2011 Salinas Valley Weed School

- **Meeting Code:**
  - **M-1147-11**
  - **4.0 credits, all other category**
- **Thank you Monterey Bay Chapter of CAPCA the refreshments**
- **CAPCA Session in afternoon**
- **Please put phones on silent mode**

8:00 **Registration and Refreshments. Weed Identification Exhibit**

8:30 **Spinach weed control update**
Richard Smith, Vegetable Crop and Weed Science Farm Advisor, Monterey County
John Rachuy, Staff Research Associate, UC Cooperative Extension

9:15 **Lettuce weed control: Update on Kerb and herbicide resistant lettuce germplasm**
Steve Fennimore, Extension Vegetable Weed Specialist, U.C., Davis, Salinas

9:45 **Zeus a new vegetable herbicide and plant back studies**
Mac Learned, FMC Corporation
Steve Fennimore, Extension Vegetable Weed Specialist, U.C., Davis, Salinas

10:30 **Break and Weed Identification Exhibit**

10:45 **Activation of Chateau on celery with drip irrigation**
Oleg Daugovish, Strawberry and Vegetable Crop Farm Advisor, Ventura County

11:00 **Automated thinner/weeder for lettuce and other crops**
Mark Siemens, Agricultural Engineer, University of Arizona

11:30 **Seed biology and ecology of common vegetable weeds**
Scott Steinmaus, Professor, Department of Biological Sciences, Cal Poly, San Luis Obispo

12:00 **Conclusion**

Spinach Weed Control Update

Richard Smith, Vegetable Crops and Weed Science Farm Advisor
Monterey, Santa Cruz and San Benito Counties

Spinach Herbicides

- **Preplant**
  - **Vapam**
  - **Glyphosate**
  - **Scythe**
- **Post plant preemergence**
  - **RoNeet**
  - **Dual Magnum***
- **Post plant**
  - **Spin-Aid**
  - **Poast**
  - **Select Max**

