Paladin (DMDS), Midas, and Pic-Clor 60 for Strawberry Production in California

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The purpose of this study was to determine the minimum application rate of Pic60, Paladin and Midas under two different films. Treatments were drip applied on November, 2010 and sequential application of Metam-K took place 5 days following the primary application. Soil was covered by Standard tarp (Std) and virtually impermeable film (VIF) for 14 days. Midas and Paladin were applied under (VIF), Pic60 treatments were applied under (VIF) and standard tarp, and MBr/Pic was applied under standard tarp. Strawberry (Albion variety) was transplanted on the following dates: November 19th, 24th, and 29th, 2010. Each bed was 100 feet long and each treatment was replicated 4 times. Yield data were taken weekly throughout the production season and were graded into marketable and nonmarketable yields. Weed data were collected three times and combined.

Summary of Results

Total and marketable yields relative to standard methyl bromide chloropicrin mix (350 lbs/ac of MBr/Pic; 50/50) are shown in Table 1. Total and marketable yields (to date) from all treatments are presented in Figures 1 and 2. Cumulative weed density is shown in Figure 3.

Table-1: Total and Marketable Yields Relative to Standard MBr/Pic – (harvest through June, 2011)

Treatment	Total yield relative to MBr/Pic (%)	Marketable yield relative to MBr/Pic (%)
Control	**70**	**69**
Paladin (DMDS) 79/21 at 40 gal/acre (VIF)	**85**	**86**
Paladin (DMDS) 98 pure at 51 gal/acre (VIF)	**93**	**92**
Paladin (DMDS) 79/21 at 50 gal/acre (VIF)	**85**	**83**
Paladin (DMDS) 79/21 at 60 gal/acre (VIF)	**87**	**85**
Pic60 (1,3-D and Chloropicrin) at 200 lbs/acre (VIF)	**86**	**85**
Pic60 (1,3-D and Chloropicrin) at 200 lbs/acre followed by Metam (VIF)	**91**	**90**
Pic60 (1,3-D and Chloropicrin) at 300 lbs/acre (Std)	**95**	**95**
PIC60 (1,3-D and Chloropicrin) at 300 lbs/acre followed by Metam (Std)	**88**	**86**
Midas (Iodomethane and Chloropicrin) 98/2 at 75 lbs/acre (VIF)	**78**	**76**
Midas (Iodomethane and Chloropicrin) Gold 33/67 at 113 lbs/acre (VIF)	**96**	**97**
Midas (Iodomethane and Chloropicrin) Gold 33/67 at 169 lbs/acre (VIF)	**96**	**96**
Midas (Iodomethane and Chloropicrin) Gold 33/67 at 225 lbs/acre (VIF)	**95**	**95**

Figure 1. Comparison of Total and Marketable Strawberry Yields: Paladin and Pic60 - Drip Application

