Rubbery Shrubbery

Should we use rubber mulch in our landscapes?
Seminar road map

- Rubber mulch
  - What is it?
  - Does it work?
  - Environmental impacts
- Alternatives
  - Choices
  - Benefits
- Resources

Dr. Linda Chalker-Scott
WSU Extension Urban Horticulturist
Uses for scrap tires

- Generating energy
- Rubberizing asphalt
- Playfields and landscapes
Why use as a mulch?

- Eliminates Annual Mulching
  Se Elimina la Necesidad de Colocar el Cubresuelo Año Tras Año

- Prevents Insects and Weed Growth
  Impide la Infestación de Insectos y Crecimiento de Maleza

- 99.99% Wire-Free
  99.99% Libre de Alambre

- Made from 100% Recycled Tires
  Hecho de 100% Materiales Reciclados
Impact on weeds

Rubber mulch is less effective in controlling weeds than organic mulches

Dr. Linda Chalker-Scott
WSU Extension Urban Horticulturist
Impact on plants

- Leaf yellowing, reduced tree growth, and increased tree mortality
- Soil tests show high levels of zinc
- Zinc toxicity can cause chlorosis
Impact on pests

Asian cockroach mulch preferences

- Rubber mulches most preferred
- Wood chips were least preferred
Should recycled rubber be placed in greater contact with people, pets, and the environment?
Flammability

Rubber mulch is the most likely to ignite and most difficult to extinguish.

Dr. Linda Chalker-Scott
WSU Extension Urban Horticulturist
Rutherford, PA fire
Decomposition of rubber mulch

- Tires broken down by microbes
- Many bacterial species
- White- and brown-rot fungi
- Decomposition → breakdown products
- Heavy metals
- Plasticizers
- Accelerators
Toxicity of breakdown products

- Rubber leachates can kill entire aquatic communities
- Small particles have increased leaching potential
- Crumb rubber toxins found in air, soil and water
  - Benzothiazole
  - Polycyclic aromatic hydrocarbons (PAH)
  - Heavy metals
Health concerns

Continued documentation of crumb rubber toxins in turf fields

No similar studies on rubber mulches

Gardeners should be aware of potential contaminants
Summary of benefits

- Many colors available
- Easy to find
- Easy to apply
- Infrequent application
Summary of drawbacks

Short term:
- Poor choice for weed control
- Attractive to nuisance insects
- Highly flammable

Long term:
- Release heavy metals and organic chemicals
- Potentially negative effects on human and environmental health
Food for thought:
The EPA classifies illegally dumped tires as pollutants

How does this differ from legal “dumping” as a landscape mulch?
Alternative mulches
Better performers
Pose no environmental risk
Many living mulches are resistant to foot traffic and make good turf replacements.
Inorganic mulches can be aesthetically appealing.
Stone mulches are ideal in dry environments.
Chunky organic mulch
Depth of mulch critical
Woody mulches are “slow food” for landscapes
Mulch combinations
Living and inorganic
Living, inorganic and organic mulches
New WSU Extension Fact Sheet on Rubber Mulch


Dr. Linda Chalker-Scott
WSU Extension Urban Horticulturist
Theory and application of current landscape plant science
New book: plant physiology for non-scientists

Dr. Linda Chalker-Scott
WSU Extension Urban Horticulturist
Re-using containers? A cautionary tale.

January 10, 2014 • Amusing Facts, Knock It Off, Stories, Uncategorized • wildlife • Holly Scoggins

I attempted to clean up our little home greenhouse over the holiday break. There’s no good place to recycle pots around here, and I hate throwing them away...so I suffer from container build-up. Figured I’d sort through the haphazard pile in the corner of the greenhouse, wash and re-stack the useable ones, and finally ditch the busted ones.

As I started separating the first stack, I noted a tiny flash of red. It is well-known and oft-reported among my gardening and grower buddies that the Southern Black Widow (Latrodectus mactans) really enjoys a nice stack of grubby pots. But I hadn’t seen one in quite a while, and not at our current location.
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