Gazing into the Crystal Ball

Are we truly on the verge of entering a (greenhouse) space odyssey, or will 2001 be just another year in the industry? Some of your industry peers have braved the elements to predict where current trends will shoot us off to in the not-so-distant, biotechnology-saturated future.

RICHARD LINDQUIST

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Happy 2001! Well, this is not a drill like it was last year, we have REALLY entered the new millennium this time with the beginning of 2001, so I hope that we did not have any Y2.001K problems — other than the recent election, of course.

I was reminded that predicting the future is much more difficult than predicting the past when I came across some boxes of college textbooks and other references my sons left behind after escaping to the western mountains. One of the books was titled "Japan as Number 1: Lessons for America." The preface of this book stated: "….Japan has dealt more successfully with more of the basic problems of postindustrial society than any other country." Events in recent years have certainly proven this to be incorrect. It illustrates that things do change, and that there are no certain answers to all the world's problems.

In November 2000, I had the opportunity to participate in the British Crop Protection Council Pests and Diseases Conference in Brighton, England. Although the emphasis is on pest and disease management with chemicals, there is a fair amount of information on alternative controls.

The fate of organophosphate (and carbamate) pesticides in northern Europe was discussed. There's no law similar to the USA's FQPA in other parts of the world, but the consensus seemed to be that the European Union will eventually adopt similar ways of evaluating pesticide safety.

Only a few new pesticide products were mentioned in the invited presentations, some of which are very similar to the ones we have. Here's a brief description of three potentially useful products that were discussed.

Thiacloprid, from Bayer, is in the same class as imidacloprid (Marathon). Thiacloprid will be marketed worldwide under the name Calypso. Registration in North America is expected before 2003. Thiacloprid is about the same as imidacloprid in terms of pests controlled, but is safe to use on open flowers where bees are pollinating. This would make thiacloprid useful in greenhouse tomato production, because bumblebees used for pollination would not be harmed. Thiacloprid is also said to be harmless to predatory mites.

Spirdiclofen is a miticide from Bayer in a new chemical class, the tetronic acids. A current trade name is Envidor. Registration is expected between 2002 and 2004. The chemical interferes with mite development, but was not called an insect growth regulator. Activity is slower than a knock down product but faster than some growth regulators.

IKI-220 is a systemic insecticide being developed by Ishihara Sangyo Kaisha Ltd. It is effective only against aphids and some other sucking insects. IKI-220 does not even have a common or proposed trade name yet, so registration could be a long way off. I mention it only because there are many growers who used other systemic products against aphids and are hoping for another product like it. This may be the one, so stay tuned.

At the conference, a fungus gnat control poster presentation by John Buxton of the Agricultural Development and Advisory Service (ADAS) showed that the granular insecticides imidacloprid (Marathon in the USA, Intercept in the UK) and chlorpyrifos (Dursban in the USA, suSCon Indigo in the UK) incorporated into plug media were both very effective in preventing injury to young poinsettia plants by fungus gnat larvae. In these experiments, the imidacloprid product was a 5 percent granular formulation and the chlorpyrifos product was a 10 percent granule. Fungus gnat numbers were reduced, and both fresh and dry weights of plants rooted in treated plugs were higher than plants rooted in untreated plugs.

This research illustrated the importance of getting the fungus gnat controls applied before the insects became established. Also, incorporation of a product in the media eliminates some of the variables involved in application after planting, such as uniform application.

The ability to apply precise amounts of pesticide without a lot of handling by humans may help reduce the perceived risk factors in the future. In many cases, pesticides can be applied at reduced rates. If some sprays can be avoided, beneficial insects and mites could have better chances of survival.

Another conference poster presentation showed that western flower thrips were effectively controlled by the insect growth regulator lufenuron (Match or Sorba in European markets). Lufenuron was very effective against thrips eggs, larvae and prepupae. At the same time, it was harmless to predatory mites and bees. Syngenta (formerly Novartis) apparently has no plans to register this product in North America. Lufenuron is in the same chemical class as Adept and the soon-to-be-registered-we-hope novaluron, which also has shown good control of western flower thrips. If the novaluron product (trade name has not been selected yet) is nearly as effective as lufenuron, we may be in good shape. We really need at least one or two more effective products for thrips control to take the pressure off Conserve.

