

Looking Ahead Project Agriculture's Future

by Larry Klaas

What will agriculture be like in Arizona in the year 2000 and beyond?

Will there be enough water for it?

Will there be enough arable land remaining after another 15 years of urban expansion?

Will there be enough profit remaining after the kinds of high-tech capital investments required to survive in the 21st century?

PROJECT AGRICULTURE'S FUTURE is an ambitious collaboration between the Governor's office and the University of Arizona College of Agriculture designed to examine questions such as those and to forecast answers which will be helpful in serving the people of Arizona as they seek to wisely use the land, water and renewable natural resources of the state.

College of Agriculture Dean, Dr. Bartley P. Cardon recently told a public meeting he considers PAF "the single most important effort in my term as Dean." Cardon predicted PAF findings, to be issued at a symposium in the spring of 1986, will "amaze those who say agriculture will not survive in Arizona."

The project began more than a year ago with the establishment of various task force committees whose job is to study a range of agriculture-related areas: soils productivity, land resources, water, climate, economics, public policy, technology, quality of life and public information. Months of work and research are now being formulated by each committee into final reports.

A second major component of PAF is the input

received from the grass-roots level. Thirty-five meetings were held in February, March and April all over Arizona. Each county meeting participant was given a county data base packet, a quality of life packet and a comprehensive PAF questionnaire.

Preliminary computer analysis of more than 400 questionnaires covering some 83 different subject matter concerns is now underway. Tabulations have been made by county, meeting site and for the entire state. Detailed analyses and interpretation of the results are being compiled and will be included in the final PAF report. In addition, a separate report was written by each county summarizing the results of their meetings.

The public input clearly shows Arizonans are extremely concerned with such issues as:

- Water
- Competing Land Use
- Economic Development
- Education
- Urban/Rural Interface
- National & International Markets
- Preserving Agriculture
- New Alternative Crops
- Rural Health Care
- Environmental Pollution

Perhaps most interesting about the preliminary findings is that they show an almost uniform concern statewide about the same fundamental issues. "The main points have come up at all the meetings," says Jim Chamie, Coordinator for Project Agriculture's Future. "There may be some different lesser issues, but everyone has the same basic concerns. The problems we thought were specifically in the rural areas are actually statewide.

"Agriculture needs to look at these problems," Chamie added. "We may not be able to provide answers immediately but we need to address these concerns. One thing I have seen in every community is that citizens feel there is a lack of planning and an inability to solve problems as they grow."

Public input from PAF hearings around the state will be integrated with the subject area committee findings into a final report to be published next year.

Videotaped summaries will also be prepared for showing on television, in county extension offices and public schools.

"Our objective," says PAF director, Dr. Ken Foster, "is to get the word out on our findings as widely as possible." Dr. Foster recently succeeded the retiring Dr. Curtis Cable of the University of Arizona College of Agriculture.



Wellton-Mohawk Valley farmers voice their concerns during one of the PAF public hearings.



“I think a lot of times the general public just doesn’t care about our problems because we’re so minor. We’re only 3% (of the population).”

—Wayne Stuhr
Tacna Farmer

Some highlights of committee reports already drafted show how crucial is the need to conduct a study such as Project Agriculture’s Future. On the issue of Arizona’s rural land resources, one draft report notes:

Converting prime agricultural land to urban uses may be justified in terms of short-run benefits and costs yet be inefficient in the long-run as the needs, technology and resource base of society change. Intertemporal efficiency in land use, then, requires an assessment of present and projected net benefits of competing uses of land since conversion of farmland today may be physically, institutionally and/or economically irreversible in the future.

Over the past ten years, 123 square miles of farmland has been converted to urban uses in Maricopa County alone. Nearly 95% of all new urban development in Maricopa County has occurred on agricultural land. Projected growth by the year 2000 would require 200 square miles of farm land be converted to urban uses, representing a 25% reduction in agricultural uses in the county.

