Influence of Drip Irrigation on Imidicloprid Efficacy & Whitefly Control
Yuma, AZ - June 4, 2001

Nymphs / cm²

- Sub-surface Drip
- Surface Drip

60 DAT

- Admire 16 oz
- Platinum 11 oz
- Check
Green Peach Aphid Control with Admire in Lettuce via Drip Chemigation

![Graph showing mean aphid counts per plant across different dates and Admire concentrations.](image-url)

- **Wet Date – Nov 17**
- **Yuma Ag Center, Spring 1996**

- **Mean aphids per plant**
  - Admire 5 oz
  - Admire 10 oz
  - Admire 15 oz
  - Admire 20 oz
  - Untreated
Lettuce Aphid Efficacy In Drip Irrigated Romaine
Lettuce Aphid Efficacy on Drip Romaine Lettuce – Spring 2002

Romaine

- **Admire 16 oz**
- **Platinum 8 oz**
- **Dinotefuron 0.4 lb ai**
- **Orthene 97 - 1 lb**
- **Check**

Mean aphids / plant

<table>
<thead>
<tr>
<th>Injection</th>
<th>Harvest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar 6</td>
<td>Apr 11</td>
</tr>
<tr>
<td>Mar 12</td>
<td>Apr 18</td>
</tr>
<tr>
<td>Mar 25</td>
<td>Apr 18</td>
</tr>
</tbody>
</table>

Graph showing the mean aphid population over time for different treatments and the check group.
Lettuce Aphid Efficacy on Drip Romaine Lettuce – Spring 2001

Mean Lettuce Aphids /Plant

Feb 20
March 8
March 22
April 2
April 16

Drip # 1
Drip # 2

Admire 12 oz (1) ; 6 oz (2)
Platinum 7 oz (1) ; 4 oz (2)
Pirimor 6 oz
Untreated
Uniform Chemigation is Critical for Effective Insect Management

- You need to have the injection period be long enough to move the chemical through the entire drip system

AND

- You need to have a post-injection period of clean irrigation water.
Uniform Chemigation:

The injection period should be at least as long as it takes water / chemical to move from the head to tail-end of the drip system. Twice as long is better.

The post-injection, clean water irrigation period should be at least as long as it takes water / chemical to move from the head to tail-end of the drip system. Twice as long is definitely better.
Insect Management in Drip Irrigation

- The easiest way to determine travel times of chemicals (and water) through a drip system:
  - Inject chlorine (at about 10 - 20 ppm) into the system and follow its movement through the drip system.
  - It is easy to spot when chlorine reaches any point by testing the water with a pool/spa test kit.
Timing of Admire / Platinum Application
Fall Melon Trial
Brown Ranch
Somerton, AZ
Fall 2002

* Admire 16 oz
* Platinum 8 oz
Neonicotinoids For Flea Beetle Control

Pale-stripped Flea Beetle

Desert Flea Beetle
Flea Beetle Control on Melons
Fall 2001- Furrow Irrigated

% Damaged Plants

Cotyledons
Leaves

14 DAT

Coty.

Leaves

Admire 16 oz
Platinum 8 oz
Platinum 5 oz
dinofuran
Untreated

b
b
c

c

a
Flea Beetle Control on Melons
Fall 2002 – Drip Irrigated

% Damaged Plants

<table>
<thead>
<tr>
<th></th>
<th>Leaves</th>
<th>Cotyledons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admire</td>
<td>c</td>
<td></td>
</tr>
<tr>
<td>Platinum</td>
<td>b</td>
<td></td>
</tr>
<tr>
<td>Dinotefuron</td>
<td>c</td>
<td></td>
</tr>
<tr>
<td>Untreated</td>
<td>a</td>
<td></td>
</tr>
</tbody>
</table>

14 DAT