



# NAIACC NEWS

Official publication of the National Alliance of Independent Crop Consultants

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The Voice of the Professional Crop Consultant

August 1992

## Contract Research Issues: How to Get Involved

By Richard L. Jensen

Jensen Agricultural Consultants, Inc.

A professional who is interested in conducting contract research is first well advised to determine an area of specialization. Contract research can involve testing varieties or hybrids, pesticide efficacy and residue research, instructional seminars, non-target and plant metabolism studies, and conducting various types of soil and plant analyses.

An area of specialization should be determined by the researcher's area of expertise. Identify a niche, evaluate personal expertise in that area, and assemble the resources to fill the niche.

Since no one is an expert in all areas of research, avoid the "shotgun" approach! A potential client reading a consultant's brochure will be hard-pressed to believe that a professional can be an expert in areas ranging from chemistry to neurosurgery.



Jensen

An exaggeration to be sure, but the anxiety of beginning a new business can lead a new researcher to list areas beyond the scope of his or her knowledge and experience. The best approach is to remain within a defined area of expertise, conduct quality research, and build a reputation within the industry which will allow expansion over time.

A professional with scientific knowledge and material resources needs additional skills which will contribute to the success of the business. These include:

- **Agronomic skills.** It is often more difficult to grow a crop than it is to evaluate the response of an experimental chemical on a given insect or disease.

- **Business and management skills.** The improper bidding of a contract can lead to the loss of contracts or loss of profits. A contract bid is complex and must be competitive but profitable. Beware of hidden costs such as taxes, unpredicted repairs, or additional labor costs when bidding a project.

- **Interpersonal skills.** The researcher must know his client and communicate during the study through updates. Always remember that a contract researcher's main objective should be to make the client's job easier and make him look good in the process.

As with any business, contract research involves investment capital: the amount will depend on the spectrum of research and level of quality one wants to achieve.

### Efficacy Research

Contract researchers with limited investment capital might begin by conducting ONLY efficacy research. It is wise if the researcher can find a supplemental income to survive the first "starvation years." Industry representatives will not contract larger projects until they evaluate the quality of the initial research.

If the contract researcher knows a number of farmers in the immediate area, he or she can locate a field with the problem which will fulfill the testing requirements stated in the efficacy protocol. The researcher can lease this area and even make arrangements with the grower to supply the equipment required to prepare and maintain the area. Basic supplies and equipment for efficacy research are not that expensive.

By leasing a field the contract researcher can conduct quality research and build a reputation within the industry. However, there is a major disadvantage to this approach. The researcher does not have complete control of the experimental area, which may result in the inadvertent destruction of the test by a farm employee.

The researcher with more investment capital, facilities, land, and equipment is in a position to recruit more and larger efficacy projects involving irrigation, plantback and leaching studies.

### Residue Research

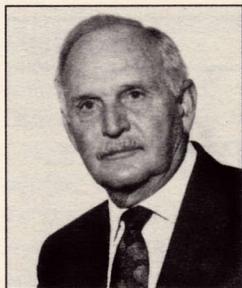
All field residue studies must be conducted according to the EPA-Good Laboratory Practices (40-CFR-Part 160). Some of the regulations set forth in GLP are:

- A testing facility shall be of suitable size and construction to facilitate the proper conduct of residue studies.

## PRESIDENT'S MESSAGE

### Here's to the Squeaky Wheels

Bill Blair, NAICC President



Remember the old saying about the squeaky wheel getting the grease? I've always thought that's a negative way of phrasing a communications process that can be very positive. What's wrong with expressing one's concerns? And what's wrong with the listener responding to those concerns?

A good case in point occurred at our annual meeting last year when several of our contract researcher members wondered aloud whether NAICC really meets their needs. The courage to ask tough questions and demand answers got my attention, and that of several others in leadership positions in the Alliance. And it got results.

One result is this special contract research edition of the newsletter. The staff and the Newsletter Committee put a lot of work into researching topics suggested by contract researcher members, and they are eager for your feedback.

