

Vision of Agricultural Research and Extension
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Based on trends in California and other states, I am pessimistic about the future of Extension and applied research. We need to reverse the current trend of de-emphasizing the extension mission. The production of food, fiber, forage and fuel will require continual introductions of new technologies and a new view of how the production system is integrated into the processing and distribution systems. Unfortunately the current system of applied and mission-oriented research and extension is at risk of fading away.

CE has two historical roles in the US: technology transfer and rural development. In the first 150 years of our country's history the rural development role often drove programs. After WWII, technology transfer has driven those programs. CE is still uniquely qualified for these roles. We are also still the most qualified agency to conduct nutrition education in the context of today's social dynamic. Our 4-H youth development program has updated its programs to include science & engineering education, food system literacy and communication skills development.

Over the last 40 years in California, the role of conducting applied research has shifted significantly to CE. This is not bad and it has been generally welcomed by CE academics. Research funds are a welcomed source of support to a program that has little financial support outside of salaries and benefits. It also gives us the opportunity to interact on a national and international level. For example, if you attend an ISHS-sanctioned event you are likely to see a paper or poster authored by a California CE academic. How is this good for a fig farmer in Merced County? Such activities raise the level of the research conducted in the counties and it gains the Farm Advisor access to experts outside of California.

But with CE having less than half the FTEs there were 20 years ago (from about 450 to 240 and dropping) UC's capacity for applied research has diminished significantly. I do not anticipate that the Experiment Station and USDA will shift resources from basic to applied research to make up this deficit. The research will not be done and the problems will not be addressed.

Increasingly applied research is being done by the private sector – chemical, seed and biotechnology companies. In some cases they are the same company. That is good in one respect in that those who profit from the research pay for the research. The problem is that unlike UC and USDA – they often only release or publicize research that gives positive results. A more important difference between the public and private sector are the long-term objectives of these programs. In the public sector, we are working towards long-term sustainability with minimal impact on the environment. We emphasize integrated approaches such as cultivar improvement, cultural practices, biological control and reducing energy inputs. In the private sector the objective is short term: product development and marketing.

Society needs to ask if agriculture's access to new technology should be through chemical and seed sales people? The people I work with act in a professional and conscientious manner but they have a different mission than CE. Is Monsanto the logical institution to lead agriculture into the new century? I have spoken to chemical sales professionals, and they do not think this is good in the long-run. They view a viable applied research and extension system in the state as being critical to the future of agriculture.

A few years ago I attended a conference at UC Berkeley about the future of technology transfer and the emphasis of conference was about the benefits of multi-million dollar revenue sharing agreements UC had with companies like Monsanto and DuPont. That was a depressing world view and it did not bode well especially for the small farmers of the world.

As the world's food systems become more consolidated and vertically integrated, the land-grant university/extension model will become more essential to helping all but the largest agricultural producers maintain access to new technology and to new systems. The future of agriculture will not lie in the introduction of new chemicals or new machines. It will employ modified production systems. We should not ignore that there are many appropriate technology issues in America as there are in lesser developed countries. Introducing a new gadget or the latest GMO will not save the family farmer. Developing the components to a farming system that helps them fit into the global market place might.

Agriculture's move towards long-term sustainability has been shepherded thus far by CE. Though developed by scientists from an array of institutions, major technological advancements like integrated pest management, biological control and mating disruption were introduced to commercial agriculture by CE. I fear for the future of agriculture when it is no longer nurtured and led by CE. For the land grant university to continue this role they must find a way to continue working within agriculture and not just broadcast to this audience. We cannot just post new technology on a web site and expect profound transformations to take place on their own. Ask any school teacher or social worker and they will have experiences that are analogous.

Local government provides a significant part of our support. Our county-based system still works very well. In a historical context, our support is pretty good. If you compare us to the county libraries and other non-mandated programs, our county support is excellent. We will always have one or two problems like Sacramento and Orange counties.

Maintaining legislative support is the complicated part. When directing how CE is structured you have to consider the political dynamics of the state. State legislators are primarily interested in how their constituents are benefiting directly from state funded programs. If they don't think CE is addressing issues that are important to their constituents then they have little reason to support it.

CE needs to have a clear and distinct identity. That includes name, logo, appearance, slogan and other identifiers. CE needs to emphasize its mission of technology transfer and promote the unique aspect of our mission. We really need to have one, full time Director of CE at the AVP level who is responsible and has authority for every single full and partial CE FTE (including Specialists) in the University and is fully responsible for all CE dollars.

We are not just another public service arm of the university. Anyone can mail out or post annual research reports. We are supposed to be agents of change that will have a profound influence on how our food, fiber, forage and fuel is produced in the future. We need to be able to demonstrate what is unique about our programs and how we are uniquely qualified to address the problems facing agriculture during the 21 century.

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