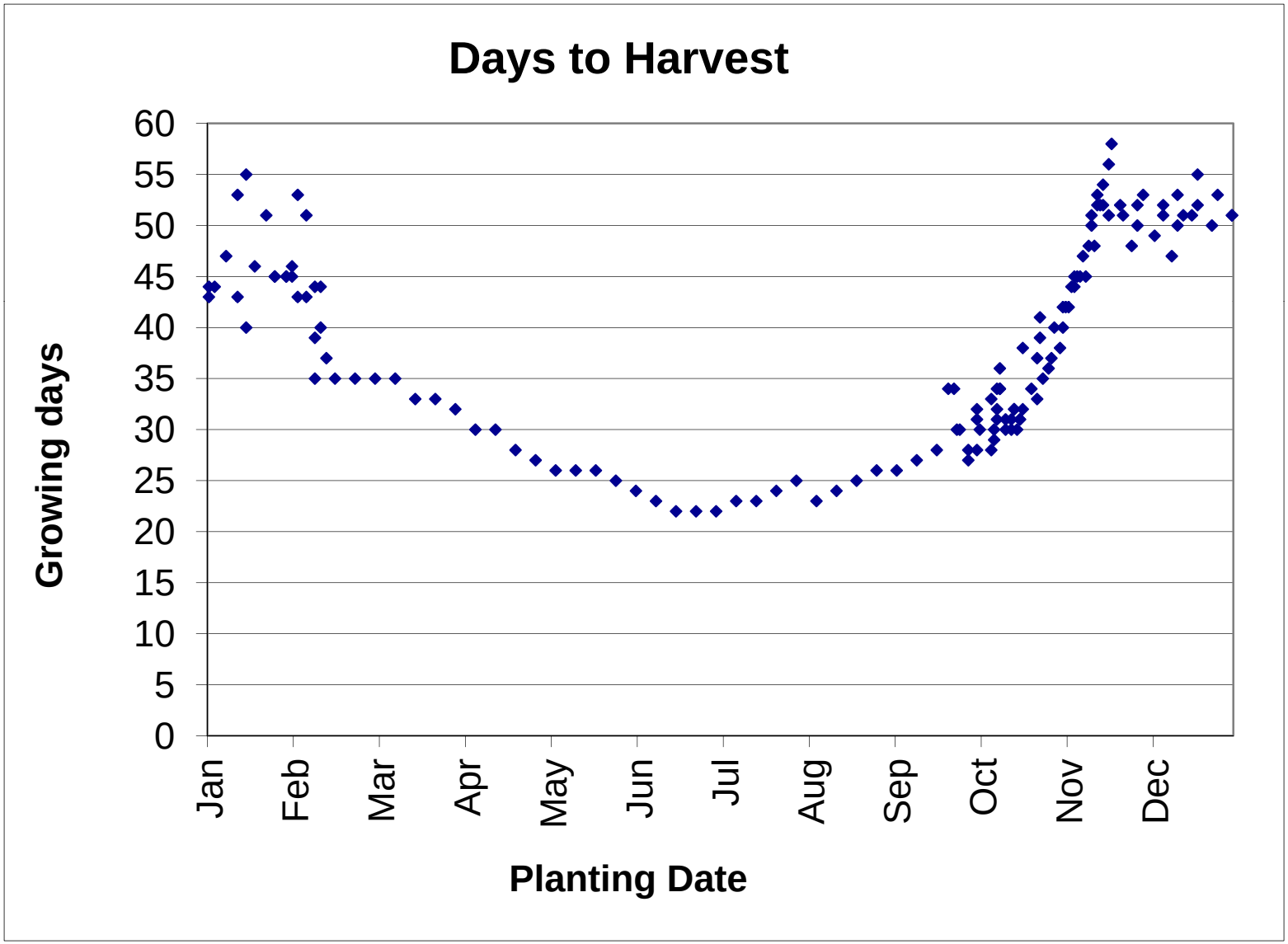
Issues in Spinach Weed Control

- **Challenges**
  - **Use of 80 inch beds**
  - **Mechanical harvest**
  - **No effective cultivation**
  - **Limited choice of herbicides**
  - **No new herbicides in the registration hopper**
- **Issues with registered herbicides**
  - **RoNeet – 48 hour REI following application increases the ‘hassle factor’**
  - **Dual Magnum**
    - **12 month plant back to lettuce**
    - **50 day PHI**

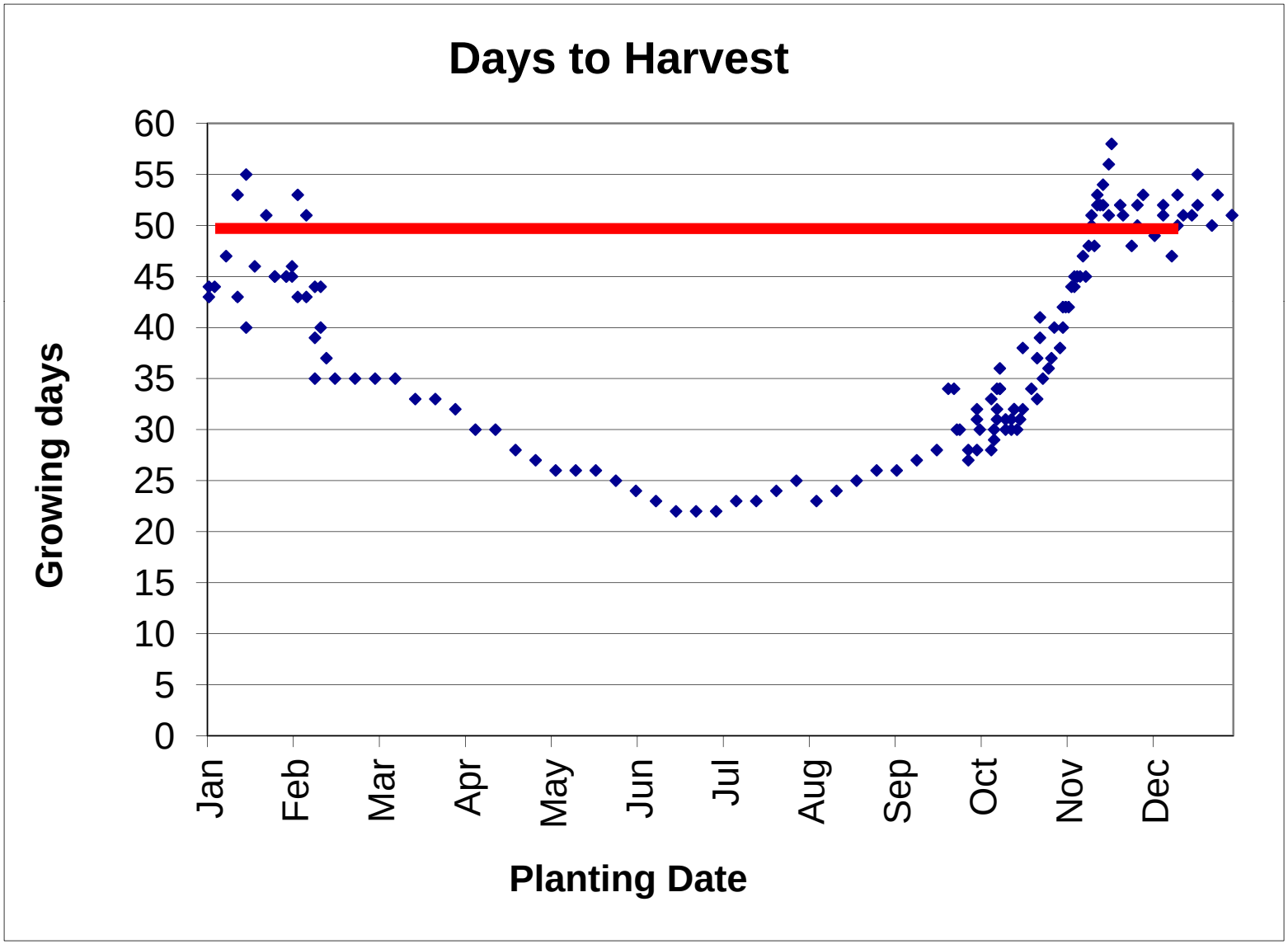
Working with the Dual Magnum Label

- **Spinach is a short term crop**
- **It takes spinach 50 days from planting to harvest only during the coldest part of the year**