A second result is a vastly expanded "contract researcher track" on the program at the annual meeting in November. You will have an entire day with topics such as, "Writing a Winning Proposal," "Pricing Your Services," "Building Networks with Clients and Cooperators," "How to Recruit and Train Staff," "The Role of the Q/A Officer," "Building Adequate Infestation Levels," and "How Much Plot Insurance Is Enough?" A panel of industry representatives will discuss how decisions are really made about who gets contracts and who doesn't, and certificates will be issued to participants. The word is getting out about the program, and our headquarters office is already receiving calls from companies looking for information about contract researchers. Your clients and prospective clients will be in Washington at our meeting, so don't miss this important opportunity to establish relationships and expand your professional skills.

Perhaps the most important result of this particular "squeaky wheel" is the consciousness raising on the part of the NAICC leadership. We have reviewed the history of the Alliance and come to realize that, although there are still several members who are both consultants and contract researchers, there are numerous others who fall completely in one camp or the other. Based on that realization, we have reinforced our efforts to represent both segments. Perhaps you have noticed that in our public communications now we refer to both independent crop consultants and contract researchers.

We owe a vote of thanks to Dr. **Grady Coburn** and Dr. **Louise Henry**, who have carried the banner in improving our focus on the needs of this segment of our membership. Let me say to all NAICC members that we are eager to hear your input, and we will do our best to respond to your needs.

I look forward to seeing you in November.

## Contract Research Issues

*Continued from page 1*

- A testing facility shall have written Standard Operating Procedures (SOPs) which describe any procedure relating to the conduct of a residue study.

- A testing facility shall have a quality assurance unit which will monitor all studies to assure that each residue study was documented in conformance with the EPA regulations set forth in 40-CFR-Part 160.

These are the most important regulations relating to contract residue research. Any new researcher would do well to make a thorough review of these regulations before entering into residue research.

There are numerous types of residue studies contract researchers can undertake. For example:

- **Raw Agricultural Commodity (RAC) studies** involve the application of a product to a given crop and the collection of small samples (1-5 pounds) for residue analysis. RAC studies do not require sophisticated equipment and are not very labor intensive.

- **Processing studies** are similar to RAC studies with the exception that large samples of the crop are collected at harvest for processing. Depending upon the crop, sample sizes will range from 50 to 6000 pounds. These studies require more manpower and equipment than the RAC studies.

- **Rotational studies** involve the application of a product to a target crop. Following harvest, various other crops are planted. Small samples similar to those in RAC studies are then collected from these rotational crops and analyzed for residues. The number of rotational crops and the planting series will determine the cost and labor involved.

- **Environmental fate studies** involving soil and/or aquatic dissipation projects are very labor intensive and require high capital investments. Daily sampling of these residue studies is common for the first 30 days. The duration of these projects can be as long as 18 months. These tests also require irrigation facilities to insure that rainfall plus irrigation equal the average monthly rainfall for the past 10 years.

The cost for a testing facility to be in compliance with the EPA regulations can range from \$30,000 to \$250,000 depending on whether property, buildings, and equipment are purchased or leased.

These high investment costs have caused several established contract research firms to stop doing residue research. And no wonder.

In order to conduct one RAC study, chemical and freezer storage cabinets, continuous temperature monitoring devices, fireproof file cabinets, and backup generators must be purchased or leased.

In the case of environmental fate studies, the researcher must purchase soil sampling equipment, which can cost in excess of \$8000. When irrigation is required, costs can increase dramatically.

Besides these equipment costs, there are also the costs of preparing written SOPs prior to the initiation of any residue

study as required by EPA regulations for contracting facilities.

The time involved to compose SOPs ranges from 40 to 150 hours. Highlights of SOPs describe the entry and exit into an experimental area; the maintenance, calibration, and cleaning of equipment; the collection, storage, packaging, and shipment of samples; and the archiving of all information collected during the conduct of a study.

