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## CHANGES IN RESOURCE ECONOMICS AND COMMUNITY DEVELOPMENT PROGRAMS: THE NEW HAMPSHIRE EXPERIENCE

Edmund F. Jansen, Jr.

### INTRODUCTION

Agricultural economics became a formalized program at the University of New Hampshire fifty one years ago. During the first thirty five years, the program was primarily a traditional agricultural economics program emphasizing farm management, agricultural marketing, agricultural policy and related subjects. However, during the past fifteen years, the program has undergone profound changes and evolved into one which places emphasis on natural resource economics and community development. In this paper, I will discuss the evolution of the agriculture/resource economics at the University of New Hampshire and look at the changes in course offerings, student enrollment, faculty staffing and factors that have been responsible for the changes that have occurred. Then, I will discuss some of the factors that may influence the future trends in the Resource Economics teaching and research program during the next few years.

### AGRICULTURAL/RESOURCE ECONOMICS BEFORE 1969

The current program at the University of New Hampshire can be traced back to 1927 when the first courses in agricultural economics were introduced on campus. That same year, a separate Department of Agricultural Economics was organized and began to offer an undergraduate degree in agricultural economics. A review of the undergraduate catalogs indicates that the major emphasis of the teaching program was on the economics of commercial agriculture until the 1960's. Then emphasis shifted toward natural resource economics and community development. The 1953 Undergraduate Bulletin stated that:

The Curriculum in Agricultural Economics is designed to meet the needs of two groups of students: (1) those who are interested in becoming farmers, farm managers, farm credit representatives, county agricultural agents, managers of cooperatives or representatives of firms marketing farm products or selling supplies and services to farmers; and (2) those who wish to prepare for more specialized positions in agricultural colleges, experiment stations, government agencies or research departments of industrial firms servicing agriculture.

. . . . All students majoring in this field are expected to gain a good background in practical agriculture.

Ten years later, the 1963 catalog stated that the student in agricultural economics learns primarily the science of economics and the application of economics to farm management, food marketing, agricultural price policy, use and conservation of natural resources, world food supply, and growth in underdeveloped countries.

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In 1953, the undergraduate bulletin of the University of New Hampshire listed eight undergraduate courses in agricultural economics — economics of the agricultural industry, farm management, economics of consumption, cooperative business, agricultural finance, agricultural marketing, agricultural policy, and special problems. Additional graduate-level courses listed in the Graduate Catalog included: advanced farm management, advanced land utilization and agricultural policy, advanced statistics for agriculture and readings and research in agricultural economics. The emphasis was on traditional problems of commercial agriculture — management, marketing, and price policy.

Seven years later in 1960, the list of undergraduate courses remained nearly the same except that the cooperative business course had been dropped and an agricultural business course added. Linear programming, economics of resource development, production economics and research methods in social sciences had appeared in the list of courses by 1964, while agricultural finance had been removed.

During the early 1960's, enrollment in several traditional agricultural economics courses dropped below 10 students and the number of agricultural economics majors also declined to less than 10. As part of an effort to attract non-agricultural oriented students, the name of the Agricultural Economics Department was changed to Resource Economics in 1964. However, the old course titles and content remained unchanged, for the most part, until about 1969-70. Regional economics and location economics courses were added by a new faculty member in the late 1960's.

### THE UNIVERSITY AND COLLEGE — 1960 to 1978

To place the change in student enrollment in Resource Economics and the University of New Hampshire in the proper perspective, we need to briefly consider the state in which the University is located.

The State of New Hampshire has experienced rapid population and industrial growth since 1960. The State's population grew from 607,000 people in 1960 to about 820,000 in 1978. This growth has been fostered, in part, by the attractiveness of natural amenities in the state, its proximity to the large Boston metropolitan area to the south, and an economic-political environment which has been receptive to the organization and expansion of new businesses within the state. The state is noted as being the only one in the Union that has neither a sales nor an income tax. While the absence of sales and income taxes has made it a relatively attractive place for businesses and new residences, the lack of tax bases has made it difficult to provide financing for public facilities and services within the state at levels comparable to those provided elsewhere. The state has the dubious reputation of being last among the 50 states in terms of per capita public contribution to higher education.

The rapid expansion in enrollment at the University of New Hampshire during the 1960's and 1970's was associated with both the baby boom of the 1950's and large state immigration.

University enrollment expanded from an approximately 3,425 students in 1960 to approximately 10,250 students in 1978. Currently, the University administration is attempting to hold enrollment on the campus constant at approximately 10,500 students. Enrollment in Resource Economics courses and the number of Resource Economics majors reflect, in part, the overall trends in University general enrollment. Between 1960 and 1970 student enrollment increased from 3,424 students to about 8,620 students — an increase of 152 percent (see Table 1). In the same period enrollment in the College of Life Sciences and Agriculture grew from 229 students to 698 students (205 percent increase). During this period of rapid expansion of the University and the College of Life Sciences and Agriculture, enrollment in Resource Economics actually declined during the first part of the decade and then began to increase slowly during the latter part of the decade.

