



NAICC NEWS

OFFICIAL PUBLICATION OF THE NATIONAL ALLIANCE OF INDEPENDENT CROP CONSULTANTS

Volume 11, Number 8

The Voice of the Professional Crop Consultant

November 1997

Value Abounds in NAICC

by Allison Jones, Executive Director

Last month in the *NAICC News*, we unveiled the new NAICC Sustaining Membership tier program. I am happy to announce that it has been well received and our Sustaining Members are sending in their forms and renewing memberships at various levels. One component that was added to Sustaining Membership was "additional individual memberships". This idea to give companies the opportunity to sign-up additional members, whether at the same location or at another office across the country, came from the research segment of our membership. Many times, the Sustaining Membership comes from the sales side. We all know that with so many employees and diverse responsibilities of each department within a large company, it is often hard for the right hand to know what the left hand is doing. Our vision was to offer the research side of companies the opportunity to be actively involved with NAICC as much as possible.

Daryl Wyatt, Senior Biologist in Residue Chemistry with **AgrEvo USA Company** at the AgrEvo Research Center (ARC) in Pikeville, N.C., was the first to take advantage of an additional individual sustaining membership. Wyatt is responsible for reviewing field data for GLP and Protocol compliance; writing the field phase portion of the final report; managing the ARC field research station; and conducting GLP trials on the ARC field research station.

Wyatt attended the 1997 NAICC Annual Meeting in San Antonio while he was employed by American Agricultural Services, Inc., just prior to

(Continued on pg. 3)

1998 OFFICERS AND DIRECTORS ELECTED

President Elect: *Roger Carter*
 Secretary: *Phil Cochran*
 Treasurer: *Charlie Mellinger*
 Directors: *Grady Coburn*
Bill Cox

Thanks to all voting members who participated in the 1998 election process. There was an outstanding response with 40 percent of the voting members casting their ballots.

Membership Special Offer

Receive complimentary registration and meals (a \$250 value) for the 1998 Annual Meeting in Washington, D.C., just by recruiting new members! NAICC is sponsoring a Membership Recruitment Contest now through December 31. The first place individual winner will receive one complimentary registration, including meals to the Annual Meeting; will be acknowledged in the newsletter and at the Annual Meeting. We'll also give a plaque to the state association that recruits the most members.

We've sweetened the deal even more by extending a one time offer to prospects to join for \$100—a savings of \$45. Anyone who joins between now and December 31, is eligible for this discount.

Membership applications can be printed from the NAICC website to give to prospective members, or contact the NAICC Headquarters for applications by mail. Don't forget to write your name on the top of the applications or let the NAICC office know who you've recruited to receive credit for those members who join.

SPONSORS SHOW SUPPORT

When NAICC members gather in Washington, D.C., for the 1998 Annual Meeting, they will once again find a cornucopia heaped with thought provoking program segments and varied social occasions that offer opportunities to interact with peers from around the country. This is due in no small part to the Annual Meeting sponsors. This dedicated group make possible many of the meeting functions.

This year's convention will be kicked off on Thursday, January 22, with a continental breakfast for all attendees in the Exhibit Hall. This breakfast is sponsored by **Monsanto Company**. This year's breakfast breakout sessions on Saturday, January 24, are sponsored by **Agri Business Group, Inc.**, and **AgrEvo USA Company**, and will start the day with presentations from NAICC members on various areas of consulting and contract research.

(Continued on pg. 3)

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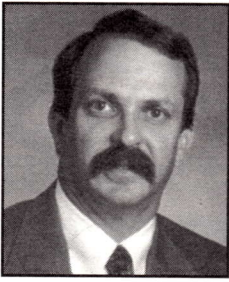
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PRESIDENT'S MESSAGE

CROSSING BORDERS

by Billy McLawhorn

A few weeks ago I received a rare opportunity. I was invited to participate in an international workshop on "Robotics in Agriculture" that was held in Gandia, Spain. The Conference was very small with about 65 participants in attendance representing 13 different countries. Practically everyone there was from academia, with a mix of both world-class researchers and young idealistic graduate students, delivering reports on their latest research findings.

Of the 65 participants, there were four or five who spoke English as their primary language. But all of the papers were written and delivered in English, with question and answer discussions afterwards. For many of the presenters, English was their third, fourth or maybe fifth language.

Topics ranged from reports on a number of automatic guidance systems to robots that were being developed for harvesting, inspecting, and sorting various types of produce from the greenhouse to the packing station. One of the most interesting was the "Robot Sheepdog Project," which is an experiment in animal-interaction robotics designed to replace humans in dangerous jobs with animals, such as working in corrals, I suppose.