June 2011 Salinas

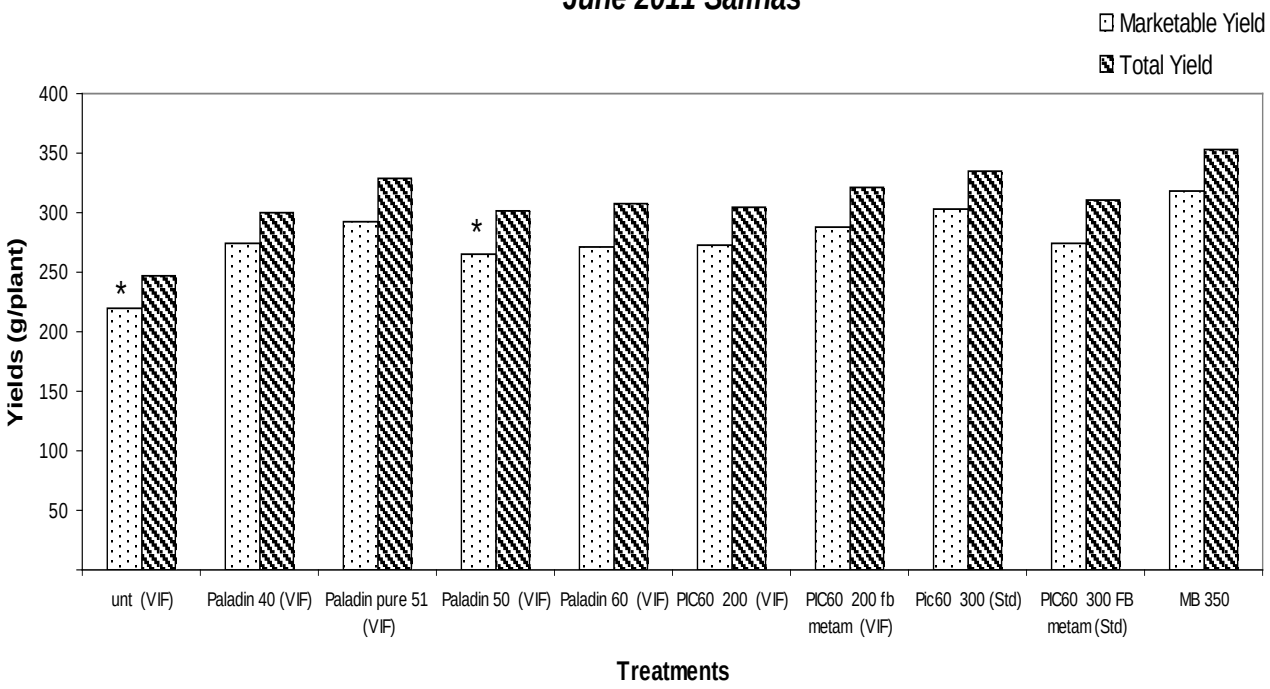


Figure 2. Total and Marketable Strawberry Yields: Midas Dose Response - Drip Application