The initial SOP will have to describe the process of how a SOP is to be written.

Jensen Agricultural Consultants, Inc. is a small contract research firm and yet has 48 different active SOPs. Additional time to revise and update these SOPs is required annually.

Perhaps one significant reason that established firms have avoided conducting residue research is that after the investments are made and the work completed to render the facility GLP compliant, there is no guarantee that the residue contracts will be recruited.

There are two basic reasons for industry to hire a private contract researcher: the client does not wish to do the project in-house, or the client does not have the resources or equipment to conduct the project.

Projects which are released for bids can be complex. The contract fee for any project must be approved prior to the initiation of the study so the contract researcher must calculate the fees as accurately as possible.

Contract research in the United States is a young and challenging field with a promising future on both a national and international level. A well-trained professional who strives for independence, who is committed to doing quality research, and who is willing to work hard will have an opportunity to build a fulfilling career.

## Filling the Research Void For Grower Groups

By **Randy Van Haren**, Pest Pros, Inc.

Crop consultants across the country possess both diverse backgrounds and specialized expertise, making them well qualified to fill research needs for commodity groups wishing to solve local production problems.

Commodity groups can muster the finances to woo Extension specialists or researchers to develop and implement a plan to solve emerging pest situations, for example.

More and more, "field" research addressing local production problems is being funded by such groups and this trend will continue with the increasing constriction of resources available to agricultural research and Extension.

Even when the resources are available, however, a willing and technically able person must step forward to take on these projects and this does not always happen.

Researchers and Extension personnel cannot be expected to attempt to solve every emerging insect, weed, disease or cultural problem that develops, even when commodity groups offer funds to do so.

Enter the independent crop consultant. Filling the research void for grower groups is a niche tailor-made for consultants, individuals who have an intimate knowledge of the local situation and most likely have already devoted time towards solving the specific problem at hand.

Just as the Extension service cannot be expected to solve every emerging production problem for grower groups, it is also unrealistic for grower clients to expect consultants to devote the needed time to solve such problems without additional compensation.

The fit between the needs of these groups and consultants has never been so close.

Here is one experience that proves the system can work and need not create friction between crop consultants and the Extension service.

In 1986 the Wisconsin Mint Growers Association had research funds available for work towards "entomological problems" in their budget, but were unable to entice the Extension specialist into working on a project to find solutions to these problems. At the time no specific problem existed other than the huge lack of information on the effects of various potential insect pests known to reside in mint in Wisconsin.

Having done my research thesis on mint flea beetle in the state, I was approached to present a plan for assessing the potential impact of these resident insect populations.

The funds available were admittedly small, but there is economy to be found in clients who cooperate with the effort. The specifics of the project are not important other than to note that an intern student was hired part-time to collect data and I designed a plot to test the effect of plant bug populations on peppermint.

The end result showed growers that they could indeed allow large populations of various plant bug species to reside in their fields without treating with pesticides.

The best part about this arrangement was that consultants gain valuable experience about a problem affecting their clients while being compensated for their efforts.

In this particular example, the Extension specialist who declined the project was grateful to have the heat taken off him and cooperated with the project.

Contract research does not have to fit the narrow mold that crop consultants have created for it. Many consultants come from research backgrounds and already make a living by solving problems.

What could be more natural for a crop consultant than to fill the void and pursue such opportunities in research and demonstration?

## What Do Sponsors Look for In a Contract Researcher?

By Jackie Flaum, contributing editor

Dependability, a good reputation, a nose for details, sound ethics, creativity, and confidentiality—that's what sponsors say they will demand in a contract researcher before they will shell out \$5000 to \$10,000 for the simplest study.

The sponsors also want some assurance the contract researcher has the laboratory, farm equipment, and the fields available to do the job right.

And **Edgar M. Hood III** of Bactec Corp. in Houston says he likes a contract researcher to be an independent crop consultant, too. He recognizes, however, that it is becoming increasingly difficult to wear both hats.

