UC Weed Workgroup Meeting

November 14-15, 2000
University of California, Davis

*2001 meeting to be held at UC Davis on November 13-14, 2001.

AGENDA

Tuesday, November 14, 2000 • MU II

10:00 AM	Coffee and Rolls
10:15-10:20	Welcome - Joe DiTomaso
10:20-10:40	Senate Bill 1740 - Steve Schoenig
10:40-11:00	New non-crop area advisor position - Carl Bell
11:00-11:20	GIS work to estimate yield losses from weeds in rice - Jack Williams
11:20-11:40	Methyl bromide update - Steve Fennimore
11:40-12:00	Delta pesticide use update - Lars Anderson
12:00-1:00	LUNCH
1:10-1:20	WRIC & Weed Workgroup update - Joe DiTomaso
1:20-1:40	Discussion on New Weed Position - Mike Parrella
1:40-3:10	Breakout sections: Agronomic Crops or Aquatics
3:10-3:30	BREAK
3:30-5:00	Breakout sections: Trees and Vines or Turf and Ornamentals

*Dinner will be hosted at Joe DiTomaso's home in Davis

Wednesday, November 15, 2000 • Hanna Rooms, Asmundson Hall

7:45	Coffee and Rolls
8:00-9:30	Breakout sections: Vegetable Crops or Non-Crop Areas
9:30-10:15	Section reports
10:15-10:30	BREAK
10:30-11:45	General Session to discuss:

- Research priorities
- Education-Outreach priorities
- Workgroup: Proposals, future agenda and priorities
- Position priorities: AES, Specialists, Advisors
- Elect two new Executive Committee members
- Dates and location of 2001 meeting
- Other

11:45-12:15 Executive Committee Meeting

Business

The Weed Workgroup needs to develop a white paper outlining the needs of Weed Science throughout the state. This white paper should be similar to that produced by Environmental Horticulture in September 2000. Such a document should be submitted to the Pest Management Director Joe Morse, and the Program Director Lanny Lund, as well as the Dean, Associate Dean, and Executive Vice Dean (Neal Van Alfen, Mike Parrella, and Jim McDonald).

The Weeds of California text will be divided into two books. The first will be entitled "Aquatic Weeds of the Western United States" and will be ready to submit for publication in early summer of 2001. The larger text entitled "Weeds of California" is about 40% completed and the photos are about 90% completed. It will require another 2 years to complete.

The Weed School and the Aquatic Weed School will be held in alternate years in October. The Weed School will be held every odd number year and the Aquatic Weed School will be held in even numbered years.

Commodity Reports

Turf and Ornamentals

Turf

- *Dave Cudney*—Found that MSMA and halosulfuron at 0.5 rate each, MSMA followed by MSMA at 2 lb MSMA, or 0.05 lb halosulfuron (3 applications) gave 100% control of kyllinga. Also tested all turf labels for kikuyugrass safety. No results reported. Triclopyr + MSMA is best control for kikuyugrass at present at 0.5 + 2 lb a.i./A. Quinclorac provided good kikuyugrass control. BASF says registration should be March 2001. Crabgrass resistance to quinclorac reported in CA (note: DiTomaso worked with quinclorac resistant crabgrass from Dinuba). Edging materials tested for combinations to speed up glyphosate activity. Diquat at very low rate works well. Roundup dry-pak woks as well as liquid formulation. Dave noted that glyphosate will can have residual activity on sandy soils with low organic matter.
- *Richard Smith*—Reported on a paper that indicated that clopyralid remains active in composted material.
- *Clyde Elmore*—Looked at dithiopyr vs corn gluten meal (CGM) for crabgrass control. Slight weed reduction but not as much as Dimension.

Ornamentals

- *Cheryl Wilen* and *Richard Smith*—Yellow nutsedge trials reported that timing of application is key when using halosulfuron. Pennant was good in south (sandy soil) but not quite as good in north.
- *Clyde Elmore*—Broccoli residues and tarping provide good weed control. Tarping is better than untarped. Good control except a period of time is required before planting due to phytotoxicity of broccoli to subsequent crop.
- *Carl Bell*—Working on project regarding ornamental plants that can become invasive. Nurseries will do educational efforts with UCCE participation.