By now, those of you who know me well, and know my background is in agronomy and business management, are wondering why in the world I was invited to speak at that conference. Frankly, I am still not quite sure myself. I told the folks who invited me of my limited understanding of ag engineering and high tech computer technology. I did profess to have a pretty good practical background in crop production, and I admitted to knowing lots of sharp researchers, farmers, and consultants who deal regularly with implementation of the latest production technology.

I assumed my job as the token "outsider" was to ask questions such as, "Do you really think you can develop a

machine that will replace a real cowboy?" or "My friend has developed an automatic guidance system for farm implements that costs less than \$50 installed. How

much does a system utilizing 'machine vision' cost?"

Actually, I talked to them a lot about things I learned from a number of you regarding the kinds of technology a few growers readily adopt, the kinds masses readily adopt, and the differences between what is often promoted and what eventually fills a real need.

Another discussion topic concerned the development of delivery systems for pesticides and what happens if, through genetic engineering, the seed becomes the delivery system for those pesticides? Some equipment projects may become obsolete before the resulting product reaches the marketplace. On the other hand, the opportunities in all kinds of seed handling systems - whether related to harvesting, processing, planting, etc., will be enhanced as the value of the seed is enhanced.

My primary message to the engineers was that the value of networks has never been greater and fields that weren't necessarily closely related even two years ago may be closely intertwined due to technological innovations. For many of them, it will be essential to develop and maintain contacts with researchers in other engineering and agricultural fields, innovative growers, crop and research consultants, and representatives from industry.

My talk seemed to be well received, with a lot of discussion generated afterward, but as always with such an experience, I received a lot more than I could have possibly given any of the others. Upon reflection, I think one of the major benefits was a change in the way I think about this country in relationship to the rest of the world.

Although I've done very little international traveling, each time I've crossed a foreign border, my almost smug provincial attitude, which is typical of most of us Americans, fades a little. We have had it so good for so long, we sometimes assume everything worthwhile

begins and ends in our own backyards.

But this is far from true. In Spain I learned that many other countries appear to be much further along with "systems thinking" than many of our universities seem to be. Cross-disciplinary teams were much more common, particularly with the Japanese and Koreans, than I assumed.

This experience underscored a thought process that has been in the back of my mind for awhile, and which was further stimulated at one of the NAICC strategic planning sessions several months ago. Your next president, Lee West, gave a stirring presentation at that meeting on the way her business developed an international focus. Even those of her listeners who still work primarily in our own neighborhoods could relate to many of the changes she referred to.

Such stretching of my thought processes is one of the primary benefits I have gained from participating with NAICC through the years. It's hard to imagine how I would have advanced professionally without the network of NAICC friends from across the nation who constantly prod me to "think outside the box" and give up a little of the close-minded provincialism that is so stifling. Each time I meet with members of NAICC, especially at our annual meeting, I come home with ideas that are far more valuable than the cost of the meeting. A few come to mind that have altered the way Martha and I run our business including:

- Chuck Farr's discussion of his grower advisory committee;
- Phil Cochran and others from the Midwest, discussing "combine rides";
- Mike Brubaker's networking tips;
- Bill Cox's advice on managing multiple crops/priorities;
- Dennis Berglund's and Merv Erb's business management tips;
- Madeline Mellinger's presentation on consulting in a litigious environment.

Literally dozens of conversations in the halls have led to personal visits or other direct ideas on how we can improve services to our clients. Additionally, we always take home some critical messages from our invited speakers.

This year's annual meeting in Washington, D.C., promises to present the best program we have had to date. And the networking opportunities with our guests and membership will probably

impact your business and lives as much as anything you do this year.

I certainly hope you don't miss this opportunity, and hope to see you there in January.

("Value Abounds in NAICC" cont. from pg. 1) joining AgrEvo. He felt the experience gave him important insight into the conduct of GLP field residue trials.

He explains, "The NAICC is an excellent organization for contract researchers and chemical company researchers because it is a good way for company personnel to disseminate information to contract researchers and consultants. It is extremely valuable for contract researchers because they can make contacts (network) with company representatives, which helps them generate business. For the company representative this is a good organization because it provides the opportunity to meet contract researchers and discuss any potential needs and/or problems for the next year."

Another thing about NAICC that impressed Wyatt was that NAICC members have to abide by a code of ethics and be sponsored by two existing members before they can be approved for membership. He feels that this is a statement of commitment and dedication for the contract researcher to the contract research business. The newsletter provides the members with current information about NAICC involvement in regulatory issues, new trends/ technology, NAICC news, and calendar of current events.