Hood, like most people looking for research work, is in product development. He may spend \$100,000 a year on contract research. So, he said, he wants to contract with someone who knows the practical side of farming and farm products. Such a person can be invaluable in making creative suggestions about improving the product.

He recognizes there might be the appearance of a conflict of interest. But he said in three years of working with contract researchers and independent crop consultants he has never had even the slightest hint of a problem.

Jim R. Bone, vice president of product development and regulatory affairs of Griffin Agricultural Chemical Group, values a contract researcher who will not only report the product according to EPA regulations and his protocol, but go one step beyond and give him suggestions on improvement.

He wants the researchers to report things that aren't called for on the EPA forms—things only a seasoned veteran could spot.

And he wants a contract researcher to be absolutely honest.

"You know sometimes people can present the data in such a way as to encourage you when perhaps there's nothing to be encouraged about," Bone said. "If the product is no good, tell me. Look me straight in the eye and say, 'Bone, it's no good.'"

Between consultants and grants-in-aid, Bone has 75 to 100 testing programs out per year. His objective is to introduce one new commercially viable product a year.

Larry Hatfield, southern and western technical development manager of FMC, likes a contract researcher who belongs to NAICC and who attends professional meetings. "It indicates the guy is serious about his business and it also gives him some credentials," he said. Hatfield signs between 25 and 50 contracts a year with private researchers.

Finding good contract researchers today is becoming difficult, sponsors said. But the shortages are spotty. "There's a shortage of good quality contractors," Hatfield said. "I'd say Alabama, Arkansas, and Texas need more."

Hood, of Bactec, said the shortages are due to the EPA regulations that make contract researchers invest in expensive equipment.

All that new equipment, in turn, makes the price of a field test go up, sponsors said. Contract researchers have to charge more than they did in the past.

"Most people on the contract research side of the business assume the companies find the cheapest person to run the tests," Hatfield said. "That's not true. I'd rather pay quality price for dependability." Sponsors do hire researchers who are new to the business. Hood said he will hire someone new to the field if he or she is qualified, comes with a good reputation, and has the resources to do the test.

"I give newcomers a try, but I don't pay them like I do the big names," he said.

Hatfield also likes to hire new contract researchers, but wants to see some evidence they are serious about the business. He advises newcomers to get some experience and establish a track record as fast as possible.

Bone checks the professional standing and academic credentials of every contractor he doesn't know personally. He said he'll try a newcomer but only give that researcher less important tests to run until they've worked together for a time.

All three sponsors agree confidentiality is extremely important in hiring a contract researcher. Hood said that's one reason he doesn't like to do business with universities or college researchers—they want to publish their findings.

### *Profile*

## Finding His Niche

About six years ago entomologist **Larry V. Emerson** of Brookshire, Texas, was an independent crop consultant who also did a little residue research for agricultural chemical companies. He worked with rice, cotton, and soybeans.

Then the Environmental Protection Agency issued its Good Laboratory Practices (GLP) regulations to govern acceptable data that may be submitted for registering and re-registering products.

Emerson, like many other independent crop consultants, had to decide if he wanted to go to the trouble and expense of staying in residue research.

"I felt it was a good opportunity. It looked like not many consultants were going to stay in it and go to the expense and headache involved," he said.

Now Emerson is an independent researcher who also does a little crop consulting. He works almost exclusively with rice.

He says he is one of only four or five researchers in the state of Texas. Research is a field he trained for—Emerson graduated with a BS from Texas Tech in 1970 and a PhD from the

University of California in 1974.

He and his partners, **John Christian**, Mike McHugh, and Roy Stanley, formed South Texas Ag Research Inc. They work in four different parts of the state to catch the extremes of Texas climate for their field trials. Their four farms include 20 to 25 employees. Emerson said having qualified, dependable employees is extremely important to the success of his business. "You have to do it right the first time," he said. "You don't get many chances to fail."

