



Citizens' **ViewPoint**

A Study by Penn State University
Department of Agricultural Economics and Rural Sociology

USERS OF PENN STATE COOPERATIVE EXTENSION

The Land-Grant Act of 1862 provided grants of public lands to individual states with the stipulation that funds derived from their sale be used to finance a new type of institution for higher education. Whereas previous American colleges and universities were concerned largely with training the children of the wealthy in the classics, these land-grant colleges were "to teach such branches of learning as are related to agriculture and the mechanic arts ... to promote the liberal and practical education of the industrial classes."

With the inauguration of college level instruction in agriculture, it quickly became apparent that this teaching needed a more scientific foundation. Faculty, with their students, engaged in experiments in crop and animal production, and welcomed opportunities to share the results of their studies with others. The struggle to fund such efforts was intense and constant. Congress addressed the issue through the Hatch Act of 1887 which established experiment stations at each of the land-grant institutions. The act charged these schools "to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture and to promote scientific investigation and experiment respecting the principles and applications of agricultural science." Subsequent legislation has expanded federal support in this area.

Before many years had passed, the land-grant schools found themselves increasingly drawn into education of the public outside of college classrooms. Through conferences, institutes, demonstrations, and tours, they sought to extend their audiences among the general population. In 1914, through the Smith-Lever Act, Congress recognized the legitimacy and desirability of these activities and provided funds for Extension education. Penn State University, as the land-grant institution in Pennsylvania, carries forward the tripartite responsibilities of resident teaching, research, and extension.

As a cooperative effort, Penn State Cooperative Extension is linked to its counterpart agency in the United States Department of Agriculture, and associated with the 67 counties of the Commonwealth. Local, state, and federal levels of Extension share financial, educational, and legal responsibilities for the Cooperative Extension System. In Pennsylvania, as with other states and territories, Cooperative Extension is based at the land-grant institution.

The College of Agricultural Sciences at Penn State operates through 20 administrative units -- twelve academic units and eight regional extension units. To encourage integration of extension and research the academic units include faculty with extension, research, and resident education responsibilities. Regional Unit Leaders work with County Extension Agents, and these in turn,

operate with County Extension Associations. Some extension education implements federal programs; most programming, however, is derived from state priorities developed through the interaction of people and interests at all levels of Cooperative Extension.

In each of the state's 67 counties, a county extension director (CED) coordinates programs related to the defined state priorities in the local area. Local County Executive Committees work to ensure that extension's programming deals with problems relevant to people in their counties. Multi-county staff have broader geographic responsibilities as well as specialized areas of expertise. Many have research experience and operate as regional subject matter specialists.

Over 100 faculty members at Penn State hold extension appointments and provide leadership for extension education. There are approximately 300 county extension agents and 113 para-professionals who make up the extension field staff. More than 10,000 volunteers help to plan, deliver, and evaluate extension education programs on the local level. Penn State Cooperative Extension is available to every citizen of the Commonwealth through the county offices. Historically, extension sought to service the educational needs of farmers, their families and rural communities. While these remain important areas of concern, Cooperative Extension in Pennsylvania today is a far reaching educational network that helps individuals, families, businesses and communities throughout Pennsylvania access Penn State's resources and expertise to obtain information and instruction about a broad range of topics. Yet the vast majority of faculty and staff time (around 60 percent) is focused on agriculture and forestry, and children and youth programming.

The extension network is one part of Penn State Outreach and Cooperative Extension, which also includes Continuing Education, Distance Education/World Campus, and Public Broadcasting. Given its historical roots in rural society, the question can be raised. How effective is Penn State Cooperative Extension today in reaching the citizens of the Commonwealth? Does it serve rural and farm groups predominantly, or has its clientele been broadened to include more diverse audiences? How many households are reached by various kinds of extension education programming?

The Citizens' Viewpoint Surveys

The availability of data from three statewide surveys of Pennsylvania citizens, conducted in 1980, 1990, and 2001, provide information for addressing some of these questions. In 1980, the Department of Agricultural Economics and Rural Sociology at Penn State surveyed more than 9000 residents about their opinions on current social issues. In 1990, a similar study was conducted by the same Department with responses from over 3600 citizens of the Commonwealth. A third Citizens' Viewpoint, carried out in 2001, surveyed 4183 Pennsylvanians seeking information on their opinions about many of the same issues as those assessed in the earlier studies. Included on all three surveys were questions dealing with the household's use of Cooperative Extension services during the previous two years. The level of current usage and changes across the two decade were assessed.