Days to Harvest Clipped Spinach



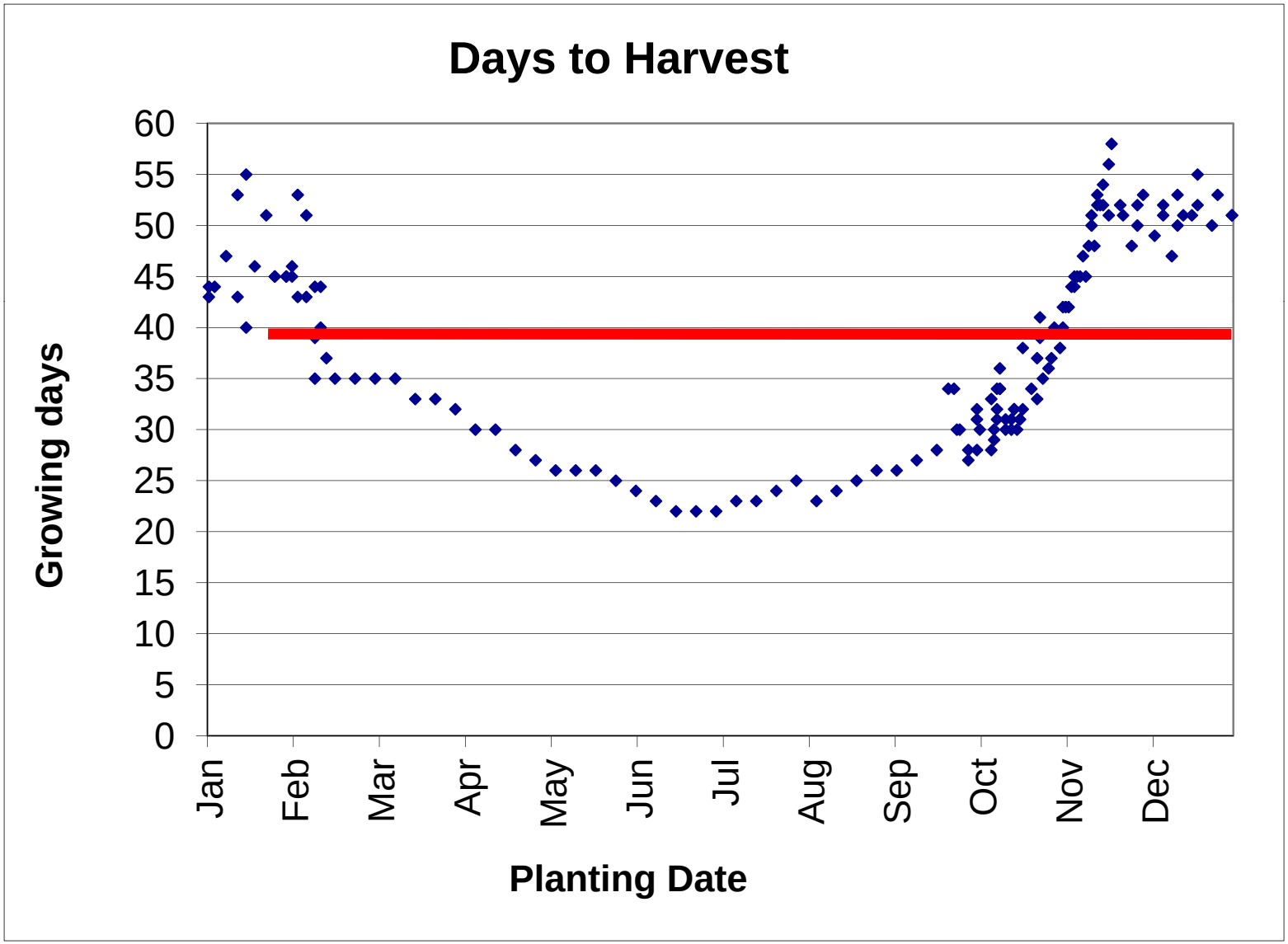
Days to Harvest Clipped Spinach



Working with the Dual Magnum Label

- **Syngenta is pursing a shorter PHI, but best we can hope for is that that it is reduced to 40 days**
- **Applying Dual Magnum prior to planting is an option**

Days to Harvest Clipped Spinach



Working with the Dual Magnum Label

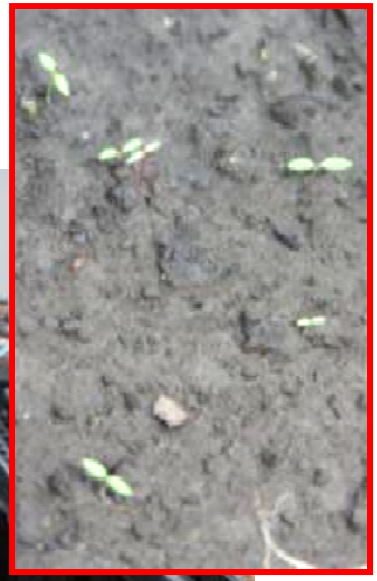
- **Applying Dual Magnum prior to planting is an option to satisfy the PHI**