We will continue to learn more about insect and mite biology. The trick here is to take advantage of the knowledge in pest management programs. An example of advancing knowledge was cited recently in a Florida newsletter. Research on mosquito behavior showed that mosquitoes inflict more bites on: 1) Tall people, 2) fidgety people, 3) people

wearing dark clothing, and 4) females. It was pointed out that to take full advantage of this knowledge, you need to find a tall, fidgety female wearing dark clothing and have her walk around you while you remain still. Knowing more does not always make things easier.

In summary, we will continue our slow movement toward integrated crop production in 2001. Yes, there will be new products registered for insect and mite control — as well as losses from registration cancellations. Even though pesticides will be the main controls used, we will continue to integrate more biological controls into pest management programs. Ironically, biological controls may help to preserve pesticide effectiveness.

PETER KONJOIAN

Konjoian's Floriculture Education Services, Andover, Mass.

Industry consolidation at the production and marketing levels has received much attention over the last few years. We are beginning to see the concept infiltrate other levels of our industry, namely the grower education level.

My participation over the last couple of decades as a speaker at grower conferences has allowed me to take part in changes that are streamlining how we offer education to growers and retailers of floricultural products. We are seeing grower conferences on a national level settle out to include The Ohio Short Course, GrowerExpo and the BPI annual conference.

On the regional level, conferences such as the New England Greenhouse Conference, the Southeast Conference and the Far West Show have emerged as excellent avenues to provide regionally specific education to growers. As these shows continue to set anchor, smaller state association meetings are being relieved of the pressure of having to offer a trade show as part of their educational effort. As a result, they are able to focus on offering programs to address their local needs, and exhibitors have found ways to help sponsor these educational events without having to participate in a time-consuming trade show effort.

Supporting floriculture research at our land grant universities may also be ready for some consolidation. President Clinton recently signed a bill earmarking millions of dollars of federal funding for research in our industry. These dollars are a result of us consolidating our voices and educating our representatives that ornamentals have become the leading agricultural commodity in many states across the country.

Two of our industry's research and scholarship funding groups have recently opened discussion on whether the time is right for a merger into a single, united support arm for floriculture. The Ohio Floriculture Foundation (OFF) and The Bedding Plant Foundation, Inc (BPFI) are presently exploring this option and could take this consolidation step soon. It makes sense that consolidating their efforts could lead to bigger things.

Education and research are the keys to competing in a global marketplace. Our industry is getting its act together nicely in an attempt to take on the challenge of ensuring its future.

JIM FAUST

Asst. Professor of Ornamental Horticulture, Clemson University, Clemson, S.C.

Trade shows and educational conferences will continue to increase in importance as academic meetings diminish. In the past, educators were strongly encouraged to attend conferences that were exclusively academic. The newest research was presented there, and after a couple of years of discussion and follow-up experiments, other professors would provide a consensus as to whether the research was reliably accurate. Then, the research would trickle down to an industry conference and be presented in a trade journal.

The situation is different now. The order of events has changed and the time cycle has become much faster, primarily because the sources for funding have changed. The floriculture industry has done a great job of supporting university programs through the Gloeckner Foundation, Bedding Plant Foundation, American Floral Endowment, the new Floriculture and Nursery Research Initiative, individual state funding programs, etc. Since the funding for applied research comes from the industry, the industry is the first to see the new information, whether in the trade journals or at conferences.

I don't look in academic journals first for new floriculture information anymore. I open up GPN or go to OFA. These are the avenues for communicating the newest information. These are the think-tanks where growers, suppliers and universities come together to develop new ideas and products.

There really has been a "changing of the guard" in floriculture academia over the last five to ten years. Today, faculty, just like most of today's professionals, are more apt to move up the corporate ladder or move on to bigger and brighter opportunities. The career floriculturists like Roy Larson and Will Carlson are fewer and farther between. When floriculture faculty have gotten together at academic meetings over the last few years, there was only a handful of faculty over the age of 50. Is this good or bad?

