

## **Pepper & Eggplant Production and Weed Management**

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### **Introduction**

The 2008-2009 version of the New England Vegetable Management Guide is available and all vegetable growers should have a copy of this publication. There is one major change for peppers since the last edition. There is a registration for Prowl (pendimethalin) herbicide which is new. A brief summary of the other “newer” registered herbicides is also provided below. All of the information that will be presented in this talk can be found in the Vegetable Management Guide. I expect that copies will be available for sale at the Conference and copies are available from all 6 New England Extension services. Members of the New England Vegetable & berry Growers will receive this publication as part of their membership.

In addition to these herbicide changes, physical and cultural weed management strategies in pepper and eggplant will be discussed. Also, this talk will cover general production practices for both pepper and eggplant.

### **Label Changes in 2008-2009 New England Vegetable Management Guide**

pendimethalin (Prowl H2O): 1 to 3 pt/A (REI 24h, Group 3). Apply either preplant incorporated or to the soil surface PRIOR to transplanting. If applied to the soil surface, excessive treated soil falling into the transplant hole may delay crop growth. Preplant incorporated treatments are generally safer. May be surface applied between plastic mulch. Do not apply over the top of pepper plants. Do not apply within 60 days of harvest.

The new formulation on the market for paraquat is Gramoxone Inteon. This formulation is designed to be safer to the user. However it is still restricted use and the signal word is still “Danger”. Gramoxone Inteon contains an “alginate” which is made from seaweed and slows absorption into the bloodstream. There is also an alerting agent that smells like decaying grass, and emetic and purgative, and a green dye. The new formulation also comes with some rate changes. With the old formulation (Gramoxone Max) the rate range was 1.7 to 2.7 pints per acre. Rates for the new formulation are 2.5 to 4 pints/acre.

### **“Newer Label Changes”**

Command (clomazone) 3ME has fully replaced Command EC. It is registered in peppers and many other crops including beans, cabbage, cucumbers, melons, peas, squash, and sweet potato. Command ME is low volatile and can be applied to the soil surface rather than needing to be incorporated into the soil.

Sandea (halosulfuron) may be used between plastic in both pepper and eggplant. Contact with the crop will result in crop injury. It can be used preemergence to control many weeds mentioned above. A banded application after the plastic is laid but prior to planting the crop is

preferred to avoid crop contact. If Sandea is used after the crop is transplanted, use of a shield is recommended to avoid crop contact. Consider using Sandea as a supplement to either Devrinol (napropamide) or Trilin (trifluralin) in pepper and eggplant.

## **Production Practices at Pleasant Valley Gardens, Methuen, MA**

### **Varieties**

Current varieties for pepper are Alliance, Brigadier, Lantern, and Olympus

Current variety for eggplant is Classic

We have been making a move back to blocky hybrids, although I am not happy with the extent of crown flower abortion of these varieties during periods of hot weather in June. We had been growing elongated varieties of which Vidi was the best for us. The chains had issues with the elongated varieties which I will discuss. The ideal pepper variety in my opinion has a short plant, good leaf cover, good early and late yield with a total of 7 XL/Jumbo blocky fruit per plant, resistance to phytophthora and bacterial diseases, and is very slow to turn red. I would prefer that we have no red peppers at all.

Classic is the eggplant variety we have been growing since it replaced Black Beauty.

### **Transplant Production**

All seeds are started in 512 plug trays and incubated at 80F for 6 days before moving them into a warm greenhouse. We use "Rootshield" is all of our germinating mix to help with Pythium.

In about 4 weeks, they are moved to 98-cell trays for pepper and 72-cell trays for eggplant and then grown for an additional 4 weeks. 15-16-17 Peat-lite fertilizer is used at 100 ppm N through an injector.

### **Plastic Mulch, Fertilization, Weed Management, Irrigation**

Fertilizer (15-4-12) a rate of 1500 lb/acre is broadcast prior to laying plastic. If there is excessive rainfall, 50 lb N/acre supplied by calcium nitrate is applied over the top. Plastic mulch (4-foot with a 30" bed top) is used for all plantings. A water wheel planter is used to make holes but plants are set by hand. Two rows spaced 12" between rows and 15" in the row are used with a final plant population of 12,500 plants per acre. Trilin is used prior to laying plastic and a tank mix of Devrinol and Sandea is used between the plastic. Either hand weeding or Gramoxone is used between the plastic for secondary weed control. About half the land has drip irrigation and half is irrigated overhead using a traveler. In 2008, we expect to be all under drip.

### **Insect and Disease Management**

Fungicides are not used in the eggplant and either Spintor or Provado are used for control of Colorado potato beetle.

In pepper, copper may be used in wet years for control of bacterial diseases. For European corn borer, either Orthene or Ambush is used for control. We generally do not treat for either pepper maggot or aphids

### **Harvesting, Cooling, Packing**

Crops are harvested into 1.5 bushel plastic “fish” baskets and transported to the pack shed which is at 60F. A small packing line is used to wash the fruit, dry it, and place it on a circular packing table. Warmer city water (65F) is used for the packing line rather than the cooler (55F) well water that is used for hydrocooling greens. This is to keep surface diseases from moving into the fruit which accelerate breakdown. We have not been using chlorine in this packing line. All peppers and eggplants are packed in 1 1/9 bushel cartons. We generally have an eggplant count of 20-25 per box. Peppers are packed into a XL grade (55 fruit or less per box), which sometimes turns into a jumbo pack (50 or less). We have packed fruit with as little as 38 per box. We also pack a “medium” pack for the chains. This is really a “large” pack of about 65 fruit per box but there just doesn’t seem to be a market for large anymore. Suntans and reds are also packed separately. Cartons are shipped either that evening or by noon the following day at the latest. All product is shipped on refrigerated trucks. Prices have been depressed somewhat by Canada. They have been shipping peppers into New England for as low as \$7 US. With the Canadian dollar moving higher this Fall, I hope that prices move higher for us in 2008.