Differing Approaches to Spinach Weed Control

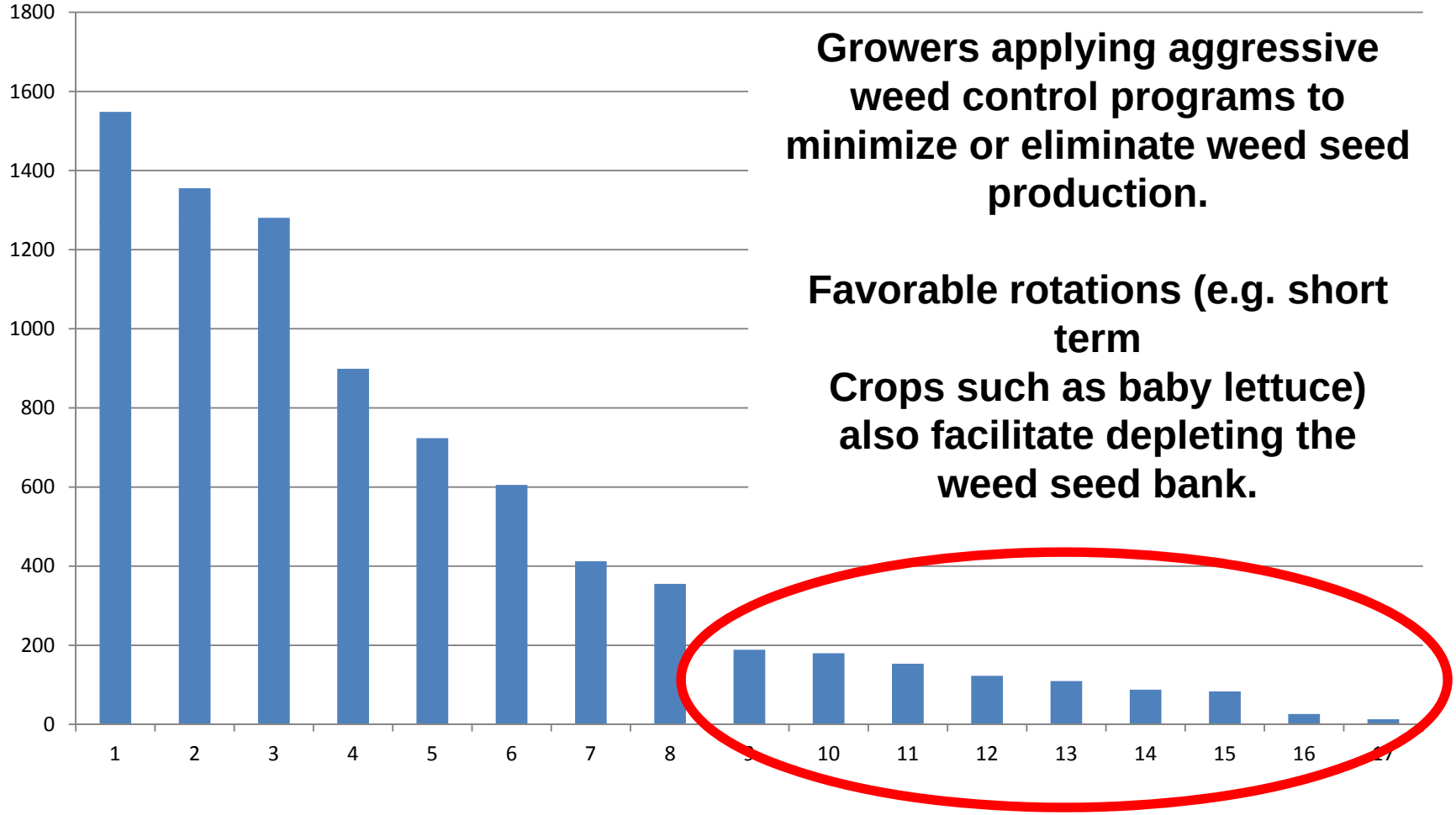
- Emphasis on the importance of cultural practices
  - Zero weed seed tolerance
  - Favorable rotations
  - Preirrigation
  - Locating fields
- Preplant fumigation
- Work with the nuances of available herbicides

Seedbank Evaluations

Repeat germination evaluations



Impact of the Total Weed Management Program
Germable Seeds/m^2



Growers applying aggressive weed control programs to minimize or eliminate weed seed production.