According to Wyatt, "The NAICC annual meeting is an excellent opportunity for the member to hear presentations on current topics, network with other individuals in the industry, view exhibits and posters, and participate in discussion groups on various topics." He adds, "The annual meeting is especially helpful for company representatives/study directors/project managers because it enables them to meet with contract researchers from all regions of the US. For me to contact as many contract researchers as I contacted at the annual meeting I would have to spend considerable amounts of time traveling or on the phone."

Wyatt hopes others will join NAICC and has even contacted three other contract researchers and encouraged them to join. NAICC Membership Recruitment, Retention and Rules Chair

Bruce Niederhauser commented, "We need more people like Daryl in NAICC. Not only does he bring the research consultant's as well as the sponsor's perspective to the table, but he is also a key player in our recruitment efforts!"

("Sponsors Show Support" cont. from pg. 1)

The Outgoing President's Reception, sponsored by **DuPont Agricultural Products**, will offer attendees a chance to say thanks to outgoing President **Billy McLawhorn**. This reception follows the Exhibit Hall Extravaganza where exhibitors will be raffling various items for attendees.

NAICC's 1998 President, **Lee West**, will take office at the President's Luncheon/Awards Banquet on Friday, January 23. During lunch, co-sponsored by **Bayer, Inc.**, and **Delta and Pine Land Company**, West will present her plans for the upcoming year. Also during this event the industry's most prestigious awards will be announced.

Coffee breaks between sessions will be sponsored by **Helena Chemical Company**, **Rohm & Haas**, **Stoneville Pedigreed Seed Company**, and **John Deere Agricultural Services Group** on Thursday and Friday. This is an excellent time to meet with both current and potential NAICC members. Also on Friday, John Deere Agricultural Services Group will sponsor the student session entitled, "Everything You'll Ever Need to Know About NAICC and the Consulting Professions."

Friday evening offers an opportunity for new members to mix and mingle with the NAICC Executive Board and Past Presidents at the New Members and First Timers' Reception, sponsored by **American Cyanamid Company**.

Also on Friday evening, **Abbott Laboratories** will honor incoming President West at a reception prior to the evenings' banquet. Attendees will enjoy political spoof entertainment by the Gross National Product, that promises to be a fun-filled evening. This event is sponsored by **FMC Corporation**.

Other sponsors include **Rhone-Poulenc Ag Company**, responsible for the annual meeting T-shirts, and **DowElanco**, which is underwriting the costs of the notepads and ticket holders. **Novartis Crop Protection** is sponsoring the registration badges, while **Zeneca Agricultural Products** is contributing

the cost of the Annual Meeting program again this year. **Farm Press Division of Intertec** is sponsoring life-sized cutouts of President Bill Clinton and President Bill(y) McLawhorn. Attendees will have the opportunity to have their picture taken with our leaders!

A hearty thank you goes out to this year's convention sponsors. The support of these companies is sure to make the 1998 convention yet another success.

NAICC Offers Input On Research Issue

by Billy McLawhorn

None of us is comfortable with the prospect of increased governmental regulations, and especially when there is much uncertainty about exactly what they will be and how they will be implemented. But one thing has been made crystal clear to the GLP contract research community. EPA has not been able to provide their mandated level of oversight to GLP labs, and changes will be forthcoming in their programs.

There appears to be strong consensus that the state-run NELAP program is not applicable to GLP labs performing work under FIFRA. Neither the public, the EPA, sponsor companies nor the labs themselves will be well-served if the labs are required to come under this program.

The issues involving an enhanced program are complicated, so the ELAB appointed a GLP sub-committee to come up with suggested changes (see Sept. NAICC Newsletter). Lee West represented the NAICC as one of many entities represented on the subcommittee. They presented a 27 page document discussing the options of 1) maintaining status quo (which would not resolve the issue); 2) modifying the current program, and; 3) developing an accreditation program. Then we were asked to supply NAICC's position as an addendum to the full report.

The issues are very complicated and whatever the outcome, the results will likely have a significant impact on both our sustaining and research consultant members. So your Executive Board and staff have spent a huge amount of time and energy soliciting input on this issue, and developing a position.

Lee West drafted a tentative position paper and it was circulated to the

Executive Board at their October meeting. We discussed the matter at length, and after we spent several hours of debate, we redrafted the position and circulated it to all of our GLP research members for input.

A few days later we held a conference call with members of the NAICC NELAP committee and the Executive Board. The final result was the following document.