Between 1970 and 1975, the University enrollment increased to 9,945 students (about 3 percent per year); whereas, enrollment in the College of Life Sciences and Agriculture increased to 1,616 students (about 15 percent per year). During this period, majors enrolled in the undergraduate Resource Economics program began to increase from about 10 students to 22 students (nearly 20 percent increase per year). Since 1975, University enrollment has continued to increase less than 1 percent per year and enrollment in the College of Life Sciences and Agriculture actually declined slightly. However, between 1975 and 1977, the number of Resource Economics majors nearly doubled from 22 to 40. These figures suggest that enrollment trends in Resource Economics have lagged behind the general University and College trends and appear related to factors other than the general increase in the size of the student body.

The trends in Resource Economics enrollments were related to overall population and economic activity trends within the state. While there has been a rapid expansion of the manufacturing and service sectors in the state, the commercial agricultural sector has continued its relative decline so that farm population accounts for less than 1 percent of the state's population. Also, over 30 percent of the student body at the University of New Hampshire are out-of-state students who come primarily from Southern New England and the Mid-Atlantic States. Consequently, the majority of the students entering the Resource Economics program come from non-farm backgrounds and rarely intend to turn to commercial agricultural activities. It should not be a surprise that the demand for the traditional farm management, agricultural marketing courses experienced a significant decline at the University of New Hampshire. However, students are interested in courses and curriculum within the College of Life Sciences and Agriculture as indicated by the large enrollment increase in the College at the University of New Hampshire between 1960 and 1975. Today, classrooms are occupied by students with new interests and new motivations. Students demand resource economics courses with application to natural resource problems, environmental issues, rural development and community development. Thus, the resource economics faculty found that there were few takers for the old traditional agricultural economics courses which we continued until the late 1960's.

The combination of changing student interest, financial budget restrictions and demands for accountability and cost effectiveness, forced the economics faculty to consider offering new courses that would attract students in the academic marketplace. Since 1960, eight new courses have been added in the Resource Economics program and a new Community Develop-

ment program with five new courses was established at the University of New Hampshire.

**TABLE 1.**  
**Enrollment at the University of New Hampshire, College of Life Sciences and Agriculture and Resource Economics, 1960-1978**

| Year | University of New Hampshire | College of Life Sciences & Agriculture | Resource Economics |
|------|-----------------------------|--|--------------------|
| 1960 | 3,424                       | 229                                    | 15 <sup>a</sup>    |
| 1970 | 8,620                       | 698                                    | 15 <sup>a</sup>    |
| 1975 | 9,945                       | 1,616                                  | 30                 |
| 1978 | 10,245                      | 1,570                                  | 45                 |

Source: University Registrar and Resource Economics Records

<sup>a</sup> Estimates for 1960 and 1970

### RESOURCE ECONOMICS AFTER 1969

In addition to the courses in linear programming and regional economics, already mentioned, several courses have been developed since 1969 to better serve student needs and interests. In the fall of 1969, the faculty began offering a new introductory resource economics course designed to acquaint non-majors with resource economics. The enrollment in this course grew from about 25 students the first year to more than 200 students at the present time. Several of the current majors in resource economics were first attracted to the program by this course. The fact that agricultural economics is not a required course in the College of Life Sciences and Agriculture has reduced student exposure to economics in the College.

In response to interest expressed by students and the College Dean, a new course, Population, Food and Resource Use in Developing Countries, was offered during the Spring semester of 1970 by a new faculty member with previous overseas experience. Although initiated as an elective for agricultural college students, a large proportion of the students who enroll in this course come from non-agricultural degree programs in other colleges on campus.

During the seventies, courses in water economics, land economics, and marine economics have been developed. Seminars in environmental economics and energy economics also are offered.

The current (1978) Undergraduate Catalog states the resource economics program "offers training in resource economics, including public resource policy, resource management, conservation economics, and regional economics. Training is also available in agricultural economics, including farm management, food marketing, agricultural policy, and world food supplies." Thus, although training is offered in agricultural economics, it no longer receives top billing or commitment of resources.

While the number of resource economics majors began to increase after 1970, enrollment in resource economics courses expanded more rapidly. The merger of the Resource Economics Department with the Forestry Department and the Soil and Water Department to form the Institute of Natural and Environmental Resources (INER) in 1970, had a major impact on the resource economics program. Following the organization of the Institute, a large proportion of the majors in the Institute were required to take an introductory course in resource economics. This caused a significant increase in the service course role played by the resource economics faculty. The demand for



undergraduate resource economics courses is also influenced by the fact that most of the lower-level resource economics courses can be used by students to satisfy general University educational requirements in the Social Science area.

