

Encouragement and Admonishment

James A. Bethke

University of California Cooperative Extension

San Diego County California

Outline

Encouragement and Admonishment

I can't

The Kings of Logistics

Impact on California's ornamental production

Dealing with Roadblocks

I can't

Can't write

Can't be a scientist

Can't kill bamboo mealybugs

Need to go for it

Logistics

**The planning and control of the flow
of goods and materials through an
organization or manufacturing
process**

I don't need no stinkin' wood









JOKES63.NET















Getting your pigs to market



Getting your pigs to market



Going Green by Recycling



Going Green by Recycling





Herbs



Getting your birds to market



We'll butcher them when we get there



Eggs



**Gotta get these birds to market.
Are you coming honey?**







CA's diverse agriculture

- California's agriculture; the Wine Industry, Cotton Industry, Strawberries, Citrus Industry, etc. is very sensitive to invasives that could impact their bottom line. Like Hawaii, these industries are getting hit by new insects and diseases that could devastate their business.

The Grower

Mandatory Actions - Invasive pests

- **Red imported fire ant mandatory treatments of bifenthrin**
- **Glassywinged sharpshooter mandatory treatments if shipping north and 300% inspection**
- **Diaprepes mandatory treatments of bifenthrin and diflubenzuron**
- **Mediterranean fruit fly mandatory bait trapping every 10ft² or sprayed throughout**
- **LBAM mandatory pheromone trapping, mandatory inspections by County ag at a cost of \$65 hour - quarantine will end this month**
 - Preinspection certification
- **SOD**
- **Magnolia white scale, root mealybugs, green looper**
- **Asian Citrus Psyllid**

The Grower

Mandatory Actions - Invasive pests

- **Red imported fire ant mandatory treatments of bifenthrin**
- **Glassywinged sharpshooter mandatory treatments if shipping north and 300% inspection**
- **Diaprepes mandatory treatments of bifenthrin and diflubenzuron**
- **Mediterranean fruit fly mandatory bait trapping every 10ft² or sprayed throughout**
- **LBAM mandatory pheromone trapping, mandatory inspections by County ag at a cost of \$65 hour - quarantine will end this month**
 - Preinspection certification
- **SOD**
- **Magnolia white scale, root mealybugs, green looper**
- **Asian Citrus Psyllid**

Costs of RIFA to nursery industry in CA

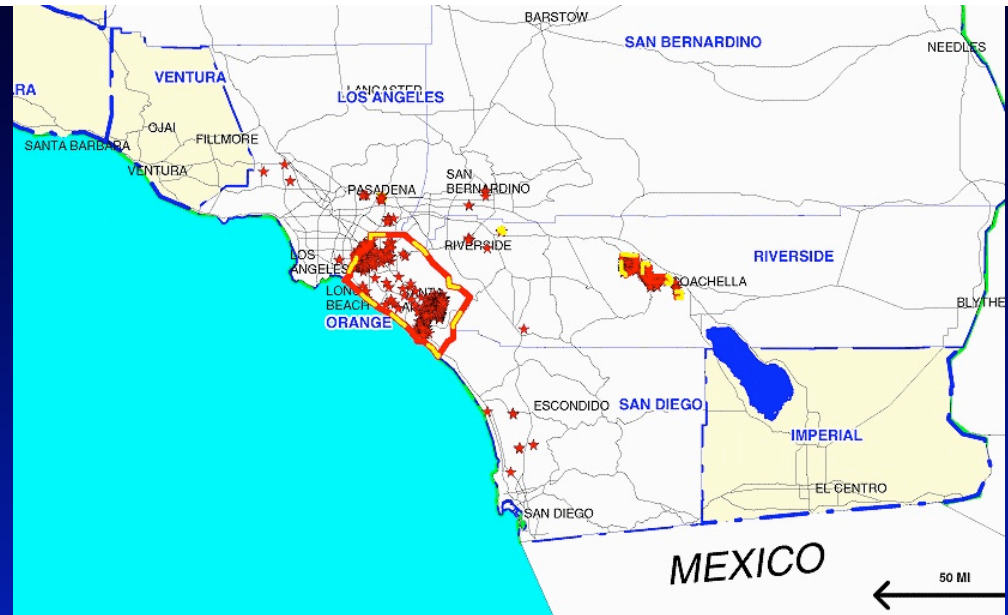


California Agriculture 56(1):26-34.

The red imported fire ant, a pest newly introduced into California, threatens households, agriculture and wildlife. The results show that almost all agricultural activities would be affected should the ants become established.

Annual costs to treat nurseries for RIFA would be about \$650 per acre. The applications of fenoxycarb and hydramethylnon are \$60 per acre with the use of bifenthrin accounting for the remaining costs.