Non-Crop

- *Steve Young*—Studying the use of corn gluten, acetic acid, weed burner (flamer) and other techniques for roadside weed control in Mendocino County. Working with State Parks, possibly looking at goats as a control tool. Funded *by CalTrans. Also looking at goats for possible gorse control.*
- *Jodie Holt*—Has a number of students working with Arundo donax and others with artichoke thistle. Has found that dense monocultures of Arundo no longer expand. High nitrogen will continue to allow expansion of populations, but requires new openings. Beginning new work on population genetics and variability within

state. Demographic study being conducted with artichoke thistle. Developing phenology model with agronomic weeds. This is a collaboration with Tim Prather and Scott Steinmaus. Also working with Steve Orloff on wild oat resistance to herbicides. Found that wild oat in Siskiyou County is resistant to difenzoquat (Avenge) but not to triallate (Far-go). Other resistant populations of wild oat in other states resistant to both herbicides. Mechanism unknown.

- *Steve Wright*—Looking at effects of combination of Transline and fertilizer (UN#@) on yellow starthistle control. Found excellent control in all plots. In year with very late rain, only Transline alone plots gave good control.
- *Joe DiTomaso*—Jubatagrass control at Vandenberg AFB indicates that Fluazifop at 2% in the fall can provide good control of jubatagrass. Rope wick applications at 50% are also effective. Hack-n-squirt treatments of imazapyr (Stalker) very effective on tree-of-heaven (Ailanthus altissima) using 1 ml per every 3 inches of trunk diameter. Similar studies are being conducted with Tamarix ramosissima and Eucalyptus. Eucalyptus not as easy to control as Ailanthus. Other graduate students are working on the biology of Cape ivy and Spartina. Key studies in progress or recent finding with yellow starthistle include:
    1. Two year combinations of Transline and burning or either option alone to determine the vegetative composition. Three studies underway in San Benito, Yuba and Siskiyou cos.
    2. Large scale control project in second year at Fort Hunter Liggett in southern Monterey County. This study also uses combinations of Transline and burning.
    3. In collaboration with CA Fish and Game, toads were not found to be sensitive to clopyralid.
    4. Graduate student Steve Enloe, with Steve Orloff, is looking at grazing strategies to maximize forage in plots previously converted to perennial wheatgrass from a heavy yellow starthistle infestation.
    5. Steve Enloe is also looking at using irrigation in late summer as a tool to control yellow starthistle seedbanks.
    6. Guy Kyser is conducting a degree day model experiment throughout the state to help predict optimal timing for control tools.

In education efforts, the yellow starthistle website will be available in mid-December. It can be accessed through the WeedRIC website (wric.ucdavis.edu). Photos used in the new California weed text can be made available of Farm Advisors by request. Contact Joe DiTomaso.

Agronomic (prepared by Mick Canevari

Discussion group: Albert Fisher, Ron Vargas, Steve Fennimore, Steve Orloff, Tom Lanini, Steve Wright, Doug Munier, Milt McGiffen, Dan Marcum, Dave Cudney, Jerry Schmierer, Mick Canevari, Richard Smith, Cheryl Wilen.

Alfalfa

- New experimental herbicides “Raptor” Imazamox in seedling ALFALFA. Good results on Foxtail barley and Downey brome. Better on Fiddleneck than Pursuit. High rates reduced yields in 1st cutting.
- “Valor”—dormant timing, winter weed control. Post & Pre activity to many weeds. Some injury (chlorosis) on regrowth.
- “Permit”—application following last harvest for nutsedge control—in progress

Beans—no discussion

Clover

- Imazamox “Raptor” - Safe to crop. Buckhorn Plaintain 50% control.

Cotton

- 250,000 acres transgenic varieties grown in 2000 i.e.: BXN, RxR. Buctril 50% control on pigweed, when mixed with Poast, Prism or Fusilade, lost all control on pigweed.
- RxR variety is dominant in San Joaquin Valley. Good yields, some problem with seed coat fragments showing up in lint, which reduces quality.
- New X CGA herbicide for nutsedge and other B.L. weeds. Post directed, poor nutsedge results.

Corn

Efficacy trials

- "Shark" - Excellent on velvet leaf
- "Clarity" - BanVel type - good results
- "Distinct" - Marginal overall

Some RxR varieties - Limited use in 2000

Small Grains

- "Achieve" and "Puma" used in northern California for avenge resistant oat. Good control except when combined with 2,4-D, lose all oat control.
- "Achieve", wild oat control good Ripgut brome control is poor.

Sugar Beet

- "Stinger" Pant back trial 1 year results. 100% kill on alfalfa, 50% loss of lettuce.