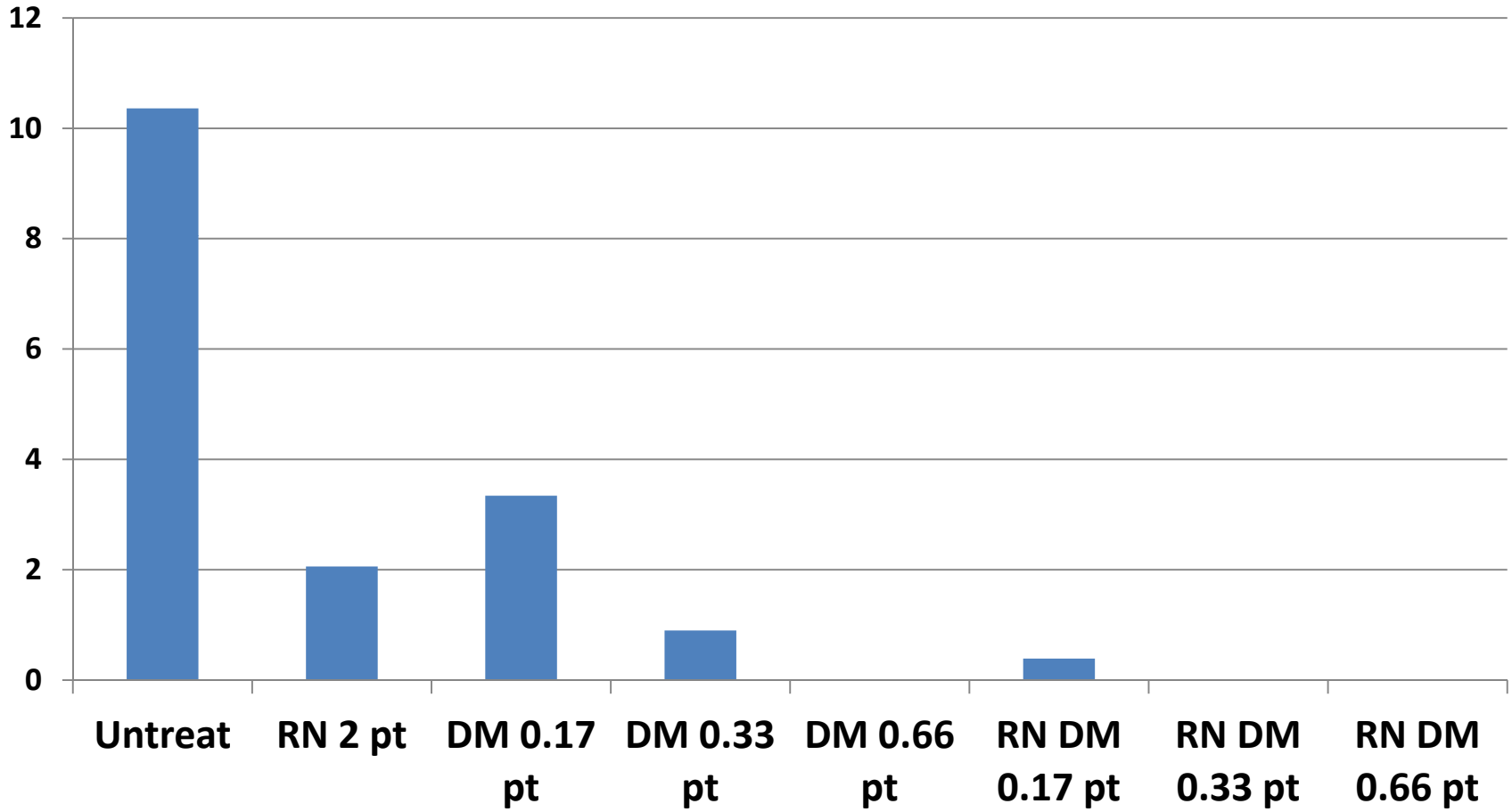
Favorable rotations (e.g. short term Crops such as baby lettuce) also facilitate depleting the weed seed bank.

