

**Minutes of the S-300 Cooperative Regional Project**  
**Peabody Hotel, Little Rock, AR**  
**24 February, 2002**

Acting Secretary: Mo Way

**Meeting Participants:**

In attendance were John Bernhardt and Max Meisch (AR), Sharon Lawler and Bill Walton (CA), Mike Stout, Mike Perich and Boris Castro (LA), Michael L. Boyd (MO), Jim Robbins (MS), Jim Olson and Mo Way (TX) Fred Knapp (Experiment Station Administrative Advisor), and Herb Bolton (CSREES Advisor).

The meeting was called to order at 8:20 a.m. by Chair John Bernhardt who took over for Larry Godfrey (Godfrey was unable to attend due to eye surgery). Acting Secretary, Mo Way, was instructed to write a letter to Rick Norman (Secretary 29<sup>th</sup> RTWG) expressing thanks for allowing the S-300 meeting to be held in the Caddo Room free of charge. Coffee and snacks were also provided gratis.

Selection of Officers: The first business item was the selection of officers for the 2003 S-300 meeting. Bernhardt will assume the Chair; Mike Stout the Secretary.

2003 Meeting Site: The site and date for the 2003 meeting was discussed. S-300 members voted to hold the 2003 meeting in Davis, CA during the third week of February. Lawler volunteered to take care of local arrangements.

Bernhardt asked Herb Bolton (CSREES Advisor substituting for Rick Meyer who did not attend due to hip surgery) for comments. Bolton reported the Farm Bill passed the Senate but now is being debated in a joint Senate/House conference. CSREES will add \$310 million to the IFAS program (deals mostly with invasive species). Basically, the 2003 agriculture budget will not increase over the 2002 budget. However, \$120 to \$240 million increase in funding for the National Research Initiative (basic sciences) is expected to occur. Bioterrorism is a hot topic in Congress, so \$131 million has been added to USDA's budget to safeguard the U.S. food supply. The GAO is critical of USDA for not demonstrating leadership in IPM. The GAO wants more accountability and progress in implementing IPM on a nationwide basis.

Next, Bernhardt asked Fred Knapp (Experiment Station Advisor) for comments. Knapp reported USDA projected 75% of crop production in the U.S. would be under IPM by 2000. The GAO reported that this projection was not met. As Chair of the Southern Regional IPM (SRIPM) grants committee, Knapp reported that 11 proposals were funded including one joint research/extension proposal. Next year, SRIPM will not require preproposals. Knapp also informed S-300 that minutes and the report of the meeting are due within 60 days of the meeting date. Both also are required to be placed on the S-300 website. Lawler will handle this task. Knapp also emphasized that S-300 must show integration of mosquito and rice production entomology research. Knapp stressed that all state reports should have a strong impact statement, preferably with economic benefits of research. Knapp also reported that West Nile Virus (WNV) is in 28 states and is heading towards the Southwest. Finally, Knapp suggested at the 2003 meeting, members should begin to formulate objectives for the revised project which, if approved, will last 8 years.

After S-300 Advisors' comments, state reports were given by those in attendance. A more comprehensive discussion of state reports will be given in the S-300 report, but below are highlights of the reports presented at this meeting.

### State Reports

#### *Arkansas, John Bernhardt:*

- F0570 applied 6 days after flood gave RWW control similar to Karate Z
- Adage 5FS at 0.025 lb (AI)/cwt gave RWW control similar to Icon 6.2FS at 0.0375 lb (AI)/cwt
- Floating barrier trap problems = traps should be checked daily, traps should not be placed in shallow water and traps capture too many non-targets and debris
- F0570 provided significant mortality of rice stink bug (RSB) 5 days after application
- Bengal was more susceptible to RWW than Cocodrie, Saber or Wells
- Cocodrie and Saber were more susceptible to rice stalk borer than Bengal or Wells
- Ahrent was very susceptible to RSB damage while Francis was susceptible
- Rice flooded 20 days after emergence harbored more RWW than rice flooded 30 days - rice flooded 40 days after emergence had the lowest numbers of RWW

#### *Arkansas, Max Meisch:*

- Larv X performed as well as the *B.t.i.* standard in MS
- West Nile Virus (WNV) surveillance (best way to survey is to monitor birds)
- Blue jays migrated from the north in August and were found to be positive
- Once infected with WNV, mosquito is infective for life
- Ducks and geese are very susceptible to WNV
- Chickens don't die but are good sentinel species

