A NATIONAL STUDY OF THE SUPPLY AND DEMAND FOR TEACHERS OF VOCATIONAL AGRICULTURE IN 1987

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Preface

For the twenty-third year, the Agricultural Education Division of the American Vocational Association has authorized the collection and dissemination of national data on the supply and demand for teachers of vocational agriculture. What began in 1965 as a response to a perceived shortage of vocational agriculture teachers has evolved into a long-standing annual study used for student counseling, recruitment, and program planning.

A CORRECTION to the 1986 study. An error has been found in reporting the number of teaching positions for Texas. The number reported was 999; the actual number should have been reported as 1539. That affected the U. S. total number of positions, which was incorrectly reported as 11,042. The correct number was 11,589. The tables in the present study have been corrected accordingly.

This paper reports the results of the 1987 study. Recommendations include the initiation of a separate study of the supply and demand, working conditions, salary, and characteristics of post-secondary teachers of agricultural education. A second recommendation is the formation of an advisory committee to reexamine the form and purposes of the study in future years.

In response to the request of the Professional Personnel Recruitment Committee of the Ag. Ed. Division, chaired by Dr. Jacquelyn Deeds of Mississippi State University, which authorizes and sponsors the study, a series of brief news releases are being prepared for dissemination. One such release is included in the appendices. Users of the study are encouraged to duplicate the release and send it to appropriate media and agencies that may have a use for such information.

A NATIONAL STUDY OF THE SUPPLY AND DEMAND FOR TEACHERS OF VOCATIONAL AGRICULTURE IN 1987

Passage of the Vocational Education Act of 1963 set off a series of events that have produced a marked expansion in the size of the agricultural education program in America. Many forces have affected the supply and demand for teachers in vocational agriculture during the decades since that landmark federal legislation. Teacher shortages were the norm for most of those years. As a result of a perceived nationwide shortage of teachers of vocational agriculture, the Agricultural Education Division of the American Vocational Association authorized Dr. Ralph Wooden, of The Ohio State University to initiate a national study in 1965 of the supply and demand for teachers of vocational agriculture in the United States (D. G. Craig, personal communication, July, 1985).

For virtually all of the intervening years, until the early 1980's, there was a continuing shortfall in the number of qualified teachers seeking employment in teaching vocational agriculture (Camp, 1987). Yet, even in years when substantial numbers of departments could not open because of a lack of qualified teachers seeking employment, the very existence of a shortage of vocational agriculture teachers was often a source of debate (Parmley, Bowen, & Warmbrod, 1979; Craig, 1985).

There has been a national trend during the mid-1980's toward increasing academic requirements for high school graduation (Frantz, Strickland, & Elson, 1987). This trend typically has been inter-

preted to mean more math, science, and English, and less of everything else for high school students. That situation, coupled with an overall nationwide decline in the total number of high school students during the first half of this decade, produced a general perception within the profession that agricultural education could expect enrollment problems in many states.

Because of that uncertainty and because the teacher shortages in the profession, which had marked agricultural education for so many years, seemed to be a thing of the past, the faculties of many teacher education programs relaxed recruitment efforts. When we add to that situation the general malaise in the agricultural industry nationwide, from which we seem to be beginning to emerge, it is easy to see that declines undergraduate enrollments in agricultural teacher education programs might be affected. Indeed, that result was reported by this study last year (Camp, 1987).

At the same time, public criticism of education in general has produced an increased public concern and commitment to improve the educational system in this country (Holmes, 1986). One of the implications of this latest development appears to be an increased effort at the professionalization of teaching and an improved status for teachers and for teaching, as well as increased salaries for teachers in most states (Carnegie, 1986). These improvements, coupled with the perception by the American public that a serious, overall teacher shortage may be imminent, appear to be producing an upswing in the number of undergraduates entering teacher education programs. This situation seems to hold whether the impending teacher shortage is real or is indeed only imaginary, as posited by Hecker (1986).

Thus, there are two countervailing forces affecting both the need for replacement teachers and the availability of teacher education students. Clearly, it is important that teachers, state supervisory staff, and teacher educators in agricultural education know the status of the supply and demand for teachers within the profession as we counsel potential teacher education students and as they make long range plans for program directions. The purpose of this study is to provide just such information.

Data Sources

The very influential study, Teacher Supply and Demand in Public Schools, sponsored and published by the National Education Association frequently reported substantially different results from this study, in terms of the supply of agricultural education graduates and in terms of the balance between the required number of replacements and the number of graduates seeking jobs. That study, for example, showed 1200 graduates and 525 replacements needed in agricultural education in 1980, Graybeal (1981), as compared to the actual total of 1468 graduates, 766 (calculated from reported 52.2%) of whom initially entered teaching, as reported by Craig (1981). It is difficult to determine why such discrepancies exist between two studies that purport to estimate the same population parameters. Yet, this study is generally accepted in the profession as the most accurate source of supply and demand data for agriculture teachers nationwide (D. G. Craig, personal communication, July, 1985).

