

To remove or not to remove row cover

The unsettled weather of spring can make it difficult for a grower to decide when to remove row cover. Row covers provide many benefits such as protection from frost, insects, wind and pounding rains. Timing row cover removal is a key management decision. Removal too early reduces the warming benefit during cool periods. Removal too late can interfere with pollination, particularly with vine crops. Weed control under row cover can also be an issue if mulch is not used. Extremely high temperatures under row covers can reduce production of crops like tomatoes, peppers, and broccoli. Pay close attention to weather forecasts as temperatures can fluctuate dramatically from day to day. You want to be prepared to remove row cover quickly as temperatures under row cover can quickly reach up to 20 degrees higher than outside of it, depending on the grade of the material. Also, keep in mind that unsupported floating row covers can, rub on plants, damaging leaves, stems or flowers and should not be used on single stemmed crops such as peppers tomatoes, eggplants or even squash, as stems can be broken on windy days. -Teresa Rusinek

The following article on temperature fluctuations and use of row cover is written by Prof. Steve Reiners of Cornell University Dept. of Horticulture.

Growers that have crops under row cover are concerned about temperatures that may kill the plants. Most of the published temperature guidelines list maximum temperatures at which either vegetative growth becomes limited or reproductive capabilities are threatened, i.e. flowers or fruit fall off. Temperatures at which vegetable plants may die varies and depends not only on the vegetable type but also on other factors such as whether irrigation is being provided or for how long the high temperature occurs. Also, a transplant will be under much greater stress than a plant that is direct seeded. The following table lists temperatures at which severe stress will occur, possibly death, especially if soil moisture is low.

Crop	Maximum (F)
Sweet Corn	120
Watermelon	115
Cucumber	115
Pumpkin	115
Squash	115
Eggplant	110
Hot Pepper	110
Sweet pepper	105
Tomato	105
Broccoli	95

These temperatures refer only to potential crop death. Temperatures 15 to 20F lower than those listed in the table will result in the loss of flowers and fruit and will negate the positive effects of early warming under row covers.

How do you know when is the best time to remove row covers? Check the weather and see if cooler than average temperatures are forecast. A good rule of thumb that I like to use is to remove clear plastic covers about the time you can safely plant those crops without any protection. So if tomatoes would

normally be planted in late May, take them off at that point. If using floating row covers, they could be left on up to a week longer as high temperatures are lower under these compared to clear plastic.



Small wire hoops underneath a floating row cover to prevent wind abrasion
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