2011 Weed Control Evaluations

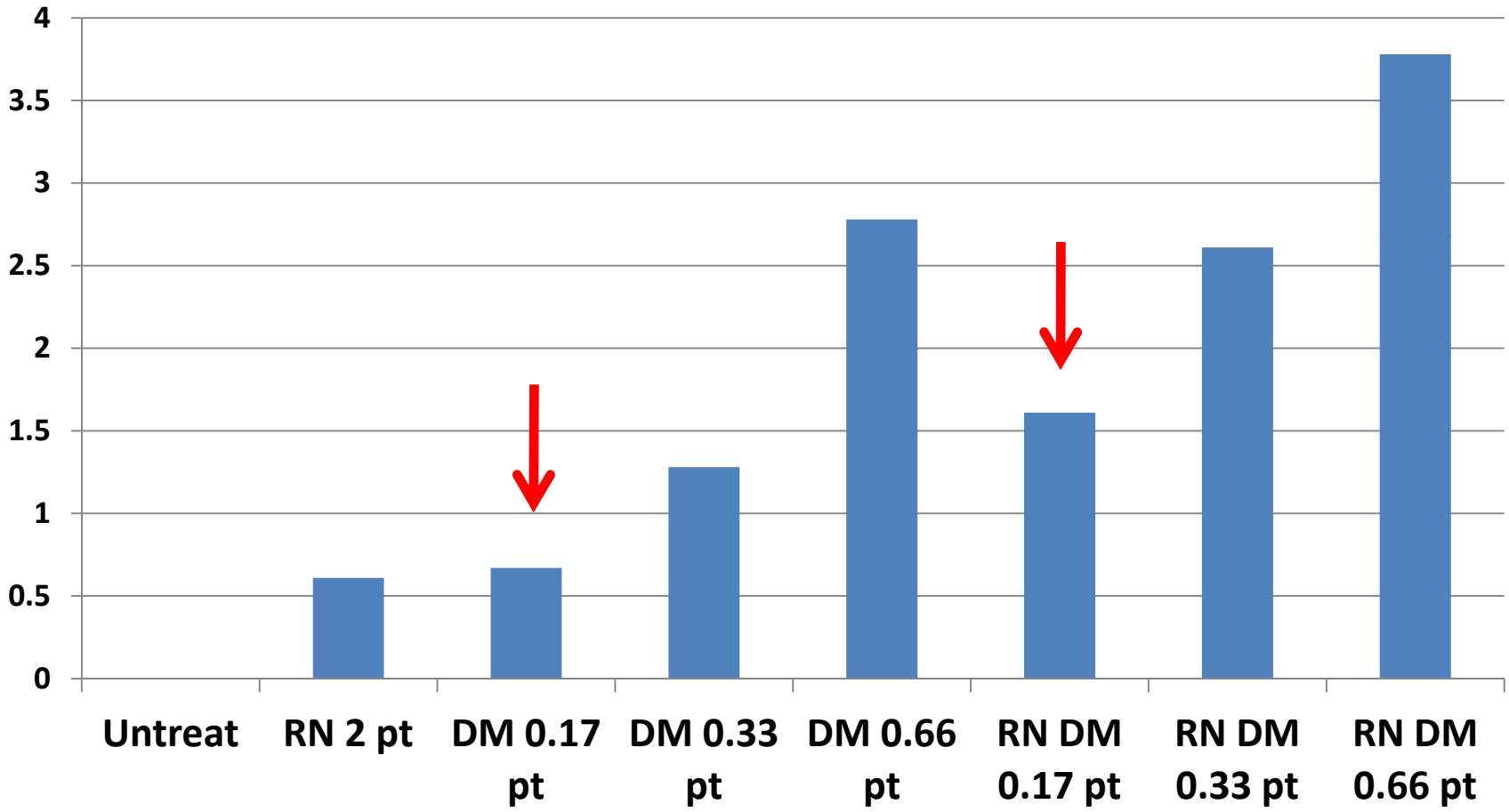
- Tank mix combinations :
- RoNeet @ 2 pints/A
- Dual Magnum
  - 0.17 pint/A
  - 0.33 pint/A
  - 0.66 pint/A