Companies spend \$5000 to \$8000 to have STAR run a trial that may take as long as a year to three years to complete. When they're spending that kind of time and money, Emerson said, agricultural chemical companies don't want to have to repeat things.

Like many other consultants, Emerson expects the EPA to issue new regulations that require research data on effectiveness of a chemical before that chemical can be registered or re-registered.

Such regulations will probably increase business, and that makes Emerson even happier. He decided to invest in land, new laboratory equipment, freezer, and office space and special training when the GLP regulations were issued several years ago.

As a consultant involved primarily in research Emerson said he knows how safe agricultural chemicals are today. As a member of NAICC, he'd like to see the organization help spread that information to the general public.

"The public's being misled on what's happening," Emerson said. "A few chemicals in the past caused problems and famous actors and actresses get on the soapbox and before long the public thinks farmers are poisoning the environment for years to come. We take samples as deep as 4 feet. We take water samples on rice to find out about the water supply. We take grain samples to see if chemicals show up in the food."

The public, he believes, should be made aware of the care given to researching and developing safe agricultural chemicals. And NAICC needs to take a larger role in educating the public, he said.

The organization, which he joined to learn what consultants in other parts of the country were doing, turned out to be enormously helpful to him when the GLP regulations were handed down.

"They turned the research industry upside down," he said. But NAICC put on seminars and workshops to help consultants understand what the EPA expected from them. After attending several of these educational programs, Emerson decided to be one of the 10-20 percent of consultants in Texas who worked under the GLP regulations.

Attention Voting Members:

Don't forget to return your constitution  
revision ballot.

## PROFESSIONAL ETHICS

### Changing the Rules Can Be The Ethical Answer

Every day there are more rules and restrictions in an independent crop consultant or contract researcher's life.

Sometimes these rules and regulations make sense—sometimes they don't.

But **Margaret Alms**, NAICC secretary, writes to the editor that if the regulations don't make sense then sometimes the ethical thing to do is work to change them.

If the rules and regulations make sense, she feels it is necessary to do whatever is possible—no matter how painful—to abide by them and see that others do too.

But it is often the case that the rules and regulations are wrong and need to be changed.

"To me working to change the rules may be much more ethical than 'turning in' a friend or client," she believes.

She took exception to the example from the ethics column which posed the ethical question of turning in a client and fellow consultant for violating a rule or regulation that should never have been on the books. In the example determinations were being made based on "25 percent sand."

"If a rule dramatically affected me, my friends, and my clients as it does in this example I would work to change it to consider tillage, timing, rate, etc." she wrote.

### Ethics Enters Classroom

Iowa State University has announced that ethics will be a part of the course work in classrooms and labs for such courses as molecular biology, botany, genetics, veterinary pathology, entomology, and agronomy.

The changes are the result of the first Bioethics Institute held at Iowa State in May. The goal of the institute was to teach basic principles in applied ethics to life science faculty members and, through them, to students.

## WASHINGTON NEWS

### NAICC Members Work on IPM at National Forum

Unclear, burdensome, expensive and time-consuming regulatory processes headed a list of constraints to integrated pest management (IPM), according to a national forum.

But at the forum's conclusion, 10 resolutions out of three hundred offered were listed as the top ways to foster IPM.

The forum is a result of more than two years' work by

hundreds of professionals. Several NAICC members including **Earl S. Raun**, **David J. Harms**, **Charles Mellinger**, and **Bill Blair** helped write the papers and formulate proposals discussed at the forum.

Three NAICC members helped lead the constraint team breakout session during the National Integrated Pest Management Forum sponsored by the EPA and USDA.

**Madeline Mellinger** of Glades Crop Care Inc. in Jupiter, Fla., **Dan Bradshaw** of Crop Aid in El Campo, Texas, and **Patrick Weddle** of Weddle, Hansen & Associates in Placerville, Calif., were among the participants of the June conference.