It is important to note that some extension programs are not specifically targeted towards households, so these responses from a survey of households does not accurately represent the reach of such programs. These include educational programs intended for daycare providers, economic development agencies, state agencies, local governments, small businesses, agricultural processing firms, and others.

Use of Cooperative Extension, 2001

Respondents in the 2001 survey were asked: During the last two years, did you or any member of your household participate in or receive information from the Cooperative Extension Service in the following areas?

- 1) Children and youth (including 4-H)
- 2) Health nutrition, food safety
- 3) Family and home
- 4) Natural resources/environment
- 5) Community development
- 6) Agriculture/forestry
- 7) Home and community gardening/ insect control
- 8) Public affairs

Overall, more than one in every six Pennsylvania households had used the services of Cooperative Extension during the preceding two years (Table 1).

- The most frequent usage of Cooperative Extension was to obtain information on home and community gardening and insect control. Nearly 9% of all households had received information or participated in programming in this area. If one can assume that the sample is reasonably representative of households in the state, this would mean that about 412,000 households used this service at least once during the preceding two years.
- Almost 7% (an estimated 323,00 households) reported that they had received information or participated in programs dealing with health, nutrition, and/or food safety.
- About 6% accessed help in the areas of agriculture or forestry (an estimated 282,000 households).
- More than 5% of all households had utilized programs or information dealing with natural resources and/or the environment -- an estimated 259,000 households.
- About 4% (198,00 households) reported that one or more household members participated in activities related to children and youth (including 4-H).

- More than 3% (167,000 households) engaged in programs or sought information pertaining to family and home issues.
- Just over 3% (152,000 households) participated in public affairs programs or received information in this area.
- 2% (nearly 100,000 households) reported Cooperative Extension usage in the area of community development.

In an effort to ascertain the extent to which the reported use of Cooperative Extension represented multiple as opposed to single contacts, the number of types of programs was tallied for each household. Such a measure underestimates the incidence of multiple use since it ignores the possibility that households might use multiple programs within the same program-type, but no more precise indicator was available from the present data.

- Of those who reported receiving information or participating in Cooperative Extension educational programs, 57% indicated that such usage occurred in more than one of the types of program areas defined on the survey form.
- Nearly 30% reported uses of three or more types of programs.

Household Characteristics and the Use of Extension Programming

Although Cooperative Extension has educational programs intended for all citizens, it has some programs specifically intended for farmers and their families, and a significant proportion of extension resources support such farm programming (Table 2).

- Farm households were more likely to utilize Cooperative Extension services than were nonfarm households. For farm households more than, 55% reported at least some use of extension programs or information, while only 16% of the nonfarm households reported such use. Moreover, for every one of the specific program areas, farm were more likely than nonfarm households to report Cooperative Extension usage.
- Residents of nonmetropolitan counties had higher levels of use of Cooperative Extension services than did metropolitan households. About 24% of the households in nonmetropolitan counties indicated that they had used these services during the last two years compared to just over 16% of the households in metropolitan counties. Some programs showed little difference between metro and nonmetro usage levels, although in every cases except one (community development programming), participation levels were slightly higher for nonmetro than for metro households.

- With increasing income levels, the proportion of extension users increased from 15% for those with less than \$20,000 of household income to 20% for those with \$80,00 or more. However, the pattern of usage for the specific types of programs was less clear. For five of the eight types of programs, differences among the income categories were small. Of the remaining types of programs, only those dealing with natural resources and the environment and agriculture/forestry showed a clear increase in usage with increasing income.

Although farm and nonmetropolitan households were more likely to use Cooperative Extension programs than were nonfarm and metropolitan households, there are many more nonfarm and metropolitan families in Pennsylvania. As a result, by far the largest percentages of participants overall and in all eight types of programs were nonfarm and metro households (Table 3).