- The following graphs are a sum of three trials

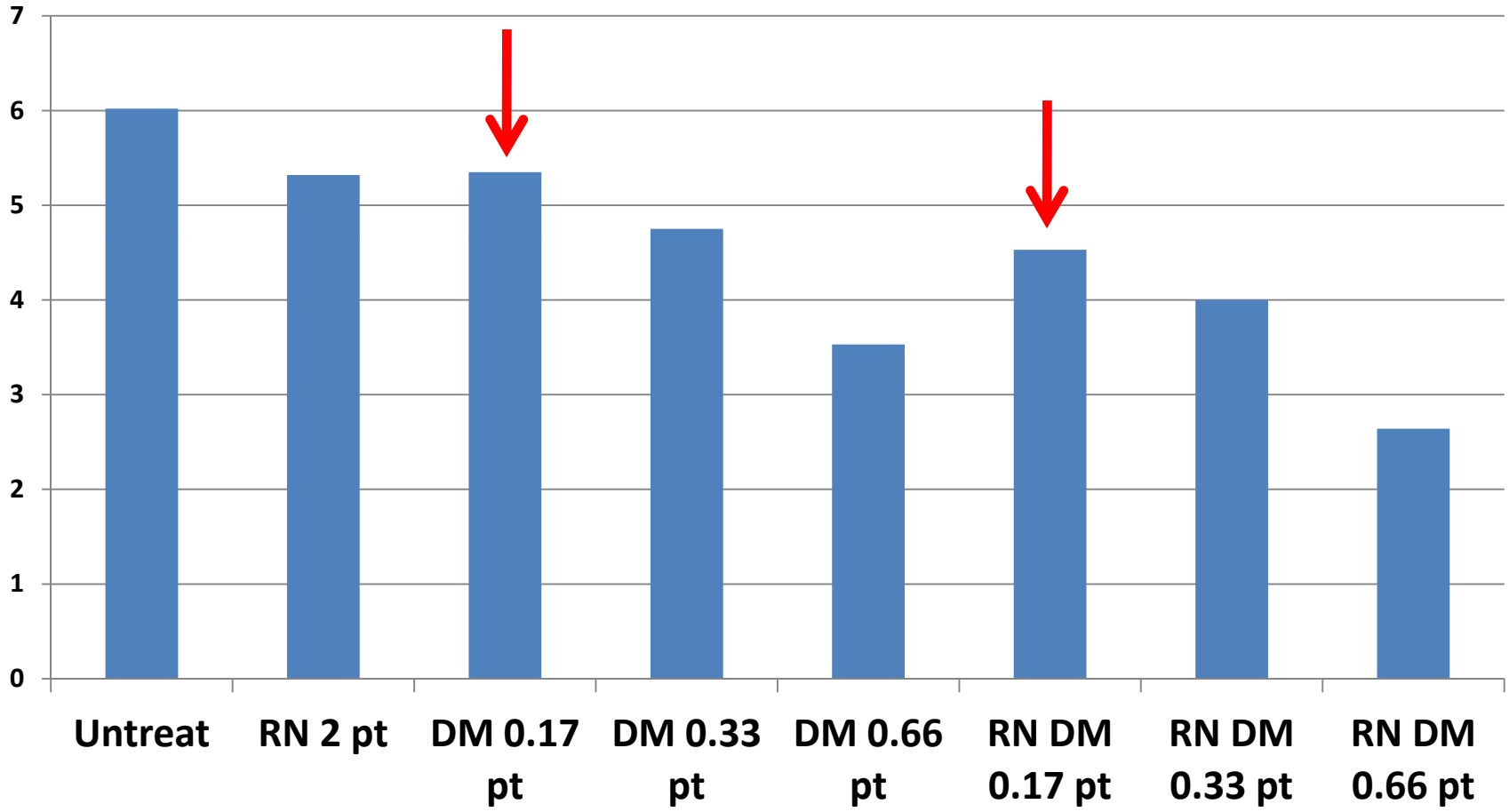
Weeds per m^2


12
10
8
6
4
2
0
Untreat
RN 2 pt
DM 0.17 pt
DM 0.33 pt
DM 0.66 pt
RN DM 0.17 pt
RN DM 0.33 pt
RN DM 0.66 pt