The federally-sponsored forum brought together 600 professionals such as crop consultants, regulators, agrichemical industry representatives, Congressional aides, and farmers to take a cooperative look at ways to foster the use of biologically-intensive integrated pest management.

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### *Lack of trained professionals called constraint*

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Maureen Hinkle of the National Audubon Society stressed that the public wants—and expects—environmental performance from all segments of the farm industry.

But farmers and crop consultants were interested in more practical applications. Faced with tough and confusing EPA standards, the men and women in the field urged regulators to make certain that approaches to IPM were economically effective.

For example, pests and pesticide use varies from region to region. Overall, pesticides are the third largest cash input in crop production. Participants felt minor use pesticides need to continue to be available.

One of the major problems forum participants listed was the shortage of independent trained IPM practitioners. Education seemed a key factor in solving this problem.

The forum approved these 10 resolutions to encourage IPM:

- Make certain there is a national commitment to IPM;
- Increase Cooperative Extension Service funding to provide long-term IPM education;
- Increase both public and private funding for IPM research;
- Increase terms of grants for such research;
- Increase competitive funding for IPM;
- Combine research and Extension programs;
- Make certain competitive funding for IPM research includes such factors as economic, sociological, and environmental;
- Increase Cooperative Extension Service funds for IPM trials;
- Establish an ombudsman at EPA to help companies through the registration process;
- Use interdisciplinary teams for IPM research.

Madeline Mellinger said one of the most important resolutions to NAICC members was the constraint that named lack of independent trained people to implement IPM.

## NAICC BUSINESS NOTES

### Meet the Staff of NAICC

This year has been one of rapid change for NAICC; we'd like to introduce the staff and the company that helped make some of the changes happen.

Along with the daily operations of NAICC, Great Lines handles public relations and marketing communications for several other agribusiness clients. The list includes companies such as Agtrol Chemical Products, Fermone Corporation, FMC Corporation (Agricultural Chemical, Latin America, and Turf and Ornamental Groups), Gowan Company, and the Pyrethroid Working Group. Great Lines also handles a wide range of other clients including a law firm, an architectural group, and an investment brokerage firm.

Great Lines, which was founded in 1983, currently has offices in Memphis and San Francisco. The Memphis lineup includes partners Daney Kepple and Mimi Hall, and staff Tracy Court, Tabitha Glenn, and Rae Jean Lichterman, while partner Linda Romander and staff Kim Molinari are in the San Francisco office.

Kepple is the founding partner of Great Lines. She was formally with Meister Publishing Company as a researcher, writer, photographer, and finally, managing editor for the firm's cotton magazine. She holds her masters degree in English from the University of Mississippi.

Romander joined Kepple at Great Lines in 1985. She received her degree in agriculture from California State Polytechnic University and has spent all of her career in agricultural publishing. She has worked as an advertising manager for *California Farmer*, and was later named managing editor for *Animal Nutrition & Health* and *Agrichemical Age* magazines.

Hall became the third partner of Great Lines in 1988. She is a journalism graduate of Memphis State University, and began her career as a trade journal editor at Little Publications, writing for magazines such as *Custom Applicator*, *Cotton Farming*, and *Rice Farming*. She later served as marketing director for two New York Stock Exchange member firms, where she created and managed in-house advertising agencies.

Court joined Great Lines and NAICC as staff secretary in April. She was the former secretary for Arkansas Cattlemen's Association in Little Rock, Ark., and is a graduate of Petit Jean Technical College.

Glenn is a communications graduate of Arkansas State University. She joined Great Lines in 1991 and was appointed NAICC Associate Administrator by the Board in April. She was previously traffic manager for McNabb Kelley and Barre Advertising Agency in Jonesboro, Ark.

Lichterman joined both staffs as bookkeeper in February of this year. She operated a bookkeeping service in Memphis before joining Great Lines and NAICC, and she is a graduate of Wayne State University in Detroit, Mich.