On the one hand, this trend does open up more doors for new and young faculty, and new blood can be a good thing, especially in the field of research, which is based on new ideas. On the other hand, the continuity and trust that must be present for the industry and university to work closely together is threatened. It becomes difficult for growers to get really excited about doing cooperative projects with universities when the faculty changes every few years. Like it or not, it's a trend that's sure to continue.

MICHELLE BELL

Manager of Horticultural Research, SePRO Corporation, Carmel, Ind.

I may be going out on a limb here, but I believe 2001 will bring more of the same. Consolidations will continue, with the ingestion of smaller production greenhouse operations — a move fueled, most recently, by this winter's sky-rocketing energy costs. Likewise, mergers and buy-outs will continue in the horticultural chemical industry, which has already become downright cozy. Along with the conglomeration of the parent pharmaceutical or agricultural chemical companies has often come the downsizing or spinning-off of specialty products divisions, of which greenhouse and nursery products are a part.

With fewer companies involved in product manufacture and marketing, does this mean that fewer products will trickle down from the more lucrative field crops divisions of these businesses to our relatively small-use industry? No. Demand will drive supply. As a matter of fact, with some of the dust from merger activity already settling, our industry is now considered more as one worthy of attention.

As a result, turf and ornamental products will be registered concurrently with, or even before, the crops-only versions of the same active ingredient. Specialty products divisions may be maintained in future mergers, and specialty agchem companies dedicated to providing products for the greenhouse and nursery will continue to acquire spun-off products and product lines. Further, base manufacturers worldwide will feed products directly to these specialty companies giving them greater impact in our market.

Depending on the political climate, we may see a slowing of product cancellations due to FQPA. We have seen the announced phase-outs of several carbamate and organophosphate chemicals (most recently diazinon), and there are more on the chopping block. Whether those at risk get

cut and how many more follow suit may depend upon continued momentum of this Clinton-Gore initiative.

If the FQPA effort does not slow, will fewer products be available? No. Reduced-risk pesticides and biopesticides awaiting EPA registration, and those that follow, will fill any void — in as far as the needs of our industry go. Along with efficacy (which generally will be better for the former than the latter group), these products will provide more targeted activity, lower mammalian toxicity, shorter worker re-entry intervals (REI's), and far greater opportunity for integration of beneficial insects and mites into growers' pest management programs.

With the proliferation of small biopesticide companies (and those marketing naturally-derived growth enhancers as well), more of these feel-good products will enter the market. The vast majority are fungicides, but new insecticides and acaracides from this group will surface. Yes, biopesticides will need to compete on cost, but if they do not bring value by way of effectiveness, they won't make it. Many of the venture-capital companies involved in biopesticide/enhancers will go the way of so many dot coms (or "the dinosaurs" for you — er — dinosaurs).

What all this does mean is that growers and IPM practitioners will have to become more knowledgeable and sophisticated in their pest monitoring, product choices and rotations, and application technology in order to fully utilize the benefits of the products available — but then you already knew that.

STEVE JONES

Director of Sales and Marketing, Bodger Seeds, So. El Monte, Calif.

I will say nothing here about automation, computerization or communication, which will obviously be in the future for any successful operation. Gazing into the future, I see an image — a "Sharper Image." Take a look at a Sharper Image catalog and what do you see? A lot of cool stuff with uses you probably never considered. Now look at the prices. Are they too high? Who knows? And that's the point. How can you price shop for a unique, high-tech back massage what-do-you-call-it?

Much of the gardening public falls into the same category of those who shop a Sharper Image catalog. I remember going into a southern California garden center in late September and watching a shopper buy pansies and lisianthus. A grower had supplied the garden center with each of these products for two different reasons. The pansies were easy to explain. It was fall. The lisianthus were more perplexing.

Not much has been done to evaluate the price elasticity (the amount a consumer is willing to pay) of gardeners. But I would bet that most home gardeners do not go into a garden center with a total budget in mind and do not know what a "good deal" is for a 4-inch pot.

Large garden store chains, especially the "Big Boxes," have never grasped this idea. And why should they when growers beat each other up on price? The secret here is product differentiation. Sharper Image.