Phytotoxicity Ratings

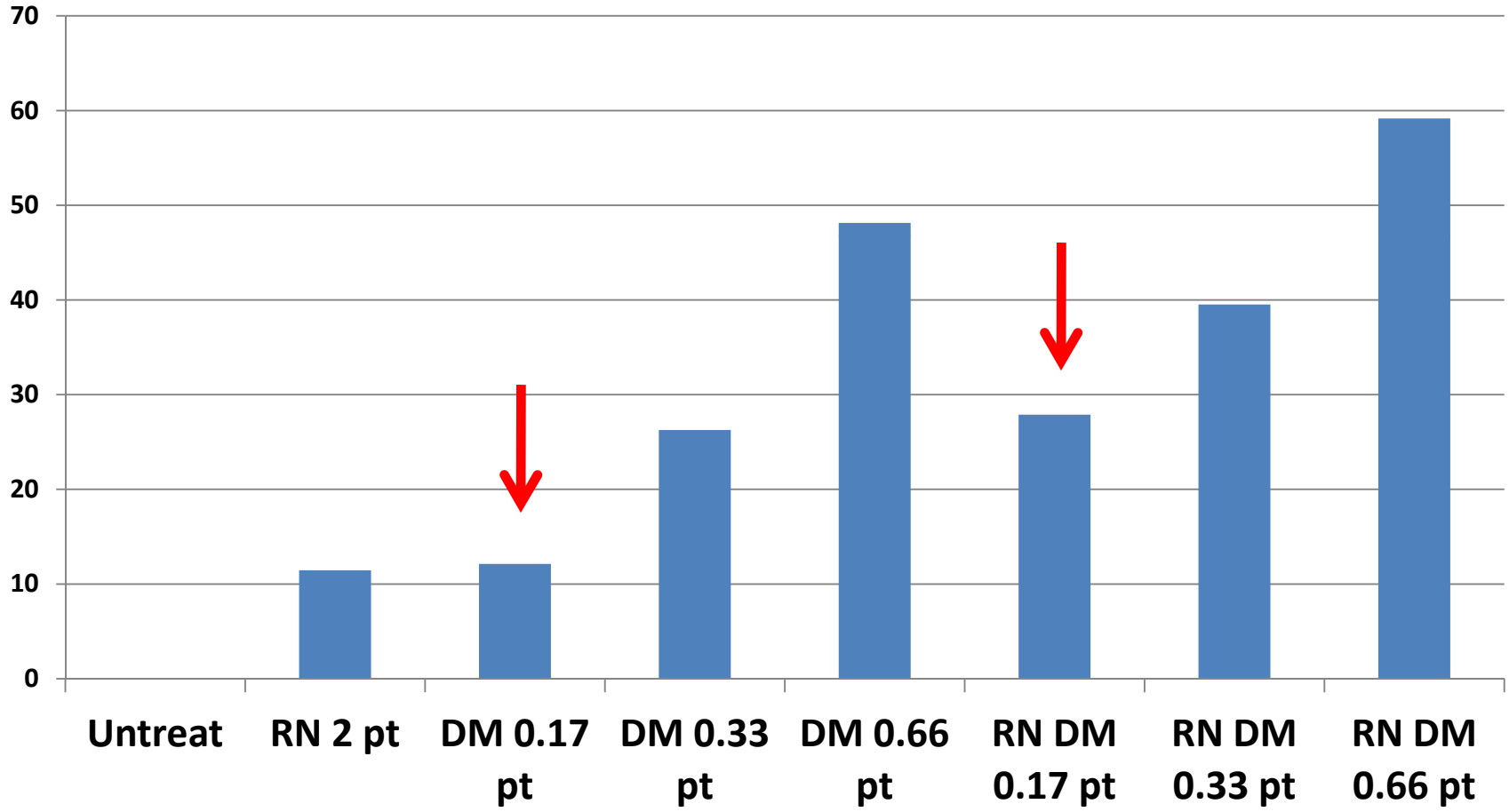


Yield tons/A


7
6
5
4
3
2
1
0
Untreat
RN 2 pt
DM 0.17 pt
DM 0.33 pt
DM 0.66 pt
RN DM 0.17 pt
RN DM 0.33 pt
RN DM 0.66 pt

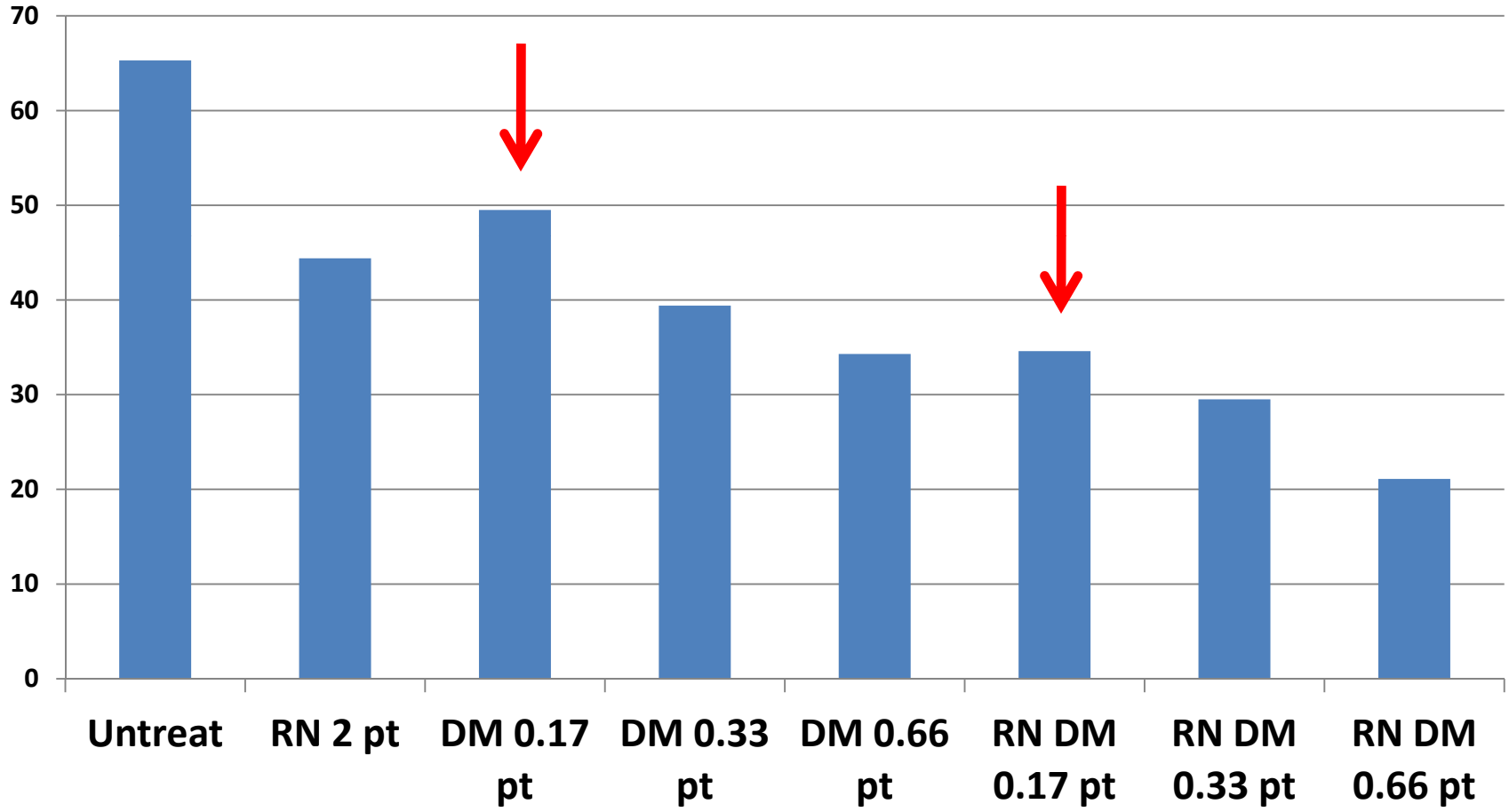
Yield Decrease

Percent less than the untreated



Time to Weed

Hours/A



Acknowledgements

- **Jose Aguiar, Kleen Globe**
- **Tony Alameda, Top Flavor Farms**
- **Chris Drew, Sea Mist Farms**
- **Frank Heffren, Green Valley Farm Supply**
- **Wyatt Duncan, Integrated Control**