

MULCH CORNER

INORGANIC MULCHES: SPECIALTY PLASTICS

By John Ferguson

Last week we looked at clear plastic so this week we are going to take a brief look at specialty plastic mulches. These plastic mulches share many of the benefits and negatives of regular black and clear plastic mulches and they are different in some ways. While these types of mulches are not recommended for the average gardener, I believe many gardeners will find the subject matter interesting.

There has been a lot of research published over the last decade on how color affects plant growth along with insect and disease issues. I will summarize all the research in a future article.

Colored plastic - this is a new type of plastic mulch designed to use color and reflectance to help plants grow. For example red plastic has been found to increase yields of tomatoes when compared to other colors and preliminary work shows red plastic might work better for strawberries and apples also. As with all plastic mulches, shallow root systems are often created and during drought periods the plants may not survive the stress. Research at the USDA has found that a certain frequency of red plastic (SRM-Red, sensitive reflecting mulch) film will increase growth of tomatoes 12-20% as compared with black plastic. However drawbacks are the same as with clear or black plastic.

Silvered Plastic - Another type of colored plastic mulch is silvered. This aluminum coated plastic has been found to reduce insect populations several times over black plastic in several types of crops. However drawbacks are the same as clear or black plastic and the costs are a lot higher.

Micropore Plastic - This is a new form of black plastic about 2 mils thick and has tiny holes that allow some air and water to pass through, but the holes are too small for weeds to grow through. It is designed to address some of the drawbacks of using plastic mulch. As with all plastic mulches it should be removed after air temperatures warm up. It is sold under trade names like "Miracle Mulch".



Infrared Plastic (IRT) - This is a new form of black plastic that lets infrared radiation pass through, helping to warm soil faster than regular black plastic. This mulch warms soils in spring better than standard black plastic, and it blocks the part of solar radiation that weeds need to grow better than plain black plastic. It is most effective in specialized applications.