I don't think any of those involved were ever completely comfortable speculating on the mechanism on how improvements should be made, but there was strong consensus regarding what the key elements should be.

In the final document, I fully believe those concerns of all affected categories of our membership are addressed, and I want to offer a huge "Thank you" to each of you who participated in the process.

NAICC RECOMMENDATIONS TO THE ELAB GLP SUBCOMMITTEE

October 30, 1997

The National Alliance of Independent Crop Consultants (NAICC) represents independent field laboratories responsible for conducting a large portion of the FIFRA GLP field studies required by US EPA. The size of these field laboratories ranges generally from one to fifteen people with the average company having 3-8 employees. Given the small size of these organizations, the most significant factor of any GLP program, whether existing or new, is the amount of time or money required to participate. The field laboratory community believes that any modification of the existing program, or change to a new program, should add value and should not just add another layer of bureaucracy and expense.

The Environmental Laboratory Advisory Board has suggested that the options presented by its GLP subcommittee be condensed to three: Status-quo; Existing program with modifications; and Accreditation. The NAICC has examined these alternatives and offers the following comments that we believe should be considered for any option that is advanced.

Compliance assistance should be integral in any GLP program to

assure quality data.

Many independent laboratories do not have the resources that their sponsor company clients have to start up their programs, or to adapt to changing regulations. Any good program should allow laboratories to verify that their systems are in compliance before performing GLP studies. This has real potential to assure the quality of data being generated in the field, and provides reassurance to concerned parties that all GLP laboratories meet the required standards.

All established and new laboratories should be inspected regularly.

Under the current GLP program, new field laboratories may conduct GLP studies for several years before they are inspected by the EPA. When discrepancies are discovered in an EPA inspection not only does the lab potentially incur civil penalties for non-compliance, but also the negative findings become public record and this adversely impacts the ability of these small businesses to continue operations. While pre-qualification inspections would not preclude EPA from conducting necessary enforcement inspections and audits as it deemed appropriate, it could conceivably avoid some cases of non-compliance in the first place, and the resulting poor publicity that this brings to the entire crop protection industry.

Program costs should be predictable and regular and appropriate for business size.

If a program is to be funded by the inspected facilities, a fee scale should exist that takes into account the relative size and study load of the facility. Additionally the necessary fees would need to be charged at a known point in time in order to assure that small businesses would not incur sudden or unpredictable financial burdens.

Any GLP program should be federally mandated and controlled.

Any successful program will need to be federally mandated and controlled and will have to be based on the GLP's and not solely ISO Guide 25. Additionally, inspectors need to be trained specifically in the GLP's. Utilization of resources from the State level will weaken any GLP program and cause unnecessary confusion between the needs of the State and the requirements of FIFRA.

Relieve sponsors of some of the

liability for the compliance of independent facilities.

Currently independent field labs entertain multiple facility inspections annually conducted by sponsor companies. Any streamlining that could occur that reduces the number of these inspections or the amount of duplicated effort expended, would be a benefit to both the sponsors and to the field labs. A pre-qualification inspection, whether from a registration system or an accreditation program, along with a concurrent reduction of the sponsor's liability, could be a benefit to the industry.

The members of NAICC recognize that maintaining the status quo does not resolve the issues for which this committee was formed. As the ELAB GLP Subcommittee prepares its final recommendations, the NAICC believes that a successful, unbiased and effective program will incorporate the points listed above.

Pest Trak A Success

by Amery Staub, Managing Editor

For the fourth year NAICC participated in the Doane Pest Trak project. During the 1997 season, 25 NAICC members from 12 cotton producing states faxed in weekly reports to **Doane Agricultural Services Co., Inc.**, on conditions in 20 fields. The survey consists of questions about specific insect infestations and treatment recommendations. Another question deals with the population density of other pests and the treatment recommendations the consultant made in dealing with these pests during that week. In some, but not all of the cotton producing areas, other questions include the predominate growth stage of the plants, plant growth regulators recommended that week, anticipated use of plant growth regulators for the rest of the season, whether the product was grower or custom applied, and whether application was made by air or on the ground.

Doane summarizes information from the surveys and reports it's findings to its customers each week.

NAICC compensates the consultants by either a monetary payment or by waiving their NAICC dues and Annual Meeting registration fee. Participants who submit their reports on time for the 15 week reporting period, (10 for Texas participants) are entered into a drawing for an all expense paid trip to the NAICC

Annual Meeting. The project has always been a substantial income producer for NAICC. This year brought in a record amount with 99 percent reporting on time. The project is a win-win situation for both Doane and NAICC.