Rice

- "Clincher"—Sec 18 in 2001 for sprangetop control Whip—Phyto problems on rice and erratic control of sprangletop
- "Regiment"—Sec 18, 2001 control of resistant watergrass, some cross resistance showing on Londax resistant watergrass.
- "Shark"—Sec 3 registration for 2001—ground application or helicopter only to avoid drift problems.
- "Clomazone"—being evaluated in granular formulation for anti drift - controls ALS resistant watergrass.

Other Pest Control Observations

Sudangrass reduces nutsedge population
Nematode resistant cow pea variety lowers nematode populations
Flooding (wild rice) reduced nutsedge population

Priority Positions

1. Farm Advisor
   - 1.1. North
     - 1.1.1. Sutter and Yuba cos. - Rice and wetlands management, Weed Science emphasis
     - 1.1.2. Central Sierra - Trees and forestry
   - 1.2. Central
     - 1.2.1. Kern Co. - Plant protection
     - 1.2.2. Sacramento Co. - Plant Protection
   - 1.3. South
     - 1.3.1. Imperial and Riverside cos. - Weed Science emphasis
     - 1.3.2. Ventura and Santa Barbara cos. - Weed Science emphasis
2. Specialist
   - 2.1. Systems approach to trees and vines - Kearney Agricultural Center
   - 2.2. Systems approach to annual crops - UC Davis; emphasis on agronomic crops including rice
   - 2.3. Invasive plant ecologist - UC Riverside
   - 2.4. Systems approach to turf and ornamentals - UC Riverside
3. Ag and Experimental Station
   - 3.1. Population Biologist and Precision Ag - UC Davis
   - 3.2. Biological control of weeds - UC Davis

Priorities for Weed Workgroup Proposal, 2001 Research

1. Precision Ag mapping (Tom Lanini)

2. Economic analysis of weed control efforts and yield monitoring (Ron Vargas and Clyde Elmore)
3. GPS units; funding for instrumentation to be used statewide (Tom Lanini)
4. Evaluation of colored plastic tarps in weed control (Steve Fennimore)

Education

1. Weed Science representation at IR-4 Coordinating Committee meeting in Washington DC; vegetables and ornamental crops (Steve Fennimore)
2. Develop training unit for Master Gardeners on invasives (Carl Bell)

Other important issues discussed:

The weed workgroup needs to increase its production of Pest Notes. Numerous suggestions for new Pest Notes publications included:

- Tamarix spp. (saltcedar)
- Delairea odorata (Cape ivy)
- Genista monspessulanus, Cytisus scoparius and C. striatus, and Spartium junceum (brooms)
- Arundo donax (giant reed)
- Abutilon theophrasti (velvetleaf)
- Brassica spp., Sinapis spp. (mustards)
- Lepidium latifolium (perennial pepperweed)
- Setaria spp. (foxtails)
- Xanthium strumarium (common cocklebur)

Weed Workgroup Executive Committee

The committee is composed of:
2- UCCE Weed Specialist or Statewide IPM Advisor
2- UC Academic Senate Faculty or USDA Scientist
2- UCCE Farm Advisor

Term ends November	*Name*	*Representing*
2002	Mick Canevari	UCCE Farm Advisor
2002	Albert Fischer	UC Academic Senate Faculty
2002	Dave Cudney	UCCE Specialist
2004	Steve Fennimore (chair)	UCCE Specialist
2004	Jodie Holt	UC Academic Senate Faculty
2004	Richard Smith	UCCE Farm Advisor

Notes of Executive Committee Meeting

Steve Fennimore is the 2001 weed group chair.

1. We discussed the work group proposal.
2. Steve Fennimore needs to set up a schedule of events for the next Workgroup on 11/13 and 11/14 of 2001. He will delegate responsibilities as needed. Sessions will be: Turf and ornamentals, Trees and vines, Agronomic crops, Vegetables, Non-crop, Forestry, Aquatics.
3. We discussed the idea of holding training sessions as the Veg Crops Conference does. Possible topics include:
   3.1. Precision Ag training such as the use of global positioning devices.
   3.2. Digital cameras - Drs. Elmore and Cudney offered to train the group. We will need to borrow a computer so that we can practice downloading and working with Photoshop or other software.
4. To accommodate the training sessions we will expand the session to two full days.
5. We will have a session on IR-4 project updates.
6. We need to deal with extension publications and to prioritize those that we need.