



## ALTERNATIVES TO PLASTIC MULCH

The use of plastic mulch films is widely popular in vegetable production due to plastic's ability to control weeds and produce earlier, higher yielding crops. If the lack of access to application equipment or disposal concerns make you hesitate to use plastic mulch, there are many alternatives that will perform admirably, such as planters paper, landscape fabric, shredded bark or leaves. There are a few degradable plastic mulches available. Planters paper, bark and leaves are all biodegradable and you won't have to deal with the used plastic at the end of the season.

When it comes to mulching for vegetable plots, there is no one-size-fits-all material. You can make an informed decision when selecting a mulch by answering a couple of basic questions:

1. Is the mulch going to be used for a summer or winter crop? For example, black plastic mulch warms soils and creates hotter temperatures near the soil line. This extra heat may be too much for anything other than the most heat-loving crops. For a cooler environment, consider white on black plastic, which reflects a lot of the heat upward and away from the plants.
2. Is the growing location an enclosed environment, such as a greenhouse or high tunnel, or is it in an open garden or field? Paper mulch is best suited for high tunnels, greenhouses and other types of enclosed production. When used outdoors, the wetting/drying cycle from rainfall can cause paper mulch to tear easily, making it far less durable, especially if used in heavy foot-traffic areas.

Here's a comparison of some popular mulching materials and the advantages/disadvantages of each.

<b>MATERIAL</b>	<b>ADVANTAGES</b>	<b>DISADVANTAGES</b>
Black plastic polyethylene	Early warming of soils, weed control, reduced evaporation, clean crops at harvest	May heat soils too much for some summer crops, disposal required at the end of the season
Photodegradable plastic	Rapid warm-up of soils, portions exposed to sunlight break down and leave little residue	Poor weed control, buried portions persist virtually intact
Degradable plastic polyethylene	Can be tilled into soils at end of season, thereby reducing labor and disposal costs	Petroleum inputs, fragments may persist in soils for months
Landscape fabric	Allows water and gas exchange	Degrades if exposed to sunlight, adding organic mulch materials to block sunlight hastens the appearance of weeds
Planters paper	Degrades in one season, best suited for high tunnels or enclosed environments	If used outdoors, material rips easily due to rainfall
Weed Gard Plus (OMRI listed)	Made of cellulose, good preventative weed control	Must address problem weeds at the site before using, may require tilling or herbicides prior to use
Bio 360	Plant starch-based, breaks down via soil organisms	Plant starch is brittle, materials often need plasticizers or other inorganic inputs, costs three times more than black polyethylene
Straw	Widely available, inexpensive	May contain weed seeds, haven for rodents, reduces soil nitrogen as it decomposes
Bark	Good soil moisture retention	Increases soil acidity, may burn plants if not sufficiently cured, breeding ground for various fungi
Shredded leaves	Degradable, adds organic matter to soils as leaves decay	May contain weed seeds or pesticide residue depending on the source, may increase soil acidity depending on tree species



Remember, there is no perfect mulch for all situations.  
Good mulches, whether plastic, paper or organic, should:

- Provide good weed control.
- Improve soil water retention.
- Reduce soil water evaporation.
- Reduce rots and soil-borne diseases.
- Be economical.
- Be readily available.
- Be easy to apply and remove.
- Be free of weeds, insects and diseases (if organic).

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