THERE IS POWER IN NUMBERS

by Bruce Niederhauser, Membership Recruitment, Retention, & Rules Chair

Have you ever heard of the statement, "There Is Power In Numbers?" To some people this could mean figuring out a profit or loss statement. To us NAICC folks, the Power is in membership numbers. Of course we have power in the other areas that as individuals or collectively we are proud of, like professionalism, independence, experience, and success. However, we all know that in many things we do, the more people representing a common cause the more power it has.

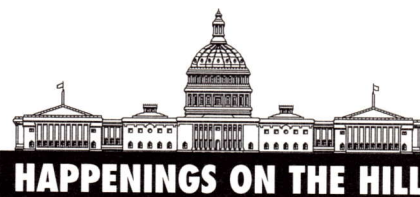
The NAICC has 457 members in nine different categories. The goal of the Membership, Recruitment, Retention, and Rules Committee for 1997 is 500 members. This is a ten percent growth rate over 1996. Considering that we have many members in each state and that there are approximately 1,500 independent consultants nationally, 43 new members for 1997 should be easy - but we need every one of you to help!!!

All of our membership should know by now the value NAICC has for us as individuals, businesses, and as an independent organization. As we move from production agriculture of the 1960's into the year 2000 the complexities of new technology, tight farm profit margins, huge corporate mergers and consortiums, world food demand, and, of course, government regulation will require consultants of NAICC caliber to meet the challenges of our future world.

Your world may be a tiny patch of farmland in Tim Buck Two, but trust me, someday the NAICC will have an impact on you there too!!!

So, during the next several weeks as most of us shift into the fall and winter months of meetings, strategic planning, and relaxation, talk about the NAICC to EVERYONE. Tell them about our great Annual Meeting in Washington D.C., January 21-24, where they can share and learn with fellow consultants and

re-searchers. Tell them to come to Washington D.C., and meet their respective government representatives. Tell them NAICC is for them. Bring in the Numbers.



House Passes Agricultural Research Reauthorization

The House of Representatives recently overwhelmingly passed the Agricultural Research, Extension, and Education Reauthorization Act of 1997 (H.R. 2534), the first comprehensive overhaul of the nation's federal agricultural research programs in twenty years. The measure faced grave difficulties, as some members used a rare parliamentary maneuver to prevent the bill from advancing to a conference committee with the Senate.

This bill reauthorizes numerous agricultural research programs through 2002, including reform provisions which ensure peer and merit review of agricultural research, and provisions which provide for input into the priority setting process by those who benefit from agricultural research. But after the bill passed, some members of the minority objected to a conference committee to resolve differences between the bill and its Senate counterpart, potentially dooming the bill for this session of Congress.

According to House Agriculture Committee Chair Robert (Bob) Smith (R-OR), "Strong agricultural research programs have enabled America's farmers and ranchers to produce the highest quality food and fiber in the world at competitive prices. Our agricultural research reauthorization bill updates and modernizes our research programs so that America's farmers will maintain their competitive edge in an increasingly global marketplace. The boll weevil has been virtually eliminated throughout the American south as a result of a highly successful research program. Genetically modified organisms such as Bt corn, which incorporates pesticidal properties at the genetic level, allows farmers to combat corn root rot and corn borers without applying additional pesticides. Round-Up Ready soybeans, which are

resistant to that common herbicide, allow Round-Up to be applied to the plant. Before Round-Up ready soybeans, farmers had to apply the herbicide before planting, before they knew whether they had a weed problem. In each instance, agricultural research has yielded better crops that save farmers and consumers money, and benefit the environment by allowing for less application of pesticides and herbicides on the farm."

WHICH ELEMENT EXCITES YOU

by Don Jameson

During the 1996-1997 Strategic Planning process the committee identified 11 critical success elements to meet the mission statement and the vision of this organization. At the time of this process we were challenged by our facilitator for each member of the Strategic Planning Committee to identify one particular element and give it some degree of leadership and oversight during the year ahead. These individuals are listed below. But it takes more than one to do this. We realize that several of these fall within the domain of our various committees. This newsletter article is intended to remind our membership of those elements and solicit a reaction or intent to participate from those of you who would be interested in a particular one of these elements. These critical success elements were identified in this numerical order:

- 1) Work on a big excitement generating project. (Lynn Henderson)
- 2) Maintain a critical mass. (Steve Wagner)
- 3) Maintain the integrity and function of our Executive Board and administrative staff. (Bill Peele)
- 4) Working on an information exchange to serve the needs of NAICC members. (Billy McLawhorn)
- 5) Develop formal interactive relationships with other state organizations. (Lee West)
- 6) Advance professional development. (Dan Bradshaw)
- 7) Develop and educate people in crop consulting career opportunity. (Don Jameson)
- 8) Work to develop a solid financial basis. (Dave Scheiderer and Dennis Berglund)

- 9) Keep a Washington presence and influence. (Earle Raun)
- 10) Work to increase membership across the United States. (Dave Harms)
- 11) Annually commit to a review of these critical success elements and their continued pertinence to meeting our mission statement and vision.

