Prospective herbicides for vegetable crops: research update

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Prospective herbicides for vegetables

- Transplanted cabbage
- Carrots
- Beets
- Snap bean

Prospective herbicides for vegetables

IMPORTANT NOTE:

The majority of these herbicides ARE NOT registered on these crops

Always read and follow the label prior to pesticide use!

Chateau evaluation on cabbage

- Chateau
  - Active ingredient: flumioxazin
  - Other trade name: Valor
  - PPO inhibitor herbicide: same mode of action as Goal, Spartan, Blazer
  - Pre-emergent and post-emergent activity
    - Good soil residual
  - NOT registered on cabbage

7 days pre-transplant

1 oz/A (top), 2 oz/A (bottom)

3 days pre-transplant

1 oz/A (top), 2 oz/A (bottom)

1 day pre-transplant

1 oz/A (top), 2 oz/A (bottom)

7 days post-transplant

1 oz/A (top), 2 oz/A (bottom)

Chateau evaluation on cabbage

Treatment	Timing	Rate	Yield (ton/A)
Chateau	7 d pre-trans	1 oz/A	16.6
Chateau	7 d pre-trans	2 oz/A	21.4
Chateau	3 d pre-trans	1 oz/A	21.4
Chateau	3 d pre-trans	2 oz/A	25.1
Chateau	1 d pre-trans	1 oz/A	18.4
Chateau	1 d pre-trans	2 oz/A	28.3
Chateau	7 d post-trans	1 oz/A	34.2
Chateau	7 d post-trans	2 oz/A	38.2
Treflan + Goal	PPI + pre-trans	1.5 pt + 1.5 pt	28.2
LSD (p=0.05),			8.5

(calculated from all treatments (partial list above))

Swamp dodder in carrots

Swamp dodder in carrots

Dual II Magnum

Prowl H_2O

Define

Swamp dodder in carrots: Everest

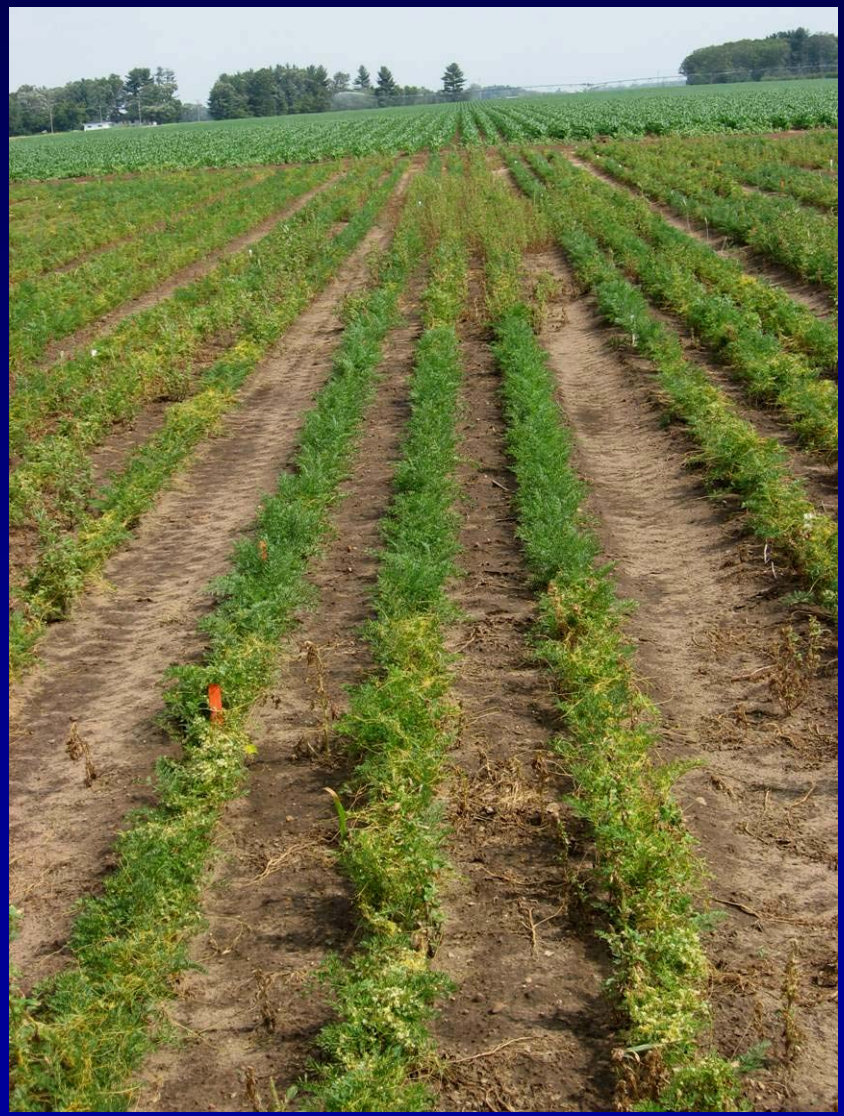

Table beets: experimental herbicides

- Poor crop safety:
  - Define
  - Prowl H_2O
  - Everest
- Moderate crop safety:
  - Betanex
- Good crop safety:
  - Dual Magnum

Table beets: selected treatments

Treatment	lambsquarters	pigweed	velvetleaf	purslane	y. foxtail
	---------- % control* ----------				
Roneet + Pyramin	100	100	99	100	100
Roneet + Pyramin + Stinger	100	100	100	100	100
Roneet + Pyramin + Betanex	100	100	99	99	98
Dual Mag. + Pyramin	99	95	88	96	95

* Evaluated 6/30/2006

Table beets

Untreated check

Dual Magnum + Pyramin

Snap beans

- Slight amount of crop injury (less than 10%) observed initially when Sandea was applied post-emergence
  - No injury observed when applied pre-emergence
  - Crop outgrew injury

Snap bean

Treatment	Rate	Crop injury (%) 6/20/06	Crop injury (%) 6/27/06	Yield (ton/A)
Raptor + Basagran + NIS	4 oz/A + 8 oz/A + 1 qt/100 gal	5.0	1.3	4.4
Raptor + Basagran + NIS + AMS	4 oz/A + 8 oz/A + 1 qt/100 gal + 8.7 lb/100 gal	6.3	1.3	4.0
Raptor + Basagran + NIS	4 oz/A + 16 oz/A + 1 qt/100 gal	5.0	1.3	4.8
Raptor + Basagran + NIS + AMS	4 oz/A + 16 oz/A + 1 qt/100 gal + 8.7 lb/100 gal	5.0	1.3	3.7

Dual II Magnum (12 oz/A) applied PRE in all treatments

Snap bean: Raptor plus:

16 oz Basagran + NIS

8 oz Basagran + NIS

16 oz Basagran + NIS + AMS

8 oz Basagran + NIS + AMS

Label updates

- Select vs. Select Max on several vegetable crops
- Dual Magnum 24c request for several vegetable crops
  - Asparagus, bell pepper, broccoli, Brussels sprouts, cauliflower, cabbage, Chinese cabbage, carrots, celery, Daikon radishes, dry bulb onions, eggplant, garden beets, green onions, horseradish, leeks, parsnips, radishes, rhubarb, rutabagas, spinach, Swiss chard, and turnips
  - Currently in public comment period (through January 25)

Other potential issues

- Receiving more complaints and indications of potential resistance problems in minor crops that rely heavily on 1 or 2 herbicides
- New registrations are few and far between
- What will we do for weed control if we lose current options?