The source of new teacher supply data is the head teacher educator at each institution producing agricultural education graduates (Henry, 1986; Herren, 1987). The source of demand data is the person in each state having direct supervisory responsibility for agri-

cultural education (U. S. Department of Education, 1987). It is from those two sources, with a 100% response rate from teacher education institutions and a 96% response rate from state supervisors, that this study estimates the supply and demand for teachers of vocational agriculture in the United States for 1987. Officials from the two states of Minnesota and Louisiana failed to respond with current information, and the data for those states from the 1986 study were used as "best estimates" for the 1987 data.

All institutions of higher education in the United States with specific programs for the training and certification of teachers of agriculture made up the first population. The list was compiled from five sources: Rogers (1985), Henry (1986), D. G. Craig (personal communication, July, 1985), Herren (1987), and the results of the 1986 Supply and Demand Study (Camp, 1987). In August, 1987 a Survey of the Supply of Teachers of Vocational Agriculture in the United States was mailed to the head teacher educators at those institutions along with a cover letter, reminding them of the nature and purpose of the study. In October a follow-up letter and second copy of the instrument were mailed to non-respondents. In November, a second follow-up letter and a third copy of the instrument were mailed to continuing non-respondents. In January a third follow-up, consisting of a hand-written letter and still another copy of the instrument were mailed. In February, March, and April telephone calls were made to the remaining non-respondents, followed by still additional copies of the instrument. Three institutions' responses were taken by telephone interview. As a result, a 100% return rate was achieved among teacher education institutions.

The second population was that of head state supervisors of agricultural education. That list was compiled from Henry (1986), D. G. Craig (personal communication, July, 1985), The United States Department of Education Directory of State Officials with Responsibility for Programs of Vocational Education in Agriculture (U. S. Department of Education, 1987), and the results of the 1986 study (Camp, 1987). A Survey of the Demand for Teachers of Vocational Agriculture in the United States, and a cover letter, were mailed in September. All of the follow-up procedures listed above were used. Of the 50 head state supervisors, all except two either responded or referred the researcher to someone who could supply the information. In all cases, the person referred to was the head teacher educator in an appropriate agricultural teacher education program. As was reported earlier, officials from Minnesota and Louisiana failed to respond. Requests to the teacher education institutions in those states also failed to elicit responses. The data from the 1986 study were used for those two states.

Data for long-term comparisons were extracted from Craig (1981), Craig (1983), Craig (1984), Craig (1985), and Camp (1987).

National Analyses

Secondary Teachers

After correcting the longitudinal data for 1986 to reflect an error discovered in the 1986 study, Table 1 shows that the downward trend in teaching positions continued for another year. Nationwide, a decline in the number of secondary (including junior high, middle, and high schools) teaching positions in vocational agriculture fell by 378 between school year 1985-86 and school year 1986-87. That is substantially more than the previous year's decline of 105.

Table 1
Number of Teachers of Vocational Agriculture in the United States 1983-1987 a

Item	1983	1984	1985	1986	1987
Total teachers during School Year 1986-87	12,099	11,960	11,687	11,582 d	11,204
Number of teachers leaving, end SY 86-87	1,354	1,173	1,043	956	874
Change in number of positions (net) b	-375	-139	-273	-105	-378
Teachers needed but unavailable September 1	42	19	8	20	14
Teachers with temporary/ emergency certificates	149	102	140	94	129
Departments which will not operate because of the lack of a teacher	9	4	3	0	5

a Source: head state supervisors

b The net change reported here differs from that shown in table 8. The figure reported here = 1987 grand total - 1986 grand total. Net changes in Table 7 reflect estimated change from FY 1987 to FY 1988.

c Source: head teacher educators

d Figures are corrected from 1986 study

Again, only a very small number of teachers (14) were still needed on September 1, but for the first time in two years, departments (5) were unable to open because no teacher was available. Also noteworthy is the fact that the number of emergency certified teachers is up from 94 in fall 1986 to 129 in fall 1987.

An examination of table 2 shows long term trends in total numbers of teachers, totals qualified to teach, and placement rates in teaching. In addition, the numbers of teachers needed but not

available as of September 1 of each year reflects the degree of severity of the teacher shortage. The shortage has been much less acute during the 1980's than before, particularly since 1982.