Costs of RIFA



California Agriculture 56(1):26-34.

The red imported fire ant, a pest newly introduced into California, threatens households, agriculture and wildlife. The results show that **almost all agricultural activities would be affected should the ants become established.**

Annual costs to treat nurseries for RIFA would be about **\$650 per acre**. The applications of fenoxycarb and hydramethylnon are \$60 per acre with the use of bifenthrin accounting for the remaining costs.

The Grower

Mandatory Actions - Invasive pests

- Red imported fire ant mandatory treatments of bifenthrin
- **Glassywinged sharpshooter mandatory treatments if shipping north and 300% inspection**
- Diaprepes mandatory treatments of bifenthrin and diflubenzuron
- Mediterranean fruit fly mandatory bait trapping every 10ft² or sprayed throughout
- LBAM mandatory pheromone trapping, mandatory inspections by County ag at a cost of \$65 hour - quarantine will end this month
 - Preinspection certification
- SOD
- Magnolia white scale, root mealybugs, green looper
- Asian Citrus Psyllid

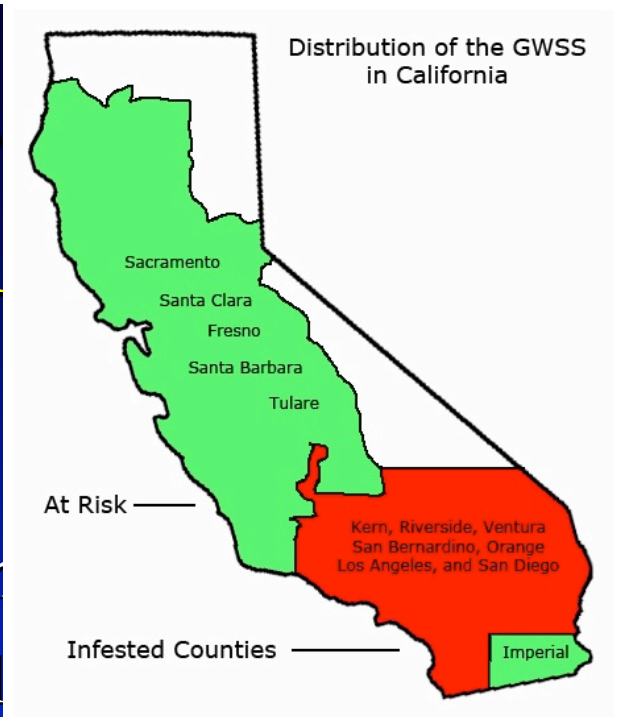
Costs of Glassy-winged sharpshooter to nursery industry in CA



- CDFA estimates of direct costs to the California nursery industry to be **~\$10 million/year (in excess of \$80 million since 2001)**.
- The Nursery Industry estimates the costs to be **~\$0.30-\$0.40 per container** of product.
- This includes trapping, treatment, monitoring, safeguarding, and inspection.
- It does not include costs of rejections, lost sales, lost markets

Costs of Glassy-winged sharpshooters to nursery industry in CA

- CDFA estimates of direct costs to the nursery industry to be ~\$10 million (in excess of \$80 million since 2001).
- The Nursery Industry estimates the costs to be ~\$0.30-\$0.40 per container of product.
- This includes trapping, treatment, monitoring, safeguarding, and inspection.
- It does not include costs of rejections, lost sales, lost markets



Impact on the Nursery Industry

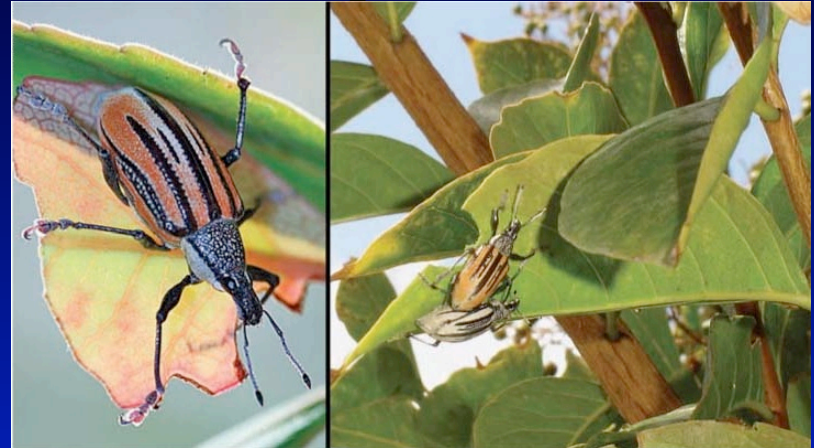
- Quarantine requires 100% control of all life stages.
- 4³ feet of foliage an hour can be inspected
- 100% nursery inspection is costly
 - boxed tall trees take hours to inspect
 - shipments are delayed
 - as much as \$2 million loss
- Orange County/ an infested county
 - 10 % of the production nurseries ship north

