ROW COVERS
DO STRAWBERRY GROWERS NEED THEM?

Improvements in manufacturing over the last 20 years have made possible the availability of large covers that can be laid directly on plants. Normally, these covers are easy to use, lightweight and durable and can be easily applied over large areas by hand or machinery. Such covers can improve earliness, yield and quality. More specifically to plasticulture strawberry growers, benefits lean more towards over-wintering protection and late season frost/freeze protection or towards promoting fall growth of plants in colder climates.

These row covers are known as spunbound or nonwoven fabrics and are most commonly made of polypropylene or polyester. Such covers are manufactured by melting the appropriate plastic or combination of plastics and spraying fine filaments onto a belt which conveys them to a bonding roller that presses and fuses them together where they touch. This process creates fabrics that are lightweight and durable.

The greatest benefits from the use of row covers are realized when they are fitted to one's individual strawberry production system. This requires consideration being given to ones geographical location, proper management of the covers with regards to application and removal timing and the management and use of covers with overhead irrigation for late season freezes.

Strawberry growers in mild climates (coastal plains and piedmont) typically use row covers for late season frost or freeze protection. Most growers in these regions view row covers as insurance policies; they may not be needed, but are invaluable when they are needed. When covers are used for only short periods such as this, their exposure to the elements (sun, wind, moisture) is greatly reduced; therefore, lightweight, less expensive row covers can be utilized. The benefits of lightweight covers (0.5 oz/yd2) for freeze protection can be greatly enhanced when used in combination with overhead irrigation.

Growers in colder climates (mountains) should use row covers as part of their strawberry production system and should consider the heavier and better quality materials due to the length of time these materials will be exposed to the elements. It is possible for some growers to apply covers as early as December, leaving them on well into late February, thus extending their exposure to long periods of time. Also, temperatures in these areas have been known to dip low enough to cause plant mortality without the aid of row covers to protect and shield plant crowns. For these reasons, medium to heavy covers (1.0 oz/yd2 to 1.25 oz/yd2) should be considered; however, not too heavy due to excessive light reduction. Covers that block more than 50% of available light could actually slow growth and advancement of ones strawberry crop.

The following reference chart gives the basic information needed for making good decisions when purchasing the right cover for your application.

ROW COVER REFERENCE CHART

Spunbonded Polypropylene

MANUFACTURE TYPE	PRODUCT INFORMATION	WEIGHT OZ/SQ.YD.	STANDARD SIZE FT.	APPLICATIONS	EST. COST PER ACRE	COMMENTS
AgroFabric Pro 10 *(light weight)*	-spunbonded polypropylene -uv stabilized -air & water permeable -non abrasive,-one crop -glued seams, -transmits 90% light	0.3	8ft. To 17ft. widths -custom sizes available	-insect protection -seed germination	$400	-Not recommended for strawberry over-wintering or frost/freeze protection. -No heat buildup
AgroFabric Pro 17 Gro-Guard GG20 & GG17 *(light to medium wt.)*	-spunbonded polypropylene -uv stabilized, -air & water permeable -one to two crops, -glued seams -transmits 85% light	0.5 0.55 0.6	83in. To 50ft. widths -custom sizes available	-frost protection, 2-5°F -higher daytime temp 8-10° -earlier/increased yields -extended growing season -reduced desiccation & winter kill	$600-$700	-Not recommended for strawberry over-wintering becaused of durability, although it can be used for late season freeze protection in combination with overhead irrigation.
AgroFabric Pro 30 Agribon+ AG-30 Gro-Guard UV GG34 *(medium weight)*	-spunbonded polypropylene -uv stabilized, -air & water permeable -high tear strength & edge tear resistance, double bonded glue seam, one to two crops, non abrasive -transmits 70% light, good microclimate	0.9 0.9 1	83in. To 50ft. widths -custom sizes available	-frost & freeze protection, 4-7° -over-wintering protection in moderate climates -higher daytime temp 10-15° -reduced desiccation & winter kill -improved yields & quality	$900-$1,000 $1,100-$1,200	-Recommended for over-wintering straw-berries in moderate climates -Mechanically applicable -This weight is most favorable for much of the Carolinas, Ga, Va and Tenn for over-wintering and late season frost/freeze
Typar T-518 *(medium to heavy wt.)*	-spunbonded polypropylene -uv stabilized, -air & water permeable -high tear strength & edge tear resistance, -three to five crops -transmits 70% light	1.25	1.5ft. To 50ft. widths	-frost & freeze protection, 4-6°F -over-wintering protection in moderate climates -reduced desiccation & winter kill	$1,800	-Recommended for over-wintering straw-berries in moderate to cold climates -Good for late season frost/freeze protection and can be used with over-head irrigation for additional freeze protection.
AgroFabric Pro 50 Agribon+ AG-50 Gro-Guard GG51 *(heavy weight)*	-spunbonded polypropylene -uv stabilized, -air & water permeable -high tear strength & edge tear resistance,double bonded glued seam, -two to four crops -transmits 50% light	1.5	83in. To 51ft. widths -custom sizes available	-freeze protection, 8-12°F -over-wintering protection in harsh cold climates -reduced desiccation & winter kill	$1,400-$1,500	-Not recommeded for over-wintering in mild to moderate climates due to heat buildup and light reduction. -In most plasticulture strawberry crops this amount of light reduction would not be beneficial. -Could be used for late season freezes, but not recommended.
AgroFabric Pro 70 Gro-Guard GG60 *(extra heavy weight)*	-spunbonded polypropylene -uv stabilized, -air & water permeable -high tear strength, multiple seasons -transmits 30% light	2	12ft. To 25ft. widths	-freeze protection, 12-14° F -used in harsh cold climates	$2,000	-Not recommeded for over-wintering plasticulture strawberries in mild to moderate climates due to heat buildup and light reduction. -Could be used for late season freezes, but not recommended.

Spunbonded Polyester

Reemay 2006 *(light to medium weight)*	-spunbonded polyester -uv stabilized, -air & water permeable -one to two crops -transmits 85% light	0.6	67in. To 12ft.4in widths	-2-4° F frost protection -earlier/increased yields -extended growing season -reduced desiccation & winter kill	$1,300	-Not recommended for strawberry over-wintering becaused of durability but it can be used for late season frost & freeze protection when used with overhead irrigation.