#### *California, Larry Godfrey:*

- F0570 (zeta-cypermethrin) provided about 90% control of rice water weevil (RWW)
- Icon 6.2FS provided 100% control of RWW PPI and 65% control as a seed treatment
- Warrior (lambda-cyhalothrin) provided 94% control of RWW PPI
- Messenger (contains harpin proteins and stimulates natural defenses of plants) did not provide effective control of RWW
- RWW infestation at the two leaf stage delayed panicle emergence 5-7 days
- Yields were reduced by 3.5, 7.1, 3.9 and 5.8% per RWW larva as infestations progressed from 7 to 28 days after two leaf timings
- Over 75% of RWW adults were captured by the three leaf stage in floating barrier traps
- 1 RWW adult/trap/day = 1 RWW larva
- More RWW larvae were found in non-flooded than winter-flooded fields

*California, Sharon Lawler:*

- In both 1999 and 2000, *Culex tarsalis* larvae were much more abundant in winter-flooded fields where rice straw was not burned.
- Webpage for S-300 is: <http://entomology.ucdavis.edu/ricemosquito/index.htm>

*California, Bill Walton:*

- In constructive wetlands near Riverside, loading of ammonium nitrogen was associated with high populations of *C. tarsalis*
- *Bacillus sphaericus* was effective against *C. tarsalis* but *B. thuringiensis israelensis* was not
- *B. sphaericus* toxins have been engineered into *B.t.i.*

*Florida, Arshad Ali:*

- Lake studies showed that significant influences on spatial temporal distribution of chironomid larvae were water depth, sedimentary weight, presence of sand or muck and vegetation
- *Glyptotendipes paripes* larval distribution tended to be associated with shallower, sandy substrates in two lakes
- Bluegill consumed midge larvae; Tanytarsini midge larvae were most abundant in fish guts
- In two Florida lakes, organic carbon and cations concentration increased with water depth and changes in larval chironomid community followed this trend, and the larval community structure was influenced by the algal community
- *G. paripes* preferred shallow water with less organic matter in sediment but *Chironomus decorus* preferred deep water with more organic matter in sediment (*G. paripes* more abundant in firm benthos; *C. decorus* more abundant in soft benthos)
- Pyriproxifen GR (IGR) gave excellent residual control of larvae of various species of *Aedes* and *Culex*
- Insect repellents (e.g., deet) displayed good larvicidal activity against various species of *Aedes* and *Anopheles*

*Louisiana, Boris Castro:*

- Castro was hired to replace Dennis Ring and will be 100% extension (50% rice and 50% water quality)
- Castro will emphasize Mexican rice borer (MRB) and RSB research

*Louisiana, Mike Perich:*

- Perich was recently hired to replace Lamar Meek and will conduct research on urban and riceland mosquito problems

*Louisiana, Mike Stout:*

- Young rice was less tolerant of feeding by RWW than older rice
- RWW densities were similar on rice of different ages
- Early planted rice suffered less yield loss due to RWW than later planted rice
- RWW oviposition was decreased with a shallow vs deep flood
- Adage 5FS and Icon 6.2FS seed treatments provided better control of RWW than Fury, Karate Z or Dimilin 2L
- Two applications of Karate Z and Fury were needed for long lasting control of

- RWW
- One RWW per plant reduced yield from 0.7 to 2.9% in rice flooded at the two to three leaf stage
  - Bengal was most susceptible and Jefferson least to RWW

*Mississippi, Jim Robbins:*

- 10% of MS acreage is treated for RWW, 50% treated for RSB and cattail billbug
- Karate Z performed well on RWW
- Malathion applied in boll weevil eradication program can be harmful to catfish (ponds)
- Grape colaspis can be a problem in rice planted after a legume crop
- Wells seems to exhibit tolerance to RWW

*Missouri, Michael L. Boyd:*

- Sporadic true armyworm infestations were present in MO rice fields in 2001
- Icon 6.2FS seed treatment performed well in a RWW variety trial
- Sustained, widespread RSB infestations were reported in 2001
- Karate Z gave good control of RSB
- RSB was a contamination problem in harvested rice

*Texas, Jim Olson:*

- Resistance management program has been in place since 1976; apply malathion in spring and resmethrin in fall
- *Aedes aegypti* eggs may be more sensitive to heat and humidity than *A. albopictus*

*Texas, Mo Way:*

- Fury was registered for RWW, RSB, fall armyworm, chinch bug, aphid, grasshopper and leafhopper control in rice in October 2001
- Fury applied early postflood was effective against RWW
- Fury and Karate Z gave similar control of RSB (about 3 to 4 days residual control)
- Mexican rice borer (MRB) was detected in two more counties (Austin and Harris) in 2001; it is now in all counties of the Texas Rice Belt except those east of Houston
- Icon 6.2FS as a seed treatment provided some degree of control of stem borers
- Stem borers did not attack rice until well after the flood, although MRB moths were caught in pheromone traps well before the flood
- Effective control of RWW on the main crop resulted in a significant positive yield response on the ratoon crop

Chairperson Bernhardt adjourned the meeting at 3:45 pm.

Submitted by S-300 2002 Acting Secretary - Mo Way



