


PLASTIC MULCH 101


Texture



Smooth Embossed

Embossed plastic mulch lays easier, hugs the soil/bed better and resists damage/punchers.

Color



Black plastic mulch warms soil for earlier growth. Most common.

Both white and silver on black plastic mulches reflect solar radiation and are opaque; therefore they keep soils cooler for summer plantings and they may be beneficial for insect (thrip) control.

Thickness

Ranges from 0.6 mil to 2mil. When a quality blend of polyethylene is used, 1 mil is common.

Type


Non-Degradable: Will keep it's integrity until it is removed. **IT MUST BE REMOVED AFTER HARVEST!**

Degradable: Will degrade due to temperature, light, humidity, wind, etc.


Barrier Film: Decreases release of fumigates/gases to atmosphere.

Width

Must be 8" to 12" wider than needed to cover the bed/row in order to allow edges to be secured under the soil.



Common Widths



Plastic mulch is used with and without drip tape irrigation in vegetable production to promote early and improved cropping by:

- 1) Maintaining a good root zone,
- 2) Suppressing weeds, and
- 3) Regulating and conserving soil moisture.

Mulch is available in several blends of polyethylene resins (linear, low density, high density, etc.). Different blends produce different strengths and abilities, e.g., how well it holds fumigants.

Other features of plastic mulch:

- Surface finishes: Smooth or embossed. Embossed lays easier, hugs the soil/bed better, and resists damage/punchers.
- Thickness: Ranges from 0.6 mil to 2 mil. When a quality blend of polyethylene is used, 1 mil is often the choice.
- Non-degradable (regular): Must be removed after harvest, and should be chosen to keep its integrity until time of removal.
- Degradable: Allows normal field operations without removal. Will degrade differently under different conditions (temperature, light, humidity, wind, etc.) Pieces may remain for years. Photo- & Bio-degradable options available.

Colors:

- CLEAR (natural): Heats the soil more than black, but allows weed growth.
- BLACK (standard): Warms soil for earlier growth. Opaque (excludes all light) to prohibit weed growth.
- SILVER; WHITE ON BLACK: Co-extruded and opaque. Keeps bed cooler for summer planting. May be beneficial for insect (thrip) control.
- IRT: May enhance photosynthesis for improved production (e.g., blue for cucurbits and red for tomatoes). Any differences in production seem to be noticeable in the higher latitudes (northern U.S.) and not so much in the lower latitudes. Cost is nearly twice that of black.

Advantages of Polyethylene Mulch Film

- Maintains a good root zone
- Enhances/maintains soil structure
- Black promotes earlier cropping by heating the soil
- White and silver keep soil cooler
- Controls weed competition
- Regulates and conserves soil moisture
- Deters pests
- Increases pesticide (e.g., fumigants) efficiency
- Keeps fruit clean and suppresses ground rot
- Minimizes leaching of fertilizers and other chemicals
- Decreases both horizontal and vertical erosion

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