At our upcoming Annual Meeting you will hear more about how this organization has been meeting and working through those different critical success elements. However, along the way there are many smaller individual steps and paths that require attention and effort. If you would like to be tapped to plug into various parts of this effort as our various working committees pursue these critical success elements, please pass on to headquarters your interest.

AGRICULTURAL INTERNET USAGE INCREASES

According to the National Agricultural Statistics Service (NASS) at USDA, as of July 1997:

- 13% of the U.S. farms have Internet access
- 31% of U.S. farms own or lease computers
- 20% use computers for their farm business

A New Way To Do Quality Assurance

By Dan Ramsdell

In his presentation at the 1997 NAICC Annual Meeting in San Antonio, **Daniel Ramsdell** of CMS, Inc., decided to address a topic that in his words, "tends to elicit heated discourse whenever contract researchers meet." Ramsdell explored the subject of test substance application and rate verification. Aware that this topic is a hot button for those involved in the conduct of GLP field studies, he nevertheless forged ahead. "I believe I've got some interesting data that may help to improve our study conduct procedures," Ramsdell promised.

Ramsdell chose boom sprayers as a means to show two separate, standard procedures used to determine and verify an application rate when these types of sprayers are used for field research.

Ramsdell used the results of 21 GLP field studies conducted at CMS, Inc., in 1996 (see table below) to compare and contrast both the Pass Time and Measureback methods and procedures in their ability to accurately verify the rate of test substance application. These studies involved both CO2 pressurized backpack sprayers and tractor-mounted / PTO pump sprayers and had a cumulative total of 82 separate applications made by three different principal investigators and encompassed 12 different cropping systems. "Thus," Ramsdell concluded, "I feel confident that the data generated is not only based upon sound scientific research principles, but is very practical and quite meaningful."

Ramsdell explained the procedures used for both Pass Time and Measureback rate verification. Simply put each is a straightforward mathematical comparison of the Actual Delivered Volume to the Target (or required) Plot Volume.

For Pass Time rate verification, the Actual Delivered Volume is a product of the calibrated boom output and the total spray time. Ramsdell broke this down further:

1. Document Calibration (boom output per unit time out / e.g. -ml/sec)
2. Calculate Target Volume Required (for the plot size being used)
3. Document Actual Spray Pass Times (e.g. - seconds per pass)
4. Calculate Total Volume Delivered (output per unit time x total spray time)
5. Calculate Ratio of Actual to Target

Measureback rate verification, is essentially a volumetric accounting – reconciled the Total Volume mixed for application with that actual Volume delivered through the sprayer during application plus that volume used to prime the boom along with that remaining in the spray system following application. The Actual Delivered Volume is determined from the Total Volume mixed minus that volume not sprayed on the plot (boom prime) and/or remaining in spray tank after application to the plot.

Ramsdell described ways of ensuring method accuracy, such as: maintain a constant rate of travel as well as consistent spray pass times when making multiple passes, start and stop the spray pattern as close to the plot boundaries as possible to eliminate loss outside the

plot area, and use an appropriate device for measuring the volume being collected (allowing adequate time for the collected liquid to settle prior to documentation).

"Given the fact that a proper and accurate calibration of the application equipment was made and also that no problems were encountered during application, such as human error or equipment malfunction, the validity of either of these two methods of rate verification still rests upon some basic assumptions. The first and foremost is that the flow rate of the spray mixture is the same as that for water calibration, and secondly that during application the flow rate was consistent over time. Two additional assumptions applicable to the Measureback method only (incorrect ones at that) are that the entire delivered volume was applied to the plot area and that the spray system (boom) used can be totally purged.

Ramsdell next addressed his audience's curiosity concerning his interest in evaluation of these studies and methods. He joked, "Other than the fact that I have a lot of time on my hands to contemplate such matters while practicing my research skills, essentially it boils down to two words: Quality Assurance (QA). After about the 100th time you've heard 'Don't you think you should do this?' or 'You need to do that,' my response may take on a bit of a 'devil may care' attitude.

