

## CULTURAL CONTROLS: Field Sanitation



### INTRODUCTION:

Good field sanitation practices are becoming more important pest management tools due to the loss of pesticides with fewer new products coming in, and the reduction in efficacy due to resistance problems. Field sanitation practices should be an important aspect of production from field preparation through harvest and beyond.

**Figure 12.** Good field sanitation, such as keeping the row middles free of weeds, can limit the number of pests and pathogens on your field. Photograph by: Phyllis Gilreath.



### PREPLANT/PLANTING:

- Use only clean, pest free transplants, preferably grown in houses away from virus or disease infested production fields.
- As methyl bromide is phased out and herbicides are incorporated into alternative strategies, field histories of weeds present become important in choosing the correct herbicide.
- Field histories related to soil borne pathogens should also be considered in selecting the proper fumigant or alternative, mechanical operations such as deep disking or in decisions to avoid planting in certain blocks.
- Consider not only herbicide residue from previous crops but also think ahead to future crops and potential residue issues.

### DURING THE SEASON:

- Maintain good weed control within the crop and field perimeters, paying particular attention to alternative pest hosts and volunteer crop plants.
- Spray a contact insecticide (oil may be a good choice due to the low REI) prior to rouging virus infected plants or doing any other activity that would disturb plants, including staking and tying. This will minimize insect movement to surrounding healthy plants.
- Avoid handling plants when wet to minimize disease spread (i.e. bacterial spot and speck). Clean hands and tools with disinfectant often when certain diseases are present (i.e. *Tobacco mosaic virus*).
- Avoid movement of equipment from infested fields (i.e. *Sclerotinia* and bacterial wilt). Work clean areas first, then move to diseased areas and then clean and/or disinfect. Decontaminate stakes that were used in disease infested fields prior to reuse.



**Figure 13.** Bacterial spot on tomato can easily be spread within the field when plants are wet when handled. Photograph by: Phyllis Gilreath.



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### POST-SEASON:

- Maintain good sanitation procedures during harvest. Dirty buckets, bins and gondolas should be cleaned to reduce decay cross-contamination and those with rough surfaces, which can cause abrasion injuries, should be replaced. Plastic containers and bins can be readily cleaned and sanitized.
- Destroy crops immediately after harvest is complete. Do not wait until all blocks are harvested. Do not rely on "Mother Nature" for effective crop destruction.
- Include either oil (2-3%) or a contact insecticide with burn-down chemicals to reduce movement of insects such as whitefly out of fields.
- Make sure that tomato plants are completely killed, especially if double cropping is planned.



**Figure 14.** Make sure tomato plants are completely killed, especially if double-cropping is planned as shown in this photograph of cucumbers planted following tomatoes. The stakes and strings are left to provide support for the cucumber vines. Trellising improves fruit quality and reduces disease. Photograph by: Phyllis Gilreath.



**Figure 15.** A variety of weeds growing in tomato row middles can serve as hosts for crop pest problems. Knowing the weeds present in a field can help with selecting the best control materials for the future. Remember that weeds can also be hosts for nematodes. Photograph by: Phyllis Gilreath.

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