- 90% of all households reporting some use of Cooperative Extension services during the last two years were nonfarm households, and 80% were households in metropolitan areas.
- 90% of the households in which one or more members participated in some form of youth programming (including 4-H) were nonfarm, and 80% were from metropolitan counties.
- 89% of the home and community gardening and insect control contacts were nonfarm households, and 80% were from metropolitan counties.
- 88% of the households accessing programs or information dealing with health, nutrition and food safety; community development, and public affairs were nonfarm households, while 80% and more were from nonmetropolitan counties.
- Even clients for agriculture and forestry programming were mostly (76%) nonfarm households, and most (74%) lived in metropolitan counties.

Changes in Programming Use, 1980, 1990, 2001

The 1980 and 1990 Citizens' Viewpoint surveys also asked respondents to indicate whether any member of their household had participated in a program or received information from Penn State Cooperative Extension during the last two years. However, the listing of program areas differed from those described in the 2001 survey. In 1980, four areas were officially viewed as the major programming emphases for Cooperative Extension in Pennsylvania. These were: 1) agriculture/natural resources, 2) family living, home economics, nutrition, 3) youth and 4-H, and 4) community and public affairs. By the time of the 1990 survey, the program base had been broadened. Nevertheless, the original four-item listing was utilized in the 1990 survey for comparability with the 1980 data. As described above, the 2001 survey sought somewhat more detailed information. However, comparison across the three studies necessitated a return to the

previously used four-category classification. Accordingly, the eight categories used in 2001 and listed above were combined as follows:

- Agriculture and natural resources (categories 4, 6, & 7).
- Family living, home economics, nutrition(categories 2 & 3).
- 4-H, and youth programs (category 1).
- Community and public affairs programs (categories 5 & 8).

The traditional role of extension in disseminating technical information about agriculture-related topics reached the largest percentage of households in 1980, 1990 and 2001 (Table 4).

- In 1980, 7% of the households surveyed indicated usage of programs dealing with agriculture and/or natural resources; by 1990, this figure had increased to nearly 8%, and in 2001, the figure was over 12%. “Agricultural” programs included programming and information on natural resources, home gardening, ornamental plants, lawns, and other related topics. The rapid increase in interest in gardening and home landscaping in recent years was likely responsible for some of this increase. Moreover, in the 2001 survey, the additional category “home or community gardening/ insect control” reminded respondents of this use, and likely also contributed to the increased reported use of this type of programming.
- Programming and/or information on family living, home economics, and nutrition reached almost 8% of all Pennsylvania households in 2001, compared with 7% in 1990 and only 5 percent in 1980. Programming in this area included child care, family relationships, care of the elderly, homemaking tasks (cooking, sewing, canning, handicrafts, etc.), food safety and nutrition and related topics. "Programs" here, as in the other subject matter areas could include not only meetings, lectures, and/or workshops, but also receipt of newsletters and self-study materials devised by and distributed through extension channels.
- In 1980, 2% of the households indicated that one or more of their members participated in 4-H or related programs. By 1990, the rate of participation had risen to 3%, and by 2001 the percentage was more than 4%.
- In 1980 only 3% of those surveyed reported that a member of the household had utilized extension programming in community and public affairs; in 1990, 5% indicated usage. Since 1990, there has been slight decline in the percentage of households reporting use of community and public affairs programming and information to 4%. Because much of this work deals directly with government officials and community leaders, the number of households in which members directly participated in these types of programs may be relatively small, but their impact on community life could be substantial.

When all four types of activities were combined, 13% of the 1980 households, 17% of the 1990 households, and nearly 18% of the 2001 households reported that one or more members had utilized the resources of Cooperative Extension at least once during the previous two years.

- If the samples are reasonably representative of the Pennsylvania population as a whole, an estimated 840,000 households were serviced by Penn State Cooperative Extension in 2001. This represented a substantial increase from the corresponding estimated usage in 1990 of 773,000, and, in 1980, of 544,000 households. The increase in households served represented a 54% increase between 1980 and 2001, with more than three-quarters of that growth occurring between 1980 and 1990.
- Between 1980 and 2001, youth/4-H programming increased by more than 100% in the number of household served (from an estimated 97,000 households in 1980 to 198,000 in 2001), with more than half of that growth occurring in the last decade.
- Programs dealing with agriculture and natural resources also increased by more than 100% between 1980 and 2001 in regard to the number of households served (from 295,000 to 602,000 households). However, as noted above, this figure may be somewhat inflated by the inclusion of home and community gardening and insect control contacts.
- The estimated number of households participating in programming in family living, home economics, and nutrition increased by 72% between 1980 and 2001 (from 219,000 to 377,000), but less than 40% of that increase occurred between 1990 and 2001.
- The estimated number of households served by community and public affairs programming increased by 87% from 127,000 in 1980 to 238,000 in 1990, but declined between 1990 and 2001 to 191,000.

