WEED CONTROL IN STRAWBERRY

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SUMMARY

Chateau (flumioxazin) and GoalTender (oxyfluorfen) are registered as strawberry herbicides. Chateau and GoalTender can be applied to fallow beds before transplanting. Chateau can also be applied to the furrows after transplanting. GoalTender can “co-distill” or “lift off” from moist soil, while Chateau does not “lift off”.

We have heard reports of increased injury from strawberry grown on beds that use impermeable films. Chateau at 1.5 & 3 oz product, and GoalTender at 0.5 and 1 pt/A were applied to fallow beds before transplanting. We tarped half of th beds with HDPE and half with TIF. Injury was greater and plants were smaller where GoalTender at 1 pt/A was applied under TIF compared to HDPE (Fig. 1 & 2). Plant response difference between mulch films was not seen with Chateau.

Eptam applied through the drip system 20, 30 and 40 days before transplanting was not safe to strawberry.

Select Max used to control rye covercrop in the furrow was safe to strawberry.

MATERIALS AND METHODS

TIF & HDPE film:

- ❖Chateau 1.5 & 3 oz/A; GoalTender 0.5 & 1 pt/A applied 10.17.17
- ❖Black Cast (HDPE) 1.5 mil & Ozgard black (TIF) 1.5 mil installed 10.18.17
- ❖Cabrillo strawberry transplanted 11.15.17

Eptam®:

- ❖Eptam at 3.5 and 7 pts./A was applied through the drip irrigation system 20, 30 or 40 days before transplanting
- ❖Dual Magnum 0.6 pt/A & Chateau 3 oz were applied at 40 days before planting

- ❖**Select Max ® for control of rye covercrop in furrows:**
- ❖Merced rye was planted in the furrows 10.18.17
- ❖Select Max at 16 oz/A was applied 1.12.18

Herbicide response to mulch type

Objective:
To determine if mulch permeability affects herbicide injury to strawberry

Figure 1: Effect of HDPE and TIF mulch film on crop tolerance to GoalTender and Chateau.

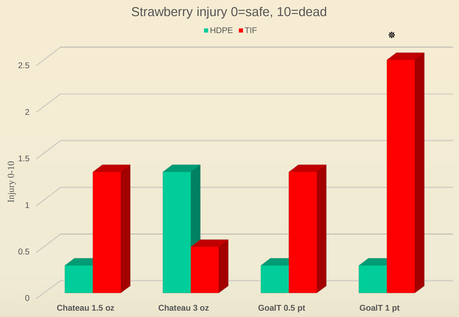

Figure 2: Effect of film type HDPE – standard film and TIF – impermeable film on strawberry tolerance to herbicides. Rating March 28, 2018
* = significant (p=0.05)

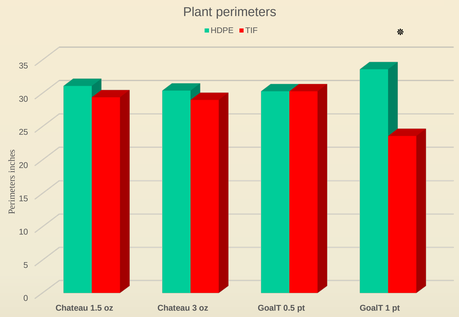

Figure 3: Effect of film type, HDPE – standard film and TIF – impermeable film on strawberry plant perimeters
* = significant (p=0.05)

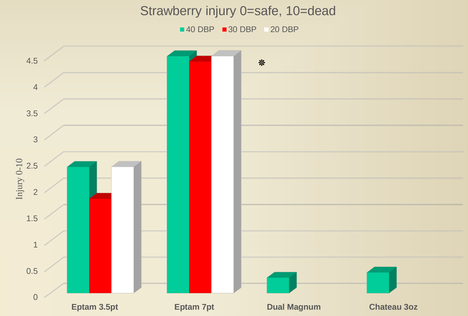

Figure 4: Strawberry injury resulting from Eptam drip applied in fallow beds 20, 30 and 40 days before transplanting. * = significant (p=0.05)

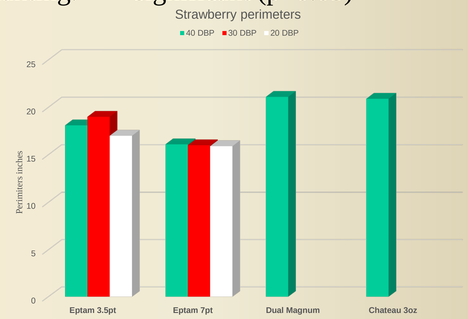

Figure 5: Strawberry perimeters resulting from Eptam drip applied in fallow beds 20, 30 and 40 days before transplanting.

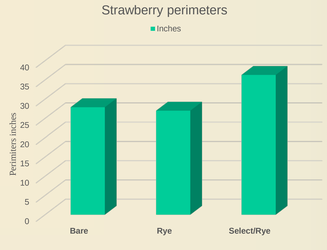

Figure 6. strawberry perimeters where furrows were planted in rye and then killed with Select (data left photo right).

CONCLUSIONS

- ❖ Strawberry was more sensitive to injury from GoalTender where TIF is used compared to HDPE
- ❖ Chateau performed similarly under TIF & HDPE
- ❖ Eptam appears to be too injurious to strawberry applied 20-40 days before transplanting
- ❖ Use of Select for control of cover crops in furrows was safe to strawberry

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