

# Organic Herbicides for Weed Control

David Cook, UT Extension

## Corn Gluten Meal as an Herbicide

Corn gluten meal works by inhibiting the root formation of germinating plants.

**It should be applied before germination of the weeds.**



## Vinegar as an Herbicide

Vinegar contains acetic acid, which is the actual weed killer. Acetic acid is found in all living organisms. It is readily broken down to carbon dioxide and water.

Vinegar consists of approximately 5% acetic acid and 95% water. This is also the concentration of acetic acid when applied as a pesticide product.

To be effective, acetic acid needs to contact the plant leaves; the acidity of the spray solution damages and dries out the leaves. Vinegar is nonselective and may damage any plant tissue. It does not move within treated plants, so only top growth is killed. This means perennial weeds return.

Vinegar is fast acting and most effective on young, actively growing annual weeds, and good spray coverage is critical.

Studies have shown that for vinegar to be most effective, the percent of acetic acid should be 10 to 20%. That means that the vinegar in your kitchen cabinet is not quite strong enough to do the trick.

Most commercially available vinegars are only 5%.

In 2002, USDA research found that control of smaller weeds was variable with 5% acetic acid, while concentrations from 10 to 20% provided 80 to 100% control.

We splash vinegar on our lettuce salads and think nothing of it.

However, stronger forms of vinegar can be hazardous to humans.

Acetic acid concentrations over 11% can cause burns upon skin contact. In fact, eye contact can result in severe burns and permanent corneal injury.

This is why reading and following the label is so important.

### **Horticultural Soaps as Herbicides**

Many gardeners know that horticultural soaps can be used to manage insects in the garden, but not everyone knows that they can also act as herbicides.

Horticultural soaps are made from specific salts that are found in fatty acids, a natural component found in plants and animals.

In the right concentrations, these salts can be harmful to plants. Certain organic weed control products use these salts to act as a non-selective herbicide that can kill many weeds, grasses, mosses, and algae.

Be sure to read the label on any product you choose to make sure that it's approved for use on the plants you want to kill. And always follow label instructions and safety guidelines when applying any product.

## **Organic Weed Control Products**

These products are non-selective and will kill both broadleaf and grassy weeds.

**Organic Weed Preventer** by Espoma (corn gluten meal)

**Weedkleen** by ecosaveearth (citric acid, wintergreen and vinegar)

**Avenger Weed and Grass Killer** (d-limonene – citrus oil)

**BioSafe Weed Control** (herbicidal soap)

**Organic Weed Preventer** by Espoma (corn gluten meal)

**BurnOut Weed and Grass Killer** by Bonide (acetic acid & clove oil)

**Organic Weed Killer** by Earthsafe (vinegar based)

**Dr. Earth Final Stop Weed & Grass Herbicide** (citric acid & plant oils)

**Weed Pharm** by Pharm Solutions, Inc. (acetic acid)