June 2011 Salinas

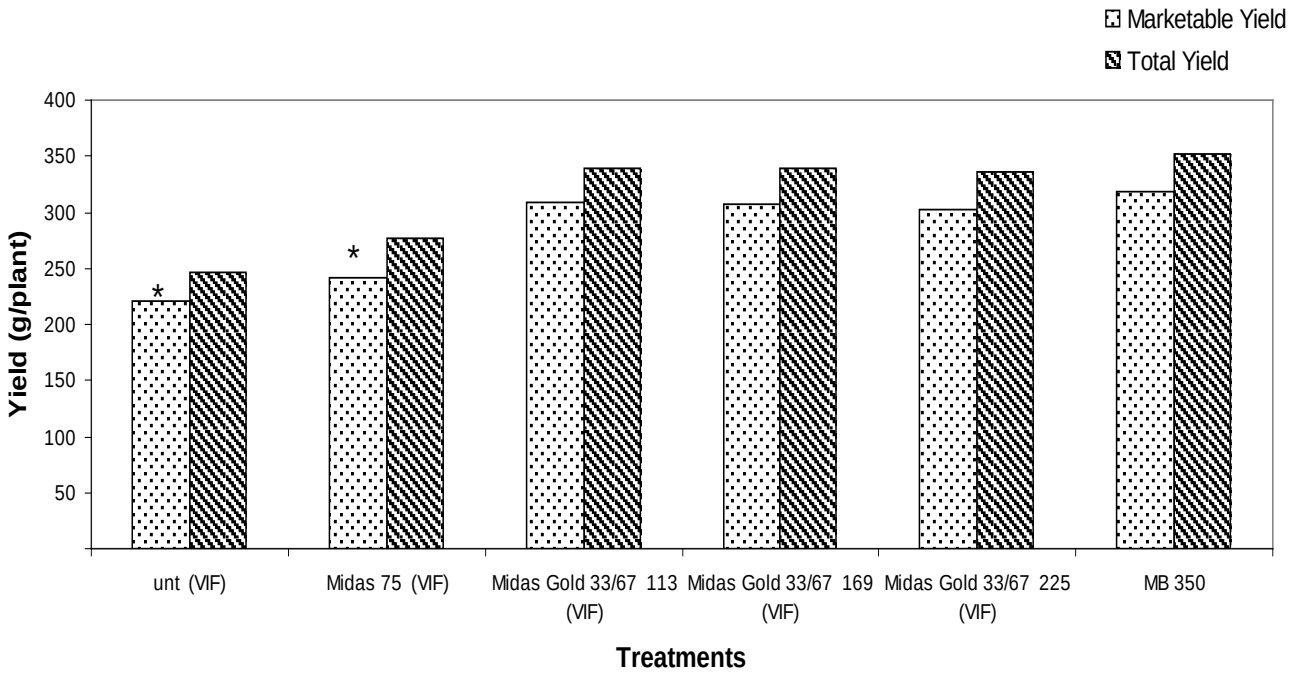
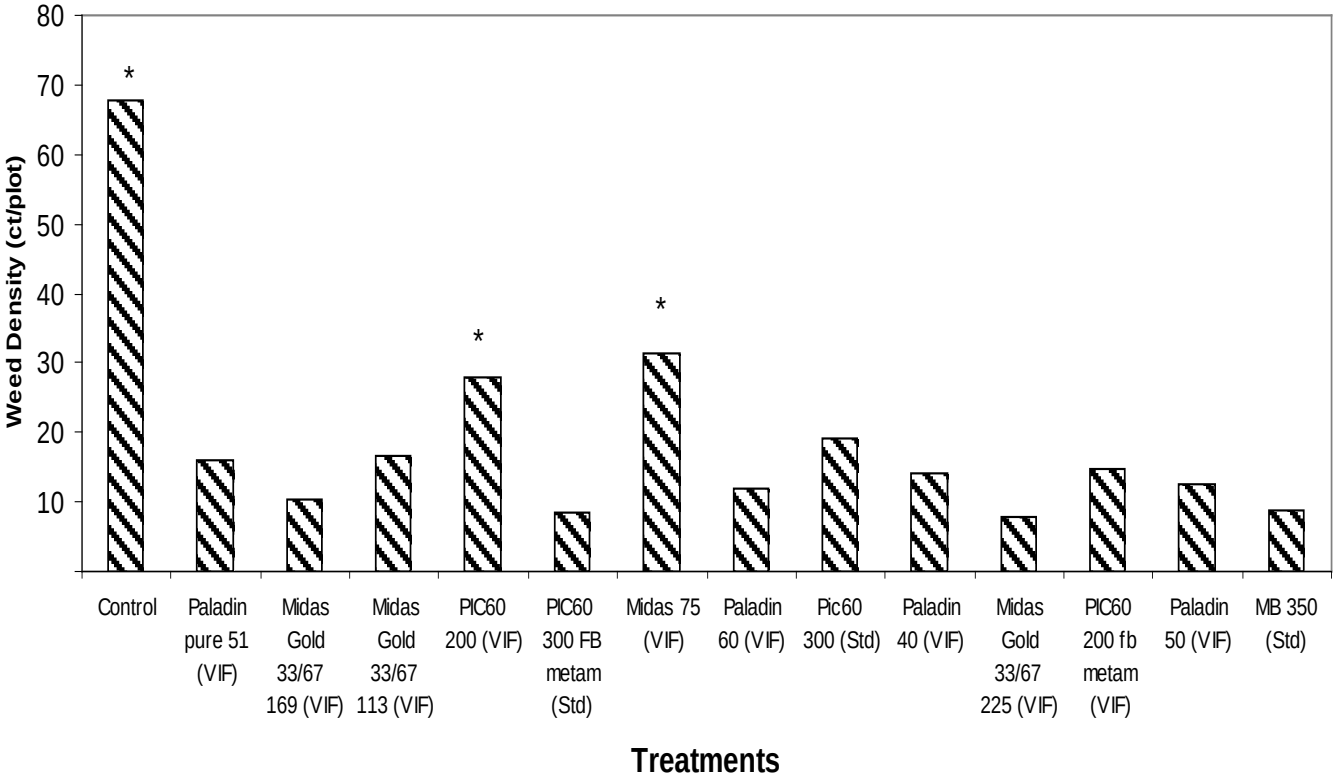


Figure 3. Weed Density from All Treatments: Drip Application
Salinas March 2011



Summary

Based on the preliminary results (fruit harvest through June), yields from all treatments, except Paladin 40 lbs/acre and Midas 75 lbs/acre, were significantly higher than yields from control. All Midas Gold EC treatments produced yields similar to MBr/Pic treatment. Yield under Midas 98/2 at 75 lbs/ac was significantly lower than standard MBr/Pic 350 lbs/acre. Among the Paladin treatments, only Paladin 50 lbs/acre under VIF marketable yield was significantly lower than standard MBr/Pic 350 lbs/acre marketable yield. Cumulative weed density was significantly higher in the Pic-Clor 60 are 200 lbs/ac and Midas 98/2 at 75 lbs/ac.