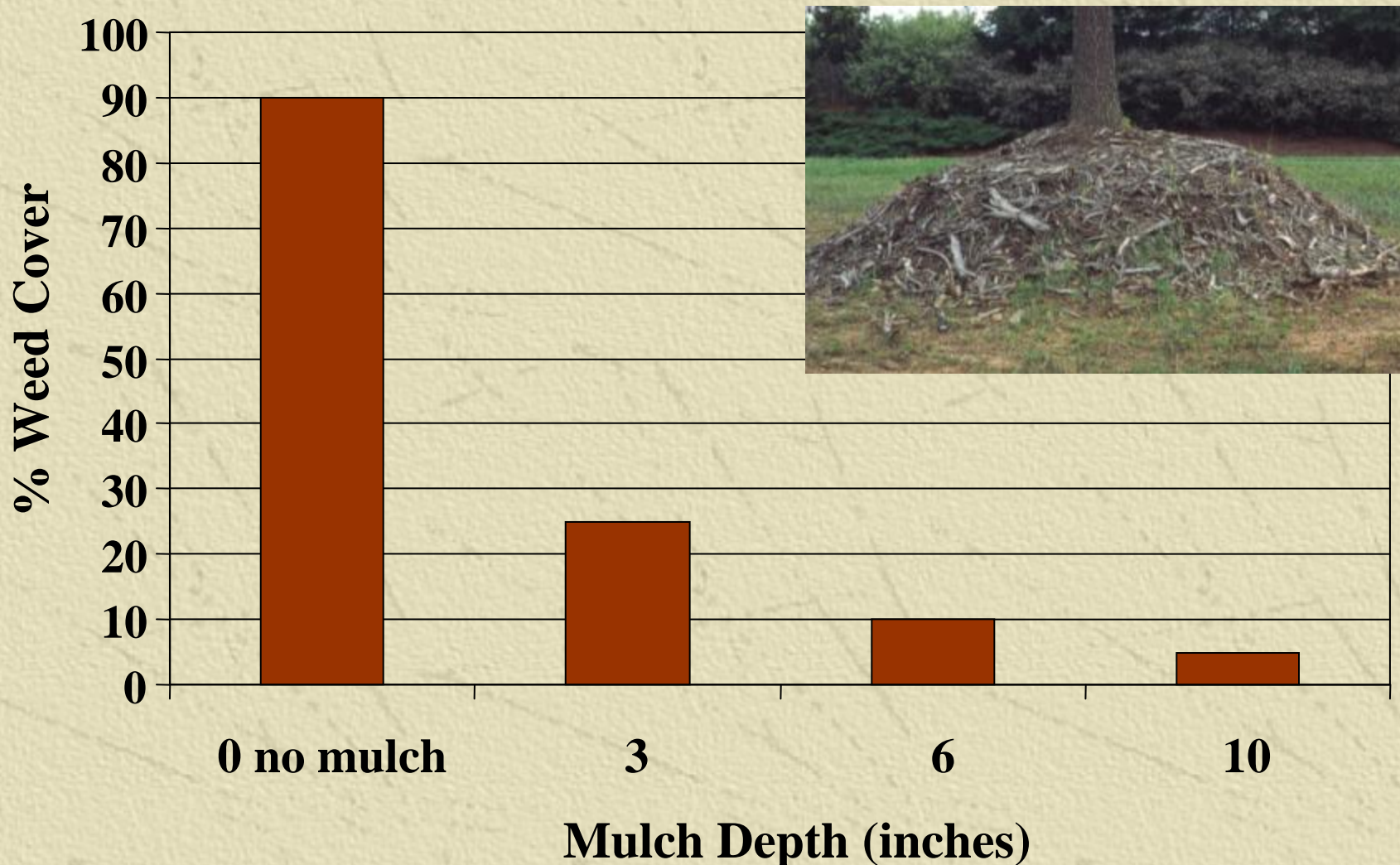
- ✦ Use a fine textured mulch around the plants – composts will do fine because they will be rototilled into the bed the following spring
- ✦ Edge the bed with pine straw to prevent washing

Most annual beds are done this way





How much mulch is enough?





Mulches -- How Much?

✦ Organic mulches: ~ 3-4 in



✦ Inorganic mulches: ~ 3 in



✦ With a geotextile: ~ 2 in



How Much Mulch Do You Need?

✦ Bark mulch: 1 cu yd
covers ~ 100 sq ft to a
depth of 3 inches



✦ Pine Straw: 1 bale covers
about 35 sq ft.



Geotextile fabrics

- ✦ Woven or spun-bonded plastic fabrics
- ✦ Allow water and air to penetrate
- ✦ Often sold at “weed mats” or “weed fabrics”





Geotextile fabrics -- Advantages

- ✱ Long term annual weed control
- ✱ Soil stabilization
- ✱ Holds moisture
- ✱ Possible add-on service \$\$

Geotextile fabrics -- Disadvantages

- ✦ Cost – materials and installation
- ✦ Site preparation: eliminate perennial weeds
- ✦ Must cover with mulch
- ✦ Perennial weeds can penetrate
- ✦ Annual weeds grow on top
- ✦ Mulches slip off
- ✦ In heavy soils, it may hold too much moisture
- ✦ Decomposing organic mulches create a humus layer where weeds can germinate

Geotextile fabrics do not control perennial weeds

- ✦ Vegetatively propagated perennial weeds can emerge through geotextile fabrics



Nutsedge



Bermudagrass



Mugwort



Many perennial
weeds can
grow through
geotextile fabric
mulches



Equisetum will emerge
through geotextiles



Weeds germinating on top can grow through the mulch



✦ Roots penetrate the fabric more easily than shoots

Weeds growing through the mulch damage the geotextile



Biggest problem with geotextiles is proper installation



Not installed correctly:
Edges come up, mulch washes off.