These data show that both the proportion and absolute number of households reached by Cooperative Extension increased over the two decades between 1980 and 2001. However, there was some evidence of a slowing of the growth rate in number of households served, both overall and in regard to all types of programs except youth/4-H, and agriculture/natural resources.

To obtain information on the extent to which individual households participated in different types of programs, the data were recast to indicate the total number of types of programs used by each household.

- In 1980, 73% of the households that participated in extension programming reported that they had utilized only one type of activity; in 1990, the corresponding figure was 76%.
- In 2001, the proportion of single-type of program users had declined to just 57%.

Summary

Through the years Cooperative Extension in Pennsylvania and throughout the nation has sought to extend its programming to meet the varying needs of changing constituencies. While internal evaluations have monitored the effectiveness of specific programs, more general external indicators of the extent of Extension's impact have been less common. The availability of data from three statewide Pennsylvania surveys, conducted a decade apart, allowed for an assessment of the current status of Cooperative Extension in the Commonwealth and changes in the number of households reporting extension usage over two decades. Mail surveys carried out in 1980, 1990, and 2001 obtained information from samples of 9,957, 3,632, and 4,183 Pennsylvanians respectively. Respondents were asked whether, during the preceding two years, any member of the household had participated in or received information from Cooperative Extension in each of a number of programming areas.

Based on the 2001 survey, an estimated 840,000 (17.6%) of all Pennsylvania households used the resources of Cooperative Extension during the preceding two years. Information on home and community gardening and pest control were the most often mentioned areas in which residents sought information from Cooperative Extension, followed by health, nutrition and food safety concerns, agriculture and forestry, issues associated with natural resources and the environment, children and youth (including 4-H), family and home, public affairs and community development.

Penn State Cooperative Extension reached more Pennsylvania households in 2001 than it did in 1980 or 1990. This was true whether one considered the proportion of all households reporting usage or the estimated number of families reached. Greater usage was evident in three of the four traditional program areas surveyed -- agriculture and natural resources; family living, home economics and nutrition, and 4-H and youth. During the 20-year period, the number of households reporting use of Cooperative Extension youth and 4-H programs increased by more than 100% . Agriculture (including gardening and natural resources) also increased by more than 100% in terms of the number of households served. There was a 72% rise between 1980 and 2001 in the estimated number of households using family living, home economics, and nutrition programs. After an extremely rapid (87%) growth between 1980 and 1990, there was a decline in the proportion and number of households using community and public affairs programming and information. Even so, when the total period between 1980 and 2001 was considered, there was an overall 50% increase in the number of households using community and public affairs programming and information. There was, however, evidence that the increase in number of households served had slowed during the period from 1990 to 2001 for all of the program areas except youth and 4-H, and, perhaps, agriculture/forestry.

While the proportions of farm and nonmetropolitan households using extension were greater than the percentage of nonfarm and metropolitan household users, the vast majority of the clientele of Penn State Cooperative Extension were neither farm nor nonmetropolitan. Nonfarm users

outnumbered farm users by almost three to one even in agriculture and natural resource program use; in most other areas the ratio of nonfarm to farm household users was even higher.

Extension has been seen in the past as servicing mostly the needs of middle and upper income audiences, and these data did show that as income increased, the percentage of households reporting some extension use increased. However, for most program types there was little evidence of increasing rates of usage associated with increasing income.

Data from this analysis suggest that in the two years preceding the 2001 survey more than one in every six Pennsylvania households participated in programs or received information from Cooperative Extension. Although the traditional rural and farm clientele continued to be an important target audience, the growing clientele for Extension, coupled with the enhanced diversity of its programming and its relevance to more general populations suggests that Penn State Cooperative Extension will continue to effectively contribute to enhancing the lives of urban, suburban, and rural citizens of the Commonwealth.