The Grower

Mandatory Actions - Invasive pests

- Red imported fire ant mandatory treatments of bifenthrin
- Glassywinged sharpshooter mandatory treatments if shipping north and 300% inspection
- **Diaprepes mandatory treatments of bifenthrin and diflubenzuron**
- Mediterranean fruit fly mandatory bait trapping every 10ft² or sprayed throughout
- LBAM mandatory pheromone trapping, mandatory inspections by County ag at a cost of \$65 hour - quarantine will end this month
 - Preinspection certification
- SOD
- Magnolia white scale, root mealybugs, green looper
- Asian Citrus Psyllid

Costs of Diaprepes to nursery industry in CA



California Agriculture 63(3):121-126.

The establishment of Diaprepes in California would affect both consumers and producers through changes in the costs of production, market prices, market supply and consumption.

The primary impacts would be increased production costs for pest treatments and quarantine regulations, in particular to ship ornamental plants out of infested regions. The estimated increase in production cost to treat Diaprepes was \$525 per acre for infested nurseries

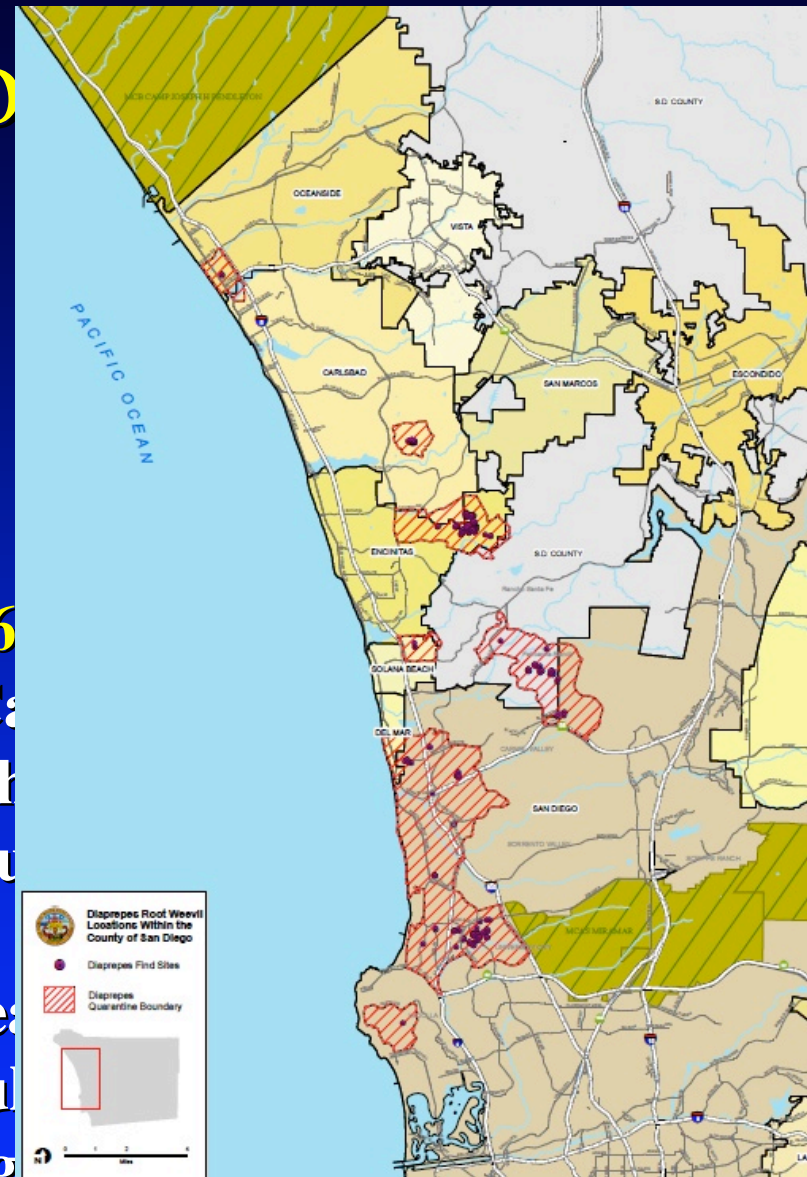
Costs of Diaprepes to industry in CA

California Agriculture 63(3):121-126

The establishment of Diaprepes in CA consumers and producers through ch production, market prices, market su

The primary impacts would be incre pest treatments and quarantine regul ornamental plants out of infested regions.

in production cost to treat Diaprepes was **\$525 per acre for infested nurseries**



