



“Data highway” new route to DANR clientele

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On reaching the office these days, UC professors, specialists and advisors turn on their computers and are often greeted by a message, “You have new mail.” A keystroke or two, and they’re connected worldwide with colleagues, friends, and almost inexhaustible sources of information. One recent morning, I received a message from the director of the FoodSafe program at UC Davis reporting on his testimony to Congress on pesticides in children’s diets. There was also a request from a county advisor for information on the care and handling of roses, a proposal for a joint research project from a New Zealand entomologist, a message from the Library of Congress about their new electronic library, the draft program of a short-course from a specialist colleague, and the revised text of a joint manuscript from a friend in Malaga, Spain. These messages were on my desktop courtesy of the Internet, a global communications network established by the Department of Defense, and now maintained by the National Science Foundation.

Rapid and inexpensive communication via computer is only the start of a revolution that will solve a problem facing most land-grant universities — increased calls for service in a time of drastically reduced budgets and public support. The University of California, and especially the Division of Agriculture and Natural Resources, has a mission to provide research-based information to address the many challenges facing rural and urban Californians in the 1990s. However, falling budgets have left us less able to serve even our traditional clientele using past techniques. County offices have fewer advisors, and those that remain often have multi-county, multi-commodity, or multi-disciplinary responsibilities. The early retirement of some of our most experienced and respected specialists and faculty has left an information void that will not easily be filled by those who remain.

John Kinsella, the late Dean of the College of Agricultural and Environmental Sciences, recognized that modern communications technology provides an opportunity to break the impasse between declining resources and increasing demands for service, and was an enthusiastic supporter of its use. The Internet already provides an important vehicle for information flow in the Division. Advisors can seek help from specialists by E-mail, without playing the game of telephone tag that wastes so much time in modern offices. Information can be garnered from message groups, networks of discipline-related academics, and other sources across the nation and the world. On one day there was a request on my screen for information on video editing equipment for Cooperative Extension use; within 24 hours there were responses from video production specialists in several states.

It is estimated that 15 million Americans, including the President, now use the Internet for communication. In April 1993, 1.5

million computers were connected to the network, and information was flowing at the rate of 6 trillion characters a month.

The Internet provides more than a simple communication tool. Once I’m logged onto the Internet, I gain access to a vast array of information through “Gophers,” information databases resident in thousands of campus computer networks worldwide. For example, I recently used a Gopher to check on the soggy weather in the Midwest; I later looked for and found, in the electronic library of Congress, the name and address of a eucalyptus specialist in Australia.

At present, the Internet is primarily a text-based information provider. But the world of the 1990s demands graphics and video, and these tools will also be a part of the communications revolution. Already, 4-H and youth advisors can download 4-H curricula, including text and diagrams from the Almanac computer at UC Davis. The rapid increase in quality of consumer video equipment has been matched by a precipitous fall in its price. High-quality video is now available to any educator, and computer-based editing systems allow semi-professional editing of videotapes. Soon, high-speed communication lines will permit affordable transmission of video images. When the U.S. “data superhighway” is operational, some say in 4 years or less, it will be possible to download a 30-minute video in 2 to 3 seconds!

Truly interactive classroom instruction will be available at sites remote from the University’s campuses, and in the near future, the public will be able to gain access to the intellectual treasures of the University on their television sets. A high school teacher will be able to download a lecture on magnetism for his physics class from the University library, and a working mother will be able to complete her MBA degree in the evenings, participating in lectures and completing assignments at her own computer. Functioning examples of all of these technologies point the way to our participation in the electronics revolution. With video cameras on their desktops, specialists and advisors will be able to identify pests and diagnose problems on-screen. The day is not far off when a farmer will bring a diseased plant to his office and file a video request for identification and control measures with his county advisor.

The land-grant mission of the University has historically included direct communication with the public; we have served clients by working one-to-one on critical problems. Some in DANR express concern that use of the tools of mass communication will efface this culture. As our public increases, and our resources diminish, I believe it is vital that we use all the available communications resources to serve the public widely and well, yet safeguard time for the personal contacts and applied research that are critical factors in our continuing service to all Californians.