### THE COMMUNITY DEVELOPMENT UNDERGRADUATE PROGRAM

The undergraduate community development program was organized within the Institute of Natural and Environmental Resources in response to perceived student and faculty interest in 1970. This program was designed as an interdisciplinary, applied social science curriculum which focused on the planning and implementation of change within local communities. Both the process of community development and the content of local change programs received emphasis. Field experiences and student involvement in on-going community development activities in local communities and governmental agencies received priority in the student's educational program. The faculty for this new program was drawn mainly from the resource economics faculty which had prior experience in community and rural development both within the United States and overseas. The program faculty continued to emphasize the importance of economics in the decisions that are made in local communities. The students were given a good grounding in both social theory of community decision-making processes, and economics. Emphasis was also placed upon picking up planning skills, communicative skills, etc. During 1971, the first year the program was offered, four students majored in community development. By 1974, this number had increased to 25, and by 1976, there were approximately 40 majors in the community development program and since that time, that number has fluctuated between 30 to 40 majors. Most of the students in the new community development program have entered as transfers from other programs within the University of New Hampshire or colleges elsewhere during their second semester as sophomores or their first semesters as juniors. Approximately 40 percent of the community development students are females as compared to approximately 25 percent females within the traditional Resource Economics program. Approximately 23 percent Community Development majors are out-of-state residents coming primarily from the states of Massachusetts and Connecticut with a few additional students coming from New Jersey, New York and Florida. In contrast, approximately one-half of the majors in resource economics are New Hampshire state residents, while the other half come mainly from northeastern states.

### FACULTY IN RESOURCE ECONOMICS/COMMUNITY DEVELOPMENT

There are about 20 courses listed in the catalog that are taught by individuals classified as members of the resource economics/community development faculty. Although about 10.5 full-time faculty equivalents are listed as members of the Resource Economics faculty, on 2.6 man equivalents are assigned to teach Resource Economics or Community Development courses, and .4 to teaching statistics or other INER courses. Research assignments account for 2.2 full-time equivalents, and extension another 2.4 man equivalents. The remaining 2.9 man equivalents are assigned to administrative or research activities outside the Institute of Natural and Environmental Resources. Clearly, 3.0 teaching man equivalents is not sufficient to cover 20 courses, especially when the introductory course has three

or four sections. The shortage of teaching faculty was further aggravated by the high turnover rate of young faculty members in recent years. During the 1974-77 period, there was normally one resource economics position unfilled. Consequently, the remaining faculty were required to shoulder teaching overloads, often to the detriment of teaching and research productivity. In order to offer courses, some contract personnel on soft money have been utilized. But soft money from continuing education students enrolling in resource economics courses has been declining. In an effort to continue offering courses as required by majors, several of the resource economics courses are now offered only every third semester. While student contact hours have increased three or four fold during the past few years, faculty time allocated to teaching has remained nearly constant.

### RESOURCE ECONOMICS GRADUATE PROGRAM

The University of New Hampshire began offering a Masters in Agricultural Economics shortly after the Department of Agricultural Economics was established fifty years ago. The graduate program complemented a strong research program in agricultural economics. New Hampshire has served as a field station for U.S.D.A., E.R.S. researchers for many years. Although the graduate program was limited in size, the availability of faculty and E.R.S. personnel enabled students to acquire high-quality training. In recent years, the requirement that research be directed toward agricultural research, especially marketing, hindered graduate student recruitment. While assistantships were tied to marketing projects, students were seeking opportunities to work on problems associated with natural resources, energy, water use, etc. The establishment of regional projects in land use, community services, and migration have reduced the problem of matching graduate student interest with funded research.

The lack of teaching and research assistantships (normally only three research assistantships have been available) has limited enrollment of graduate students who need financial assistance. While some agricultural economics departments have increased graduate student enrollment by the admission of foreign students, New Hampshire has given low priority to foreign students.

A two-year effort in 1974 and 1975 to establish an inter-college level Masters degree program in community development failed when the proposal received inadequate administrative support. As a short-term alternative, approval was given to offer a Masters of Resource Economics with a strong concentration in community development.

### DIRECTIONS FOR RESOURCE ECONOMICS/COMMUNITY DEVELOPMENT

Enrollment in resource economics courses and curricula have been influenced by both supply and demand factors operating at the national, state and local levels. Several important world and national issues have influenced student interest and participation in courses during the past ten years. Some of these events lead to long-range changes in the demand for courses while others represent mere short-run fads. International or national factors that have had some influence on student demand for courses during the past ten years include: the population explosion, world food problem, the conflict in Southeast Asia, high inflation and unemployment, the energy crisis, the war on poverty, Earth Day and the concern with environmental pollution and degradation, high taxes and the current growing tax revolt. In general, many of the issues and problems of the past ten

years have created a greater awareness of natural resource problems and consequently, have created a greater interest on the part of some students in the area of natural resource economics.