The Grower

Mandatory Actions - Invasive pests

- Red imported fire ant mandatory treatments of bifenthrin
- Glassywinged sharpshooter mandatory treatments if shipping north and 300% inspection
- Diaprepes mandatory treatments of bifenthrin and diflubenzuron
- **Mediterranean fruit fly mandatory bait trapping every 10ft² or sprayed throughout**
- LBAM mandatory pheromone trapping, mandatory inspections by County ag at a cost of \$65 hour - quarantine will end this month
 - Preinspection certification
- SOD
- Magnolia white scale, root mealybugs, green looper
- Asian Citrus Psyllid

Recent impact of the Med fly

Grower is in the GWSS program, the Diaprepes project, and within miles of the recent LBAM sighting.



The Grower

Mandatory Actions - Invasive pests

- Red imported fire ant mandatory treatments of bifenthrin
- Glassywinged sharpshooter mandatory treatments if shipping north and 300% inspection
- Diaprepes mandatory treatments of bifenthrin and diflubenzuron
- Mediterranean fruit fly mandatory bait trapping every 10ft² or sprayed throughout
- **LBAM mandatory pheromone trapping, mandatory inspections by County ag at a cost of \$65 hour - quarantine will end this month**
 - **Preinspection certification**
- SOD
- Magnolia white scale, root mealybugs, green looper
- Asian Citrus Psyllid

The Grower

Mandatory Actions - Invasive pests

- Red imported fire ant mandatory treatments of bifenthrin
- Glassywinged sharpshooter mandatory treatments if shipping north and 300% inspection
- Diaprepes mandatory treatments of bifenthrin and diflubenzuron
- Mediterranean fruit fly mandatory bait trapping every 10ft² or sprayed throughout
- LBAM mandatory pheromone trapping, mandatory inspections by County ag at a cost of \$65 hour - quarantine will end this month
 - Preinspection certification
- **SOD false positive**
- Magnolia white scale, root mealybugs, green looper
- Asian Citrus Psyllid

The Grower

Mandatory Actions - Invasive pests

- Red imported fire ant mandatory treatments of bifenthrin
- Glassywinged sharpshooter mandatory treatments if shipping north and 300% inspection
- Diaprepes mandatory treatments of bifenthrin and diflubenzuron
- Mediterranean fruit fly mandatory bait trapping every 10ft² or sprayed throughout
- LBAM mandatory pheromone trapping, mandatory inspections by County ag at a cost of \$65 hour - quarantine will end this month
 - Preinspection certification
- SOD false positive
- **Magnolia white scale**, root mealybugs, green looper
- Asian Citrus Psyllid

Other Mandates and Impacts

- Water!!! Mandatory **30% reduction**
- Mandatory **Water Quality Ag Waiver** or permit
 - \$15,000 or join a group and pay about \$2,000
- **Immigration issues** - Park outside grower and **60%** of staff don't show up for work
- Cut rose growers are gone, in Watsonville largely due to **energy costs**
- Cut chrysanthemum growers are gone
 - Leafminers and **off shore competition**
 - Growers in Carpinteria have switched their commodities to cut gerbera production or to cut flowers directly to the supermarket chains
- Nursery growers in our area are moving toward **drought tolerant plants and succulents**

Recent Finds of Serious Quarantine Pests from Hawaii Ornamentals

May

**Fruit fly larvae on garland
(foliage)**

Katydid on cymbopogon

Scale on cordyline

Mealybug on protea

Leafhopper on Thai basil

Ants

June

Moths

Crickets

Ants

Scales

Lesser snow scale on calathea

Walking stick

Whiteflies

Planthoppers and leafhoppers

Magnolia white scale

Red wax scale

Aphids

Seed bug

In Conclusion

There s a very consistent problem!

Reniform Nematode took it over the edge

How are you going to react to the threat of the loss
of certifications?

- You could **face** the head on
- You could be **preventative**
- You could **hide** and ignore
- **OR** You can **React**

Stitch in time saves nine

Ounce of prevention is worth a pound of cure

It's not that you don't know what to do. It's doing it.
It's doing things you know are wrong.

Conclusions

Need a vision for what has not yet occurred.

Arnold Hara's new USDA grant

Invasive species council - Devising a new method of categorizing invasive pests much like the CDFA rates the pests.

Prevention is the first line of defense against invasive species and is a primary focus of NISC. Often the most cost-effective approach to combating invasive species is to keep them from establishing in the first place.

http://www.invasivespecies.gov/global/prevention/prevention_index.html

Conclusions

HI-CA regulators and researchers meeting

Costs for growers in So Cal compound

Water

Energy

Immigration

Invasive pest regulations

Mandatory pesticide treatments

DON'T TELL ME YOU CAN'T