Molinari has been with Great Lines since 1990. Her NAICC duties include newsletter production and database manage-

ment. She was previously an administrative assistant for Interim Systems Corp. and is a psychology graduate of the University of Oregon.

## Econet Gives Members Access to Information

NAICC members can exchange information quickly over a publicly accessible bulletin board system called Econet.

With Econet members can send and receive text that is easily converted to most word-processing software. Members can send a fax using a laptop computer. Or Econet can be an electronic mail service.

The more remote a NAICC member's location, the more invaluable Econet is for getting in touch with peers and keeping up with the latest techniques and training sessions.

For more information call (415) 422-0220.

## MEMBERS IN THE NEWS

• **Shawn Eisch** was featured in the May issue of *NPM Field Notes* published by the Wisconsin Nutrient and Pest Management Program. In the profile Eisch notes landowners are becoming increasingly aware of consultant services and the profits farmers can gain. Shawn services 50 growers covering 12,000 acres in Sheboygan, Ozaukee, and eastern Fond du Lac counties.

## 1992 ANNUAL MEETING

### Work Greets NAICC

The National Alliance of Independent Crop Consultants' 1992 Annual Meeting gets under way Nov. 4 at Loew's L'Enfant Plaza Hotel, Washington, D.C.

Among the keynote speakers at the five-day meeting will be Maureen Hinkle of the National Audubon Society. She speaks Nov. 6 at 10 a.m.

Work sessions on contract research, dealing with problem clients, initiating good working relationships with new clients, realistic techniques for agricultural stewardship, and pesticide resistance management techniques will be on the agenda.

Archer Daniels Midland, an agri-processing company with 140 terminals nationwide, will sponsor the awards luncheon Nov. 6. The company's line of business includes procuring, transporting, storing, processing, and merchandising agricultural products. The luncheon menu will feature soy-based foods.

The annual meeting offers crop consultants and contract

researchers the opportunity to tell their story to the powers in Washington, to exchange ideas, and to sharpen their professional skills.

For registration information contact Tabitha Glenn, NAICC, 5050 Poplar Ave., Suite 2218, Memphis, TN 38157 or call (901) 683-9466.

## EXHIBITS

### Seeds Sow a Change

An exhibition depicting the 500th anniversary of Columbus's voyage to the New World will focus on the seeds of change: corn, potatoes, sugar, horses, and disease.

This extensive exhibition, which includes a panoramic video, is being presented at the National Museum of Natural History at the Smithsonian Institution in Washington, D.C.

The exhibit primarily shows the role of agriculture and agricultural products in creating a new world culture.

One part of the exhibit, "Spaghetti Meets Tomato", takes a whimsical look at the global exchange of crops that Columbus unleashed. For example, using new peppers from the Americas, Asians invented fiery curries and the Swiss used cacao to develop fine chocolates. In Mexico, Asian rice is served along with corn tortillas.

In another part of the exhibit corn and potatoes, two of the world's most popular staple foods, vie for the title of the world's most important crop, while sugar leaves a bittersweet legacy in another section of the exhibition.

This widely heralded show is expected to be popular with NAICC members and their families who will visit the Capital in November.

### Going Once, Going Twice...

Remember the hunting trip? Remember the roast? Remember the brochure? Best of all, remember the money NAICC raised at last year's Auction Night?

NAICC is now accepting donations for this annual event.

What would you place your bid on—A computer, a hunting trip, a chance to roast the NAICC president? Let your imagination run wild, then call headquarters in Memphis to make your donation.

## NEW MEMBERS

### VOTING

#### **Eugene C. Beiker (Agriculture)**

Beiker Crop Consulting Inc.

P.O. Box 140

Johnson, KS 67855

Office: (316) 492-2776 Home: (316) 492-2776

*Crops: Field corn, popcorn, milo, wheat, sunflowers, alfalfa.*

*Services: Soil sampling, fertility recommendations, pest scouting, disease identification, moisture monitoring, crop production analysis.*

#### **Bryce K. Brobst (Agronomy)**

Brobst Agri Consulting, Inc.

