

Mechanically laying biodegradable paper and plastic mulch

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Introduction

Farmers lay mulch in the field right before seeding or planting (Fig. 1) to control weeds, conserve soil moisture and get several other benefits during the crop growing season. Mulch that is marketed as biodegradable is available and can be laid mechanically with mulch laying equipment, but some minor adjustments are needed as compared to laying polyethylene (PE) mulch.

Laying biodegradable mulch by machine

Plastic mulch layers form raised beds that are 5 to 9 in. in height, and they lay drip tape and plastic mulch all in one pass. For newer mulch layers, feed the mulch through the roller bars (Fig. 2) and pull the mulch out so that it passes under the guide wheels. Roller bars should move freely so as not to put tension on the mulch. For older mulch layers, the rod that holds the mulch in place (Fig. 2) should allow the mulch to roll freely. The wheels of the mulch layer should rest lightly on the mulch or float just above the mulch so as to guide the mulch into the furrows that are opened up by the mulch layer but such that the wheels do not apply pressure to the mulch (Fig 3). With a shovel, throw soil on the mulch where it passes under the wheels or step on the mulch to hold the mulch in place once the tractor starts moving forward (Fig. 3). The mulch should be slightly loose on the bed when it is laid (Fig 3) so as to avoid stretching it too tightly which will cause it to rip. As the mulch moistens and dries, it becomes tighter.



Figure 1. Laying biodegradable plastic mulch with a raised bed shaper (left); biodegradable paper mulch laid by machine (right).



Figure 2. Feeding the mulch through the roller bar in new mulch layer (left); old mulch layer showing the rod that holds the mulch (right)



Figure 3. Step on the mulch before the tractor starts moving forward to hold the mulch in place (left); mulch layer roller bars should move freely and wheels should barely touch the mulch (middle); the mulch should be loose on the bed to avoid ripping (right).

There are several plastic mulches on the market which claim to be biodegradable; this factsheet is not meant to endorse mulch products that are marketed as biodegradable nor does it imply that these mulch products actually biodegrade in farming systems.

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