At the State level, efforts to promote industrial growth and population have created a larger pool of students from which to draw, but the restrictive, conservative fiscal policies of the State have tended to reduce the University's ability to respond to the new demands being placed upon it by this growing population. The energy crisis and general inflation in the economy also have reduced the ability of the University to respond to new additional student demands with a given-sized budget.

At the local institutional level, two major structural changes have occurred in the last fifteen years that have had a significant influence upon the demand and supply of resource economics offerings. The rapid expansion of the Whittemore School of Business and Economics during the 1960's and the organization of the Institute of Natural and Environmental Resources in 1970, have probably served to reduce the visibility of the Resource Economics Department at the University of New Hampshire. Economics at the University of New Hampshire tends to be associated with the Whittemore School of Business and Economics since the overall name of the institution implies that this is a school of economics on the campus, whereas, the School of Life Sciences and Agriculture tends not to be identified with economics or other social science disciplines. The Institute of Natural and Environmental Resources is recognized as the natural resource department on campus. Many students are unaware that Resource Economics and Community Development exist on campus.

#### FUTURE STUDENT ENROLLMENT

Future student enrollment in resource economics will be influenced by overall college enrollment and by student perception of opportunities for individuals with training in resource economics. In this era of rapidly inflating college tuition costs and declining college-age population, concern exists among College administrators about possible enrollment declines during the next ten years. Decline in enrollment associated with declining population probably will not be as severe at state institutions within New Hampshire during the next few years due to the continued growth of population because of immigration now occurring. However, the lack of public support for higher education has pushed out-of-state tuition to among the highest for a state institution in the country. Since out-of-state enrollment accounts for 25 percent or more of the students at the University and in the resource economics curriculum, continued increases in student cost could lead to a decline in out-of-state enrollment in future years.

In examination of past enrollment trends in resource economics and community development indicate that a majority of the majors in these two programs entered as transfer students during their sophomore or junior years. Although some of the transfers enter from junior colleges and other institutions in the Northeast, a majority of the transfers represent intercollege transfers of students on the Durham campus. Many of the intercollege transfers originally entered the University as undeclared majors in their freshman year, but were required to declare a major by their junior year. During the past year, freshmen applications for both resource economics and community development could be counted on one hand. In part, this reflects lack of knowledge about the nature of resource economics and community development, and also reflects the

lack of understanding of these programs by guidance counsellors in the state's high schools. A somewhat larger number of freshman from out-of-state than from within the state, apply for these programs. This may be due, in part, to the fact that while quotas have been established for some degree programs within the college, no entrance limitations have been placed upon resource economics and community development. Therefore, several students who are not fully informed about the nature of the programs may select these programs to increase their possibility of admittance to the University from out-of-state. Efforts to recruit additional students for resource economics and community development would suggest that recruitment efforts should be directed toward the large pool of undeclared and general studies freshmen and sophomores located on the Durham campus. Recruitment efforts must take into consideration the fact that most of today's students are looking for a field which will make them employable upon graduation. Therefore, the faculty must assure that the program of study includes courses which will enable the student to compete in the job market upon graduation. Those programs which have successfully prepared students for employment opportunities in the past will attract students in the future. Therefore, efforts are needed to publicize the successful employment experiences of recent graduates. Faculty advisors assisting students in developing their academic programs should give care to assisting students in selecting minor areas of study which will improve the chances of future employment. Students majoring in resource economics who know how to use computers for problem solving, or students who have combined resource economics with business administration, or public finance, find that they can successfully secure jobs in today's labor market.

#### PREPARING FOR THE FUTURE

In planning for the future at the small land-grant college, the resource economics/community development faculty will have to constantly review the curriculum to assure that it meets the needs of the students in a tight labor market. The shift in agricultural research allocation formulas towards more competitive types of grants will create additional problems for small institutions with a small faculty. The so-called tax revolt may mean even more restrictions on state and federal funds for higher education in the years just ahead. The New Hampshire experience suggests that agricultural/resource economics programs must be adjusted to ensure survival in times of rapid change and limited resources.

The limitations of budget and faculty suggest that small agricultural/resource economics departments should give serious consideration to regional cooperation and specialization among states. For example, in Northern New England, one state could specialize in agricultural marketing, another in farm management, and a third, in natural resource economics. By arranging for student exchanges or exchanges of visiting professors, students could be given an opportunity to secure course offerings or research experiences that are normally beyond the financial means of small land-grant institutions. Regional planning for staffing in agricultural/resource economics would enable faculty to avoid duplication of faculty in some fields while other fields go uncovered adequately. Regional planning efforts would also enable small land-grant schools to better join efforts to secure competitive research grants in the region.