A major issue of public concern, groundwater pollution from pesticide and fertilizer use, is addressed in another draft report.

Pollution of groundwater by agriculture has become a definite problem in such states as Florida, Maryland and New York where groundwater levels are near the land surface. Whether Arizona agriculture is a potential groundwater polluter is not clear. In most areas of the state, groundwater levels are much farther from the surface. In Arizona the pollution issue may not be a physical problem, but could become a major problem for agriculture because of standardized regulations promulgated without specific recommendations for local conditions. For example, while the EPA currently encourages state and local agencies to solve their own pollution problems, there is a move toward standardized federal regulations. The policy issue is the question of who should establish standards and who should have regulatory power. Further, on what grounds should decisions be made?

The revolution in computer/communications technology will also have enormous impact on agriculture in Arizona.

“If government will get out of agriculture . . . and let us compete in a free market system worldwide . . . agriculture will straighten itself out.”

—Chuck Bolton
Jobba Farmer



“The men came up with a lot of family concerns. This has never happened with any other group I’ve had thus far.”

—Rudy Schnabel
Rural Area
Development Agent



PHOTOGRAPHY BY ALLAN FERTIG

In agriculture, the computer-satellite communications revolution will widely enhance the acquisition, storage, retrieval and interpretation of information. The new technology will be as essential in tomorrow's agriculture as the tractor is in today's.

At present, computers are useful in agriculture for one of two things: to either save money or make money. For the vast majority, a computer is no more or less than a tool or a means to an end. Agriculture today asks not which hardware to buy, but what software is most appropriate to saving money or making money.

Perhaps the most recent survey of agri-computer use in Arizona was conducted by an Extension Economist at the University of Arizona College of Agriculture. A questionnaire was sent to 1300 Arizona cotton growers. Of the 130 growers responding, 49 said they already owned a computer. Another 49 indicated they were thinking about buying one.


The future will see much more expansive use of computers in agriculture than to simply save money or make money. Electronic communications programs, known as "videotex," are a kind of data transmission technology that uses the phone system to link a central computer with other computer terminals.

Eventually you may even be able to buy and sell on the system. If a farmer is hooked up to his supplier, he can input his order whenever he has a chance.

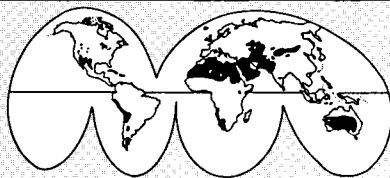
Apart from the storage, interpretation and analysis of data, the most sweeping changes ahead will be in its transmission. Satellite technology is now to the point where it allows teleconferencing among any number of origination points around the globe and two-way interactive audio/video exchanges among those points and among countless passive receive points.

Data transmission allows high-speed multiplex communications via existing satellite transponders. The text of an entire book may be transmitted digitally in seconds.

Future interactive cable applications will likely remain concentrated in high density urban areas while satellite transmission and reception will expand in suburban and rural areas.

The questions are simple; coming up with reliable answers on the future of agriculture in Arizona is the tough part. As one researcher put it, Project Agriculture's Future is an exercise in crystal-ball gazing with a scientific approach. We may not like what we see in the future, but having an idea of what's ahead will at least help us plan for it. 

In the next issue of
Arizona Land & People . . .



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Covering the full spectrum of arid lands research within the University of Arizona could fill a whole magazine. Well, that's what you'll find in our special fall issue...a cover to cover update of research projects that includes water efficient crops, water harvesting, conservation techniques, desert landscaping, remote sensing and biotechnology to name just a few. It is all arid lands research . . . research that often goes beyond the Southwest deserts to arid regions around the world.

This special issue of *Arizona Land & People* will be published in conjunction with the University of Arizona International Arid Lands Research and Development Conference October 20-25. For more information about the conference write to:

Office of Arid Lands Studies
College of Agriculture
University of Arizona
845 N. Park Avenue
Tucson, Arizona 85719
Attn: Anna Elias-Cesnik