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Table 1. Rates of use for different types of Cooperative Extension programs and estimated numbers of households served, for 2001.

Type of Program	Rate of Use %	Estimated Number of Households
Home/community gardening/insect control	8.6	412,000
Health, nutrition, food safety	6.8	323,000
Agriculture/Forestry	5.9	282,000
Natural resources/Environment	5.4	259,000
Children and youth (including 4-H)	4.2	198,000
Family and home	3.5	167,000
Public affairs	3.2	152,000
Community development	2.1	99,000
All programs combined	17.6	840,000

Table 2. Rates of use of various types of Cooperative Extension programs/information by household characteristics, 2001.

Extension Type	Farm Status		Metropolitan Status		Household Income			
	Nonfarm (n=3894)	Farm (n=128)	Metro (n=3491)	Nonmetro (n=610)	<\$20,000 (n=668)	\$20,000- 39,999 (n=1054)	\$40,000 - 79,999 (n=1322)	\$80,000 & over (n=642)
	-----% using-----	-----% using-----	-----% using-----	-----% using-----	-----% using-----	-----% using-----	-----% using-----	-----% using-----
All programs	16.3	55.5	16.5	24.1	14.8	16.3	19.7	20.1
Children and youth	3.9	13.4	4.0	5.7	2.7	4.0	5.0	5.1
Health, nutrition, food safety	6.2	25.0	6.3	9.3	7.3	5.9	6.8	7.9
Family and home	3.1	15.7	3.2	4.6	3.3	4.4	3.3	3.6
Natural resources/ environment	4.6	26.0	5.1	6.7	4.0	4.0	6.4	7.8
Community development	2.0	8.7	2.1	1.6	2.2	2.2	2.3	2.3
Agriculture/forestry	4.6	44.9	5.2	10.3	4.0	4.7	7.1	7.9
Home/community gardening and insect control	8.0	29.1	8.0	11.6	6.1	7.6	10.8	9.7
Public affairs	2.9	11.8	3.1	4.1	4.0	2.8	3.0	4.5

Table 3. Percentages of total users of various types of Cooperative Extension programs/information in various types of households, 2001.

Extension Type	Farm Status		Metropolitan Status		Household Income			
	Nonfarm	Farm	Metro	Nonmetro	\$<20,000	\$20,000-39,999	\$40,000 - 79,999	\$80,000 & over
	-----%	-----%	-----%	-----%	-----%	-----%	-----%	-----%
All programs	89.9	10.1	79.7	20.3	15.0	26.0	39.5	19.5
Children and youth	89.8	10.2	79.8	20.2	11.3	26.4	41.5	20.8
Health, nutrition, food safety	88.3	11.7	79.4	20.6	19.4	24.6	35.7	20.2
Family and home	85.9	14.1	80.1	19.9	16.4	34.3	32.1	17.2
Natural resources/environment	84.5	15.5	81.4	18.6	13.2	20.6	41.7	24.5
Community development	87.4	12.6	88.2	11.8	17.9	27.4	36.9	17.9
Agriculture/forestry	75.8	24.2	74.2	25.8	12.2	22.5	42.3	23.0
Home/community gardening and insect control	89.4	10.6	79.8	20.2	12.6	24.5	43.9	19.0
Public affairs	88.3	11.7	81.1	18.9	21.8	23.4	31.5	23.4

Table 4. Comparison of 1980, 1990, and 2001 citizen usage of types of Cooperative Extension programs.

Program Type and Year	Rate of Use %	Estimated Number of Households
Agriculture/natural resources		
1980	7.0	295,000
1990	7.9	355,000
2001*	12.6	602,000
Family living, home economics, nutrition		
1980	5.2	219,000
1990	7.1	319,000
2001	7.9	377,000
Youth and 4-H		
1980	2.3	97,000
1990	3.0	135,000
2001	4.2	198,000
Community and public affairs		
1980	3.0	127,000
1990	5.3	238,000
2001	4.0	191,000
All programs combined		
1980	12.9	544,000
1990	17.2	773,000
2001	17.6	840,000

*Figures for 2001 include those reporting that they received information related to home or community gardening/insect control. Eliminating those responses, the rate of use for Agriculture/Natural resources in 2001 was 8.2% (391,000 households).