Finally, I see in the future more cooperation and specialization. Do you buy your plugs from a company that is supposed to be your competitor? Who cares? You are your own competitor.

I see great potential for growers buying and reselling from each other, in a way similar to Bodger Botanicals, which is based on a network of breeders working together to package their products. Growers in Texas and Ohio are working together using pre-finished and finished plants from other greenhouses. What an easy, cheap and efficient way to expand your business.

PAUL PILON

Head Grower, Sawyer Nursery, Hudsonville, Mich.

The demand for perennials has been increasing for at least the last decade. According to the 1998 Census, perennials compromise 26.6 percent of the total bedding/garden plant sales. I see the trend of increasing demand for perennials continuing for a number of reasons. But the main and most exciting one will probably be the production of flowering perennials, or forcing them into bloom prior to sale.

In past years, growers have primarily supplied nonflowering perennials. There was little information and research in perennial forcing, and it was difficult to achieve consistent and timely crop flowering. Growers are interested in forcing because plants in bloom will outsell nonflowering plants in most instances. Michigan State University has spent the last seven years researching the flowering requirements for a broad range of perennials so

continued on pg. 76

floriculture's future

continued from pg. 38

that crops can be in flower and ready for sale on any predetermined date.

There is already more demand for perennials in small containers such as 3-inch or quart sizes. With the ability to force many perennials into bloom, perennials will probably be marketed alongside bedding plants and continue to gain more of the bedding/garden plant market share. By manipulating flowering, growers will be able to promote the added value of some perennials as houseplants, in that when flowering is finished, the consumer can plant them outside in their gardens. There are many undiscovered opportunities with perennials, and we are just beginning to take advantage of these new markets.

JACK WILLIAMS
Product Manager, Paul Ecke Ranch, Encinitas, Calif.

In the past five years, our world of production, sales and marketing have certainly experienced substantial change. The dynamics of the "market" has caused many growers to redefine their production and chain of distribution in order to survive. Growers have adapted to the needs of their market and often reinvented their organization's focus in the process. Up to this point, growers have been "driving the bus" in making these decisions about how we conduct business, taking the lead in defining what was grown and how it was packaged for sale. Like so many other things in life, change is inevitable. In our future, I expect the change will be in who is "driving" the changes in our businesses.

Along the way, the bus driver has changed! Growers are not as involved in driving decisions for the retailers we service. Because things are not being done the way they "used to be," it is not as comfortable for growers. In other words, there is a new set of dynamics taking control, and once again, we need to adjust our businesses to stay in the game. Virtually every segment of retail is competing for customers, resulting in new tactics.

First, buyers do not want the "same old product" we have provided (i.e., what we like to grow). They want new, unique and exciting products to attract customers to them. So, growers have to learn to produce new plants to meet the needs of their buyers. Second, retailers do not want plants in the "same old containers." Specific container sizes, colors and configurations are now being requested to separate and individualize retailers and their market share. The impact of this is requiring adjustments in production programs, space utilization and overall business planning in greenhouses everywhere.

Next, point of purchase (POP) sales support is being used to create awareness of plants and to build sales by creating interest and identity in the retail. Growers are being required to work with their buyers to bring the products, programs and support to the retailer consistent with the market strategies used by the store. And finally, some retailers are even going so far as dictating their own house labeling programs, ignoring what is considered standard bill of materials for our industry.

This is where growers are starting to complain. These moves by retailers are strategic, focused on building market share and customer loyalty, increasing profit margins in the store AND, they scare us to death. Why? Because we are no longer driving our bus!

It is scary to think of Martha Stewart as our bus driver, but for K-Mart, she knows the message and the package that must be created to sell product. What Martha doesn't know is how we have grown, sold, labeled and distributed our products in the past. Does this mean we have done it properly? Maybe we have, but maybe it is time for us to get to know our new customers and learn about doing business with them.

The changes ahead are not always going to be comfortable, but the ones behind us were not easy either. Part of learning is listening to another viewpoint and being flexible enough to meet the needs of all. Who knows, we may even find we like what Martha and the other retail programs are doing, and we might just learn how to make our industry and businesses stronger as a result of them.

Information compiled by Mary Stoerp, an associate editor for GPN.