Serious again, he added, "It was my intention to put an end once and for all to the dreaded question: ' Don't you think you should do a measureback on that application?'"

TEST RESULTS 1996 GLP FIELD STUDIES RATE OF APPLICATION (% OF TARGET)

	CO2 SPRAYER	TRACTOR SPRAYER
	Pass Time	Pass Time
Range:	96.8 to 107.6%	98.6 to 104.7%
Avg.:	102.7%	101.8%
	Measureback	Measureback
Range:	101.3 to 115.6%	102.6 to 116.3%
Avg.:	107.8%	109.8%

In a comparison of Pass Time versus Measureback (regardless of the application equipment used), Measureback tends to overestimate the application rate (on the average somewhere between five and eight percent over that of Pass Time).

This is primarily due to the inability of the measureback method to account for any spray mixture lost outside of the plot area as well as that quantity remaining in the system following purging.

This overestimation by measureback, however, does not necessarily negate the value of the measureback data. It is my recommendation that we recognize both of these procedures routine in the conduct of GLP field studies. Using the Pass Time method as the primary method of rate verification (barring any human error or equipment malfunction) and the Measureback method as a sort of 'fail-safe device.' This is wise not only for the accuracy of the data and reconstruction of the study, but for the identification of problems that may otherwise go unrecognized and could affect the integrity of the study.

Ramsdell closed his presentation with a quote that illustrated perfectly the reason for using both methods on GLP field studies: "If you always do what you always did, you will always get what you always got."

(Dan Ramsdell of CMS, Inc., in Germansville, Penn., is a voting member of NAICC.)



DON'T MISS OUT!!

The deadline for Annual Meeting early registration is December 23. Make your hotel and flight reservation early, because space is limited. For hotel reservation information call the Washington Court Hotel in Washington, DC at (800) 321-3010.



MEMBERS IN THE NEWS

NAICC members **Charlie Mellinger** and **Leon Lucas** authored articles that appeared in the July and August 1997 issues of *Citrus and Vegetable magazine*.

Mellinger co-authored *Scouting Groves for Diseases: An IPM Approach to Commercial Production* with Shepard Smith.

Mellinger and Lucas authored *Late Blight Disease Update*, along with David P. Weingartner. Dr. Weingartner is the Acting Center Director and Associate Professor at the University of Florida's Hastings REC.

Mark Otto of Agri-Business Consultants, Inc., Lansing, Mich., and **John Gruber** of New Holland, Ohio, were both elected to the International CCA Board for three year terms. Otto is representing the North Central region for a second term and Gruber was elected as an at-large member.

Phil Cochran of Cochran Agronomics, Inc., Paris, Ill., was recently appointed to a three year term on the ARCPACS Agronomy Certification Board. Cochran's term began at the end of the 1997 ASA meeting held in Anaheim, Calif. in October. **Dan Easton** is also currently serving on this board.

NEW MEMBERS

Sustaining Members

Daryl R. Wyatt, M.S. (Agronomy/Weed Science) WSSA, SWSS, WSSNC
AgrEvo USA Company
AgrEvo Research Center
703 NOR-AM Road, P.O. Box 538
Pikeville, NC 27863
Office: (919) 580-2762
Home: (919) 399-0460
Fax: (919) 734-0878
Mobile: (919) 399-9875
E-mail: daryl.wyatt@agrevo.com
Services: Write and compile final field residue reports for AgrEvo USA Company; contact and interact with contract research firms; conduct field residue trials; manage the AgrEvo Research Center Farm.

Trace Chemical Company

Contact: David Moe, National Sales Manager
Tim McArdle, General Manager
839 Brenkman Drive
Pekin, IL 61554-1552
Office: (309) 347-2184
Fax: (309) 347-5929

Services: Formulator/Distributor of seed treatment fungicides and insecticides for use by the grower in the planter or drill box.

Student Member

Derek Lloyd

AGVISE Research Inc.
Box A
Northwood, ND 58267
Office: (701) 587-5343
Home: (701) 587-5080
Fax: (701) 587-5345

Services: Contract research.

FINANCIAL REVIEW

by Roger Carter, Treasurer

Income on a cash basis through September is \$23,400 better than last year. Cash and equivalents for this year and last year are as follows:

	<u>1997</u>	<u>1996</u>
January	187,900	200,000
February	121,000	123,600
March	109,500	114,100
April	115,600	76,100
May	127,800	73,100
June	119,100	72,700
July	118,000	63,200
August	109,800	61,600
September	121,200	71,100
October		98,700
November		147,500
December		205,000

NAICC members may receive a current standard financial report at any time by submitting a written request to the NAICC headquarters. In addition, requests for annual financial statements may be submitted at the annual meeting.