Unsightly and ineffective.

Steps in proper installation



✚ Dig trench around perimeter of bed



Step 2: place geotextile over bed

- ✠ Install geotextile over plants.
Don't try to plant through the bed
- ✠ Dirt on top of the fabric leads to weeds.





Step 3: Anchor edges in SOIL (not mulch)



- ✠ Bury edges in soil. [remember, roots will grow through the fabric]
- ✠ Mulch-only will allow edges to come up



Step 4: Cover with enough mulch to prevent light degradation



Types of Geotextile fabrics

✦ Lots of different types:

- ✦ Spun bonded
- ✦ Woven
- ✦ Needle punched

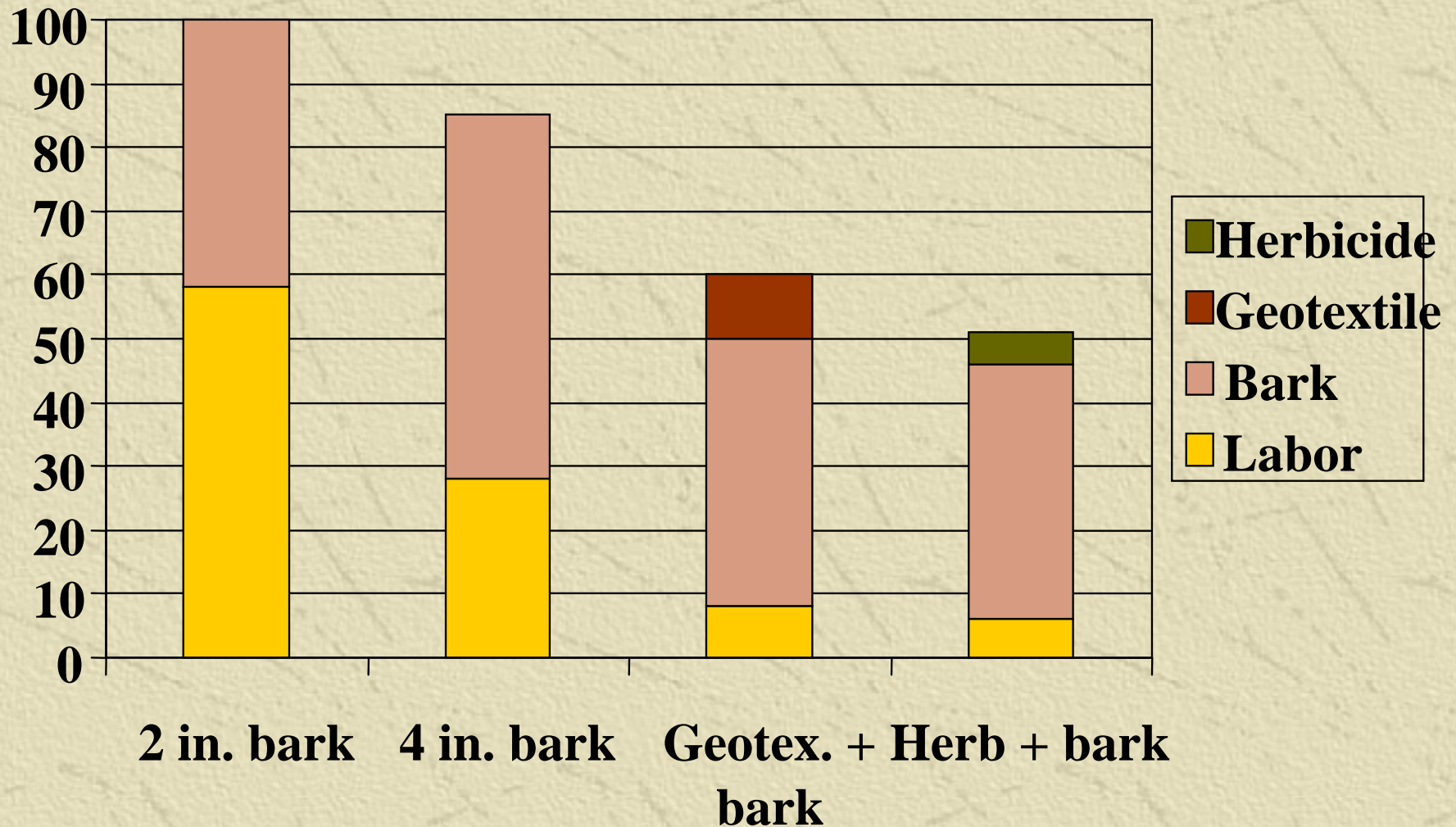
✦ Yes, between consumer and professional grade products.

✦ Smooth vs. textured can make a difference on slopes. Mulches slip off smooth more easily. Install with fiber side up.

Advice: if you use a geotextile

- ✦ Control perennial weeds before planting
- ✦ Use shallow layers of mulch
- ✦ Keep geotextiles totally covered
- ✦ Remove / kill emerged weeds when small
- ✦ Consider using inorganic mulches
- ✦ Consider preemergence herbicide with geotextile when weeds become abundant or for yellow nutsedge control

Relative Weed Control Costs



Biobarrier: An Alternative?

- ✠ Geotextile fabric impregnated with trifluralin
- ✠ Prevents most weeds from growing through the fabric



Some Weeds Like
Growing in
Mulches

Herbicides are
sometimes needed

