Pepper Production Guide for Florida: Weed Control

W.M. Stall

Peppers are present in the field in some area of Florida every month of the year. Over this period the variable climatic conditions influence the diversity of weed species present and their severity. Growers should plan a weed control program that integrates chemical, mechanical, and cultural methods to fit their weed problems and production practices.

**Total Farm Weed Management**

Total farm weed management is more complex than row-middle weed control because several different sites, and possible herbicide label restrictions, are involved. Often weed species in row middles differ from those on the rest of the farm, and this might dictate different approaches. Sites other than row middles include roadways, fallow fields, equipment parking areas, well and pump areas, fence rows and associated perimeter areas, and ditches.

Disking is probably the least expensive weed control procedure for fallow fields. Where weed growth is mostly grass, clean cultivation is not as important as in fields infested with nightshade and other disease and insect hosts. In the latter situation, weed growth should be kept to a minimum throughout the year. If cover crops are planted, they should be plants which do not serve as hosts for pepper diseases and insects. Some perimeter areas are easily disked, but berms and field ditches are not and some form of chemical weed control may have to be used on this area. We are not advocating bare ground on the farm as this can lead to other serious problems, such as soil erosion and sand blasting of plants; however, where undesirable plants exist, some control should be practiced, if practical, and replacement of undesirable species with less troublesome ones, such as bahiagrass, might be worthwhile.

Certainly fence rows and areas around buildings and pumps should be kept weed-free, if for no other reason than safety. Herbicides can be applied in these situations, provided care is exercised to keep it from drifting onto the pepper crop.

Use of rye as a windbreak has become a common practice in the spring; however, in some cases, adverse effects have resulted. If undesirable insects such as thrips build up on the rye, contact and systemic grass herbicides can be applied to kill it and eliminate it as a host, yet the remaining stubble could continue serving as a windbreak.

---

1. This document is a chapter of SP 215, last printed in 1990 as Circular 102 E. SP 215, Pepper Production Guide for Florida, last printed in 1990 as Circular 102 E, is a publication of the Commercial Vegetable Guide Series, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: August 1997. For more information about how to order the complete print document, SP 215, call UF/IFAS Distribution at (352) 392-1764. Please visit the FAIRS Website at [http://hammock.ifas.ufl.edu](http://hammock.ifas.ufl.edu).

2. W.M. Stall, professor, Horticultural Sciences Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences (IFAS), University of Florida, Gainesville, FL 32611. The Pepper Production Guide for Florida is edited by G.J. Hochmuth, professor, Horticultural Sciences Department, IFAS.

The Institute of Food and Agricultural Sciences is an equal opportunity/affirmative action employer authorized to provide research, educational information and other services only to individuals and institutions that function without regard to race, color, sex, age, handicap, or national origin. For information on obtaining other extension publications, contact your county Cooperative Extension Service office.
Control of Weeds In-Row

The use of polyethylene mulch and methyl bromide provides the greatest control of weeds in-row as well as nematode, soil-born insect, and disease control. Most of the pepper grown in Florida is produced using mulch and methyl bromide.

A combination of herbicides with mechanical control (cultivation) is suggested for pepper grown on ground culture. Establishing a good, weed-free plant bed is important. Weed control early in the season is extremely critical. Depending on the weed species, pepper yield may be reduced significantly if the weed competes with newly established pepper for only a week.

Several herbicides are labeled for control of nonmulched peppers. Apply the herbicides only as directed on the label and at the recommended rates.

Control of Weeds in Mulched Row Middles

Mechanical cultivation to control weeds in mulched row middles is difficult due to the potential of tearing of the polyethylene mulch. Several herbicides are labeled for application for the control of weeds in row-middles. The herbicides may be for the preemergence control of specific weeds or may be for the burn-down of emerged weeds. Herbicides that control weeds preemergence, may or may not control emerged weeds. Also pepper plants may or may not be tolerant to contact by the herbicide. Application instructions are specific for each herbicide on the timing and method of application to the row middle. Most will have a directed statement but they may also specify directed-shielded or directed-hooded application.

The greatest row-middle weed control problems confronting the pepper industry today is control of nightshade and dodder. Nightshade has developed varying levels of resistance to some post-emergent herbicides in different areas of the state. Best control with postemergence (directed) contact herbicides are obtained when the nightshade is 4 to 6 inches tall, rapidly growing and not stressed. Two applications in about 50 gallons per acre using a good surfactant is usually necessary.

With postdirected contact herbicides, several studies have shown that gallonage above 60 gallons per acre will actually dilute the herbicides and therefore reduce efficacy. Good leaf coverage can be obtained with volumes of 50 gallons or less per acre. A good surfactant can do more to improve the wetting capability of a spray than can increasing the water volume. Many adjuvants are available commercially. Some adjuvants contain more active ingredient than others and herbicide labels may specify a minimum active ingredient rate for the adjuvant in the spray mix. Before selecting an adjuvant, refer to the herbicide label to determine the adjuvant specifications.

Dodder is a parasitic plant that emerges in the row middles. The dodder plants then will infect a weed in the row middle and bridge to the pepper plants. If a pepper is “infected” by dodder, control of the dodder in the row middle will not control the “infection,” and the plant may bridge to other pepper plants in the row. Control of dodder then necessitates control of all weeds in the row middles as well as the control of young dodder seedlings.

The contact herbicides labeled for row middles will also control young, emerged dodder. Dacthal also will control dodder preemergence.

Herbicide performance depends on weather, irrigation, soil type, as well as proper selection for weed species to be controlled and accurate application and timing. Obtain consistent results by reading the herbicide label and other information about proper application and timing of each herbicide.

Use only labeled herbicides and those herbicides in the proper formulation. Use of a nonlabeled herbicide, even though it may be labeled for row middles in tomatoes and eggplant, which are closely related crops, may cause damage to peppers. When applying a herbicide for the first time in a new area, use only in a small trial basis.

Information on labeled herbicides may be obtained from Weed Control in Pepper, Fact Sheet HS-199.