CALENDAR OF EVENTS

NOVEMBER 19-21, 1997

International Society of Quality Assurance Annual Meeting, Mainz, Germany. For more information contact Louise Morris at 919/319-1155.

DECEMBER 2-3, 1997

North Carolina Agricultural Consultants Association Winter Meeting, Blue Ridge Road, Ramada Inn, Raleigh, N.C. For more information contact Al Averitt at 800/789-4284.

DECEMBER 3-4, 1997

Wisconsin Association of Professional Ag Consultants New Horizon Seminar, Madison, Wisc. For more information contact Judy Brannstrom at 608/833-7989.

DECEMBER 3-4, 1997

Agricultural Retailers Association Convention and Expo, Adam's Mark Hotel, St. Louis, Mo. For more information call 800/844-4900 or fax 314/567-6808.

DECEMBER 4-5, 1997

Nebraska Independent Crop Consultants Association Annual Meeting, Ramada Inn, Lincoln, Nebr. For more information contact Bill Dunavan at 402/724-2239.

DECEMBER 9-10, 1997

Virginia Crop Consultants Association Annual Meeting, Tidewater Agricultural Research and Educational Center, Suffolk, Va. For more information contact Bob Atkins at 757/357-1770 or Tom Roundtree at 757/859-6402.

DECEMBER 14-18, 1997

Entomology Society of America Annual Meeting, Nashville, Tenn., at the Opryland Hotel. For more information, contact Judy Miller at 301/731-4535.

DECEMBER 28-JANUARY 6, 1998

Nematode Identification Course For Professional Consultants, Clemson University, Clemson, S.C. For more information contact 864/656-3450.

JANUARY 5-9, 1998

Beltwide Cotton Conferences, Marriott Hotel, San Diego, Calif. For more information contact Debbie Richter at 901/274-9030.

JANUARY 11-13, 1998

American Farm Bureau Federation 79th Annual Convention, Charlotte Convention Center, Charlotte, N.C. For more information contact 847/685-8764.

January 14-15, 1998

Professional Crop Consultants of Illinois Annual Meeting, Crown Plaza Hotel, Springfield, Ill. For more information contact Dave Harms, 309/828-2767.

January 18-20, 1998

32nd Annual Conference of the Association of Applied Insect Ecologists (AAIE), Asilomar Conference Center, Pacific Grove, Calif. For more information contact AAIE Executive Secretary John Plain at 916/441-5224.

JANUARY 18-20, 1998

Texas Association of Agricultural Consultants Annual Meeting, Hilton Hotel, Austin, Tex. For more information contact Norma Wood, Executive Assistant, 512/454-3036.

JANUARY 20-25, 1998

1998 NAICC Annual Meeting, Washington Court Hotel, Washington, D.C. For more information contact Allison Jones at 901/861-0511.

FEBRUARY 9-12, 1998

Weed Science Society of America Annual Meeting, Hilton Hotel, Chicago, Ill. For more information contact 217/352-4212.

FEBRUARY 10-11, 1998

Arkansas Agricultural Consulting Association Annual Meeting, Riverfront Hilton, North Little Rock, Ark. For more information contact Chuck Farr at 870/823-4432.

MARCH 2-3, 1998

Nebraska Independent Crop Consultants Association Spring Workshop, Holiday Inn, Hastings, Nebr. For more information contact Greg Schneider at 402/463-7182.

March 3-5, 1998

Iowa Independent Crop Consultants Association Annual Meeting, Gateway Center Holiday Inn, Ames, Iowa. For more information contact Richard Drilling at 515/394-4525.

MARCH 5-6, 1998

South Dakota Independent Crop Consultants Association Annual Meeting, Ramada Inn located on Russell St. in Sioux Falls, S.D. For more information contact Rod May at centrol@brookings.net.

July 5-9, 1998

Soil and Water Conservation Society Annual Conference, San Diego, Calif. For more information contact Sue Ballantine at 515/289-2331 or sueb@swcs.org/.

AUGUST 17-21, 1998

Fifth International Symposium on Adjuvants for Agrochemicals (ISAA '98), The Peabody, Memphis, Tenn. For more information contact Allen Underwood at 901/537-7260.

REMEMBER: The NAICC membership booth is available for your state or professional meetings. To reserve the booth for your function, contact NAICC Headquarters.

NAICC

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Collierville, TN 38017

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