

12TH ANNUAL ALMOND RESEARCH CONFERENCE, DECEMBER 4, 1984, SACRAMENTO

Project No. 84-P9 - Tree and Crop Research
Weed Control

Project Leader: Dr. A. H. Lange (209) 646-2794
University of California
9240 South Riverbend Avenue
Parlier, CA 93648

Personnel: Ron Vargas, W. D. Edson

Objectives: (1) To evaluate safe, economic pre- and post-emergence herbicides for annual weed control in almonds. (2) To develop an effective perennial weed control program using both herbicides and cultural practices. (3) To investigate the long term use of herbicides on almond growth and yield under chemical strip and complete nontillage.

Interpretive Summary:

Preemergence herbicides

Several new herbicides will be useful for annual and perennial weed control in almonds when registered:

- a. Rydex (prodiamine) is very safe for use in trees and vines. It controls a broad spectrum of weeds including all annual grasses tested and many broadleaf weeds. It is not very effective on flaxleaved fleabane and marestail. Continuous use of Rydex will help control bermudagrass, johnsongrass and bindweed.
- b. Prowl (pendimethalin) similar to surflan (oryzalin) but not as residual.
- c. Igran (terbutryne) is much safer than Princep (simazine) on almonds and should be tested in the lighter soils where Princep use is not recommended.
- d. Racer (R 40244) is similar to Solicam (norflurazon) having considerable activity on nutsedge and bermudagrass as well as most grasses and many broadleaf weeds.

Postemergence herbicides

- a. Fusilade (fluazifop-butyl) is a new grass herbicide; very effective on nearly all grasses. It appears to be very effective on johnsongrass and bermudagrass. There is a lot to learn about these new grass killers but 1984 results suggest it may give more lasting control of perennial grasses (especially bermudagrass) than glyphosate (Roundup). Fusilade is now registered for nonbearing almonds and the residue work for bearing almonds is apparently complete.

- b. Poast (sethoxydim) is similar to Fusilade. It seems to be more active on most annual grasses and johnsongrass. Poast is somewhat effective on bermudagrass but not quite as good as Fusilade. Poast is also registered on nonbearing almonds. The residue work should be complete in 1984.
- c. Other effective grass herbicides being studied but not yet registered include Verdict, Whip, Assure and SC 1084.

Long Term Trials

- a. Our long term studies show equal yields for strip and complete chemical nontillage, both having much better yield than where tillage was used for controlling weeds. Strip weed control with mowing the centers gave lower yields than where herbicides were used in our 1984 UC Kearney results. However, in 1983 the opposite was true and larger scale grower trial this year showed a definite decrease in growth and yield where chemicals were used for weed control during the past three years compared to mowed centers.