Shade Cloth for Season Extension



In the Southeastern United States, summer is already a challenging time for production, with only a handful of crops able to produce in the high temperatures and humidity. Summer weather seems to arrive earlier in spring and remain far into fall. Progress has been made in extending growing periods into colder months with high tunnels, but not enough has been done in regard to expanding crops and experimenting with growth in hotter months.



While lettuce production in the southeast is fairly easy during temperate spring and fall months, high tunnels and row covers extend these periods through the colder winter months. However, it remains challenging to produce a decent crop from late June through mid-September.

65°F is the ideal temperature for growing lettuce. Plants can withstand up to 80-85°F for a time, as long as the nights are cooler. Shade cloth is proven to lower the temperature up to 3°F. A decrease in temperature results in decreased transpiration rate which results in a decrease in stress. With the aid of shade cloth and seeding **heat-tolerant varieties**, the viable months for lettuce production in the south could be increased.

Standout heat tolerant variety: 'Muir'

SIMPLE SET UP



Costs above normal growing costs in spring or fall
(this DOES NOT include, labor, seeds, bed prep, irrigation, etc.)

All investments, to be used for many years

3 - 7x50 50% shade cloths with grommets	$488
6.9x328 Proteknet	$289
Red pins x 300	$112
Standard row cover hoops x 100	$156
Total	$1,045

MEDIUM SET UP



Jenny Jack Farm, Pine Mountain, Georgia

- **30% Shade cloth**
- **20-foot-long PVC attached to ½-inch rebar**
- **Shade attached with PVC clips**
- **$200-300**



Drip and overhead at the very beginning, sometimes multiple times a day, until well established.
Overhead only on really hot days after that.

ADVANCED SET-UP



Available for sale but could be replicated easily

EXPANSION INTO SHADE RESEARCH COULD INCLUDE LARGER AREAS AND VARIOUS CROPS SUCH AS PEPPERS, TOMATOES, CILANTRO, AND CUT FLOWERS.



Covering in Italy for preventing hail damage could be replicated for shade production

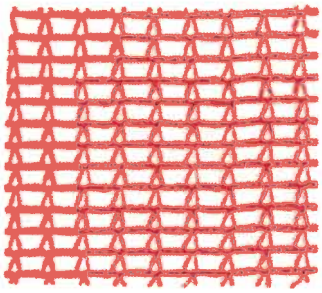
Other Options

sprinklers

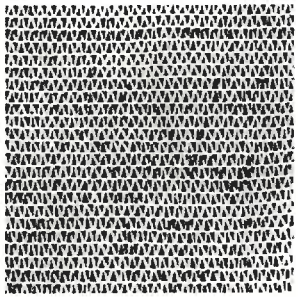


microirrigation for cooling

colors

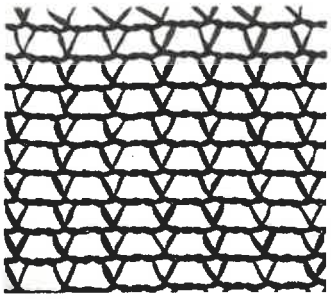


red

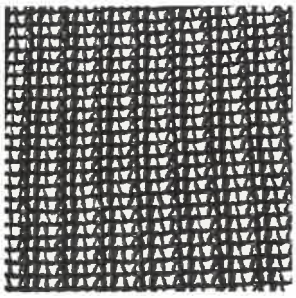


white

shade percentages



30%



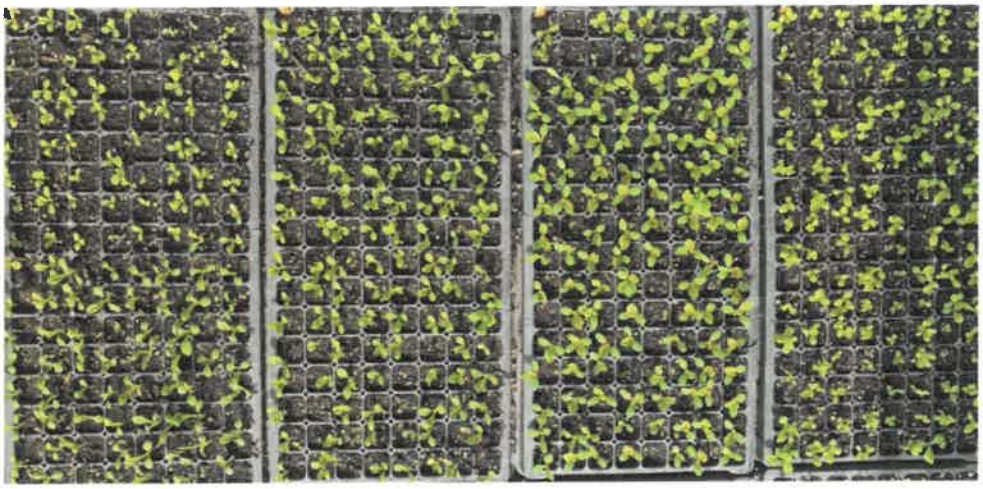
70%

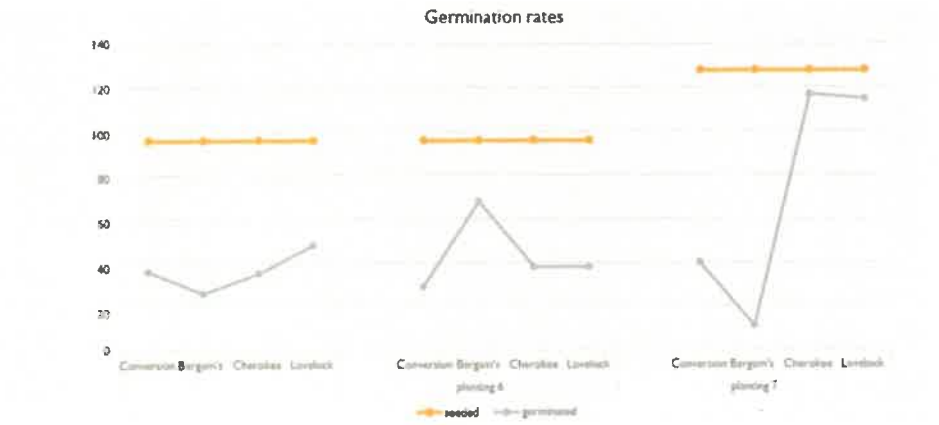
two weeks on, two weeks off

Germination

Maximum temperature for lettuce germination is **85°F.**

After seeding, seed flats should be kept at 60°F to 70°F for 48 hours. Some varieties require up to 72 hours of cooler temperature to germinate.





Germination rates of four different cultivars of lettuce after 48 hours in 60°F

Beyond Lettuce

Shade cloths may used for extending production of other cool season crops such as cilantro and for preventing sun scald on peppers and tomatoes. Early trials germinating carrots in late summer and early fall have shown promise and there is potential for uses in cut flower production as well.