P.O. Box 7, 505 Camille St.

Ellinwood, KS 67526

Office: (316) 564-3643 Home: (316) 564-3643

*Crops: Corn, grain sorghum, soybeans, alfalfa, wheat, sunflowers, melons.*

*Services: Crop monitoring, recommendations for insect, weed, disease, crop growth management. Irrigation scheduling, soil and tissue testing and recommendations.*

#### **Mike H. Kasowski (Agronomy)**

Centrol, Inc. of Twin Valley

RR #1, Box 118

Fisher, MN 56723

Office: (218) 773-0506 Home: (218) 281-7750

*Crops: Wheat, barley, sugarbeets, soybeans, corn, edible beans, potatoes, sunflowers, soil testing, crop monitoring.*

*Services: Farm program analysis, crop planning, soil testing, crop monitoring.*

#### **Shawn Sullivan (Agricultural Education)**

CountSull Ag, Inc.

153 11th Street

Burlington, CO 80807

Office: (719) 346-5215 Home: (719) 346-5254

*Crops: Corn, wheat, beans (dry edible), sunflowers, alfalfa.*

*Services: Soil testing, fertilizer recommendations, preliminary crop planning, equipment calibration, insect scouting, irrigation scheduling, herbicide recommendations.*

### PROVISIONAL

#### **Michael K. Williams (Education/Science)**

P.M.C. Inc.

1143 Pebble

Fremont, NE 68025-4358

Office: (402) 727-5888 Home: (402) 727-5880

Fax: (402) 727-5888

*Crops: Corn (seed, white, pop), soybeans, alfalfa.*

*Services: Weeds, insects, water management.*

## REAP CERTIFICATION

#### **Roger Carter, Clayton, La.**

Agricultural Management Services, Inc.

#### **John E. Christian, Raymondville, Texas**

Agri-Consulting & South Texas Ag Research

#### **Randy Darr, Shipman, Ill.**

Soil-Right Consulting Services

#### **Bradley J. Walker, Lamar, Colo.**

AgSkill

#### **Richard F. Wildman, Rochester, N.Y.**

Agricultural Consulting Services, Inc.

## CALENDAR OF EVENTS

September 2—Field Day—Western Illinois Sustainable Agriculture Society, Jeff Reuschel Farm, Box 19, Golden IL 62339. Practical tips on sustainable agriculture. Louis Reuschel, president WISAS at (217) 696-2493.

September 12-16—Irrigation—The Environment and the Law, the 1992 National Conference of the American Society of Irrigation Consultants, The Marriott's Hunt Valley Inn, Hunt Valley, Md. Speakers from government agencies, educational institutions, the golf and sports turf industries and irrigation industry are on the program. To register contact Wanda M. Sarsfield, executive secretary, ASIC Headquarters, 425-A Oak St., Brentwood, CA 94513.

October 25-30 and November 1-6 (repeat session)—Herbicide Action—Stewart Center, Purdue University, West LaFayette, Ind. An intensive course on herbicides in plants and the environment. For registration information contact M.E. Ocker, Division of Conferences, Purdue, at (317) 494-7223.

November 4-8—National Alliance of Independent Crop Consultants 1992 Annual Meeting—Loew's L'Enfant Plaza Hotel, Washington, D.C. A chance for crop consultants and contract researchers to tell their story to the powers in Washington, and to exchange ideas and sharpen professional skills. For registration information contact Tabitha Glenn, NAICC, 5050 Poplar Ave., Suite 2218, Memphis, TN 38157 or call (901) 683-9466.

December 2-4—North American Farm and Power Show, Minneapolis Convention Center, Owatonna, Minn. NAFPS offers 400 exhibits that display millions of dollars worth of high-tech farm equipment. For more information contact: Todd Manske, Farm Equipment Association of Minnesota and South Dakota, 121 East Park Square, Owatonna, MN 55060.