Table 2
A Comparison of Selected Information on the Supply of Secondary Teachers of Vocational Agriculture in 1965 and During the Last Ten Years

Year	Total No. of Positions [a]	Teachers Needed But Not Available September 1 [a]	Total Qualified For Teaching [b]	Percent of Those Qualified Entering Teaching [b]
1965	10,378	120	1,038	64.6
1978	12,844	189	1,791	56.7
1979	12,772	144	1,656	54.9
1980	12,510	117	1,584	52.0
1981	12,450	98	1,468	52.2
1982	12,474	35	1,368	51.3
1983	12,099	42	1,277	45.6
1984	11,960	19	1,249	45.2
1985	11,687	8	1,207	40.8
1986	11,582	20	964	41.2
1987	11,204	14	952	41.6

a Source: head state supervisors

b Source: head teacher educators

Graduates and Placements

Table 3 has changed in this year's study, to reflect the growing number of institutions involved in the preparation of teachers through programs other than the traditional four-year teacher edu-

cation degree approach. Because of the wording on the survey instruments (see appendices, Camp, 1987), it is a safe assumption that the total number qualified prior to 1987 reflect four-year program completers.

Table 3
Number (and Percentages) of Agricultural Education Graduates Entering Various Occupations during Selected Years a, b

Occupation	1975	1980	1985	1987
Total Number Qualified	1660	1584	1207	952
4-year program	1660	1584	1207	808
5-year program	NA	NA	NA	92
other programs	NA	NA	NA	52
Teaching Vo-Ag	999 (60.2)	824 (52.0)	493 (40.8)	396 (41.6)
Ag Business	125 (7.5)	219 (13.8)	222 (18.4)	207 (21.7)
Graduate Work	163 (9.8)	163 (10.3)	166 (13.8)	114 (12.0)
Other Work	164 (9.9)	139 (8.8)	118 (9.8)	101 (10.6)
Farming	136 (8.2)	120 (7.6)	115 (9.5)	68 (7.1)
Unemployed	N/A	57 (3.6)	88 (7.3)	60 (6.3)
Other Teaching	55 (3.3)	36 (2.3)	53 (4.4)	39 (4.1)
Armed Forces	18 (1.1)	25 (1.6)	18 (1.5)	5 (0.5)
Extension Service	N/A	N/A	29 (2.4)	29 (3.0)

a Source: head teacher educators

b Column percentage in parentheses

Because other certification programs are becoming more important, this year we have gathered information that allows us to differentiate among completers of the various programs. On first glance, the drastic decline in total number qualified reported last year (Camp, 1987) from 1207 in 1985 to 964 in 1986, seems to have abated. But, further examination shows that the decline in four-year graduates has continued. The numbers for 1986 and prior years do not include five-year and other program completers. Thus, the number of four-year teacher education students qualifying to teach declined from 964 last year to 808 in 1987.

The number of graduates entering farming has declined substantially from 115 in 1985 to 68 in 1987. Those entering agribusiness careers has remained high at about 21%. The percentage entering teaching immediately upon completion of certification requirements rose slightly for the second consecutive year, from 40.8 in 1986 to 41.2 and 41.6 in 1986 and 1987, respectively.

Of ongoing concern to the profession is the continuing decline in the undergraduate teacher education population. That number has declined by 33.1% in the last two years, from 1207 in 1985 to 808 in 1987.

Types of Teaching Positions

Table 4 presents data on the school level, school organizational basis, size of department, and kind of agricultural program. The predominant school level for agricultural education in the United States remained the high school, at nearly 62% of the total. The second largest group was a combination of in-school and out-of-school teachers, at 17.7%. Very few teachers (2.7%) worked with adults or young farmer groups exclusively.

Table 4
Types of Secondary Teaching Positions in Vocational Agriculture, 1987 a

Type of Position	Number 1986	Number 1987	Percent of total, 1987
By Kind of Students			
Teachers of junior high/middle school classes only	290	467	4.2
Teachers of high school classes only	6,606	6,929	61.8
Teachers of combination junior high/middle school and high school	1,236	1,466	13.1
Teachers of combination in-school and out-of-school classes (adult and/or young farmer classes)	1,920	1,985	17.7
Teachers of adult and young farmer classes only	194	304	2.7
Information not available	796	143	1.3
By Kind of School			
Teachers in general or comprehensive high schools	8,581	8,602	76.8
Teachers in area vocational high schools	769	1,084	9.7
Teachers in vocational high schools	422	224	2.0
Information not available	1,270	1,384	12.4
By Size of Staff			
Teachers in single-teacher departments	5,569	6,095	54.4
Teachers in multi-teacher departments	4,545	4,207	37.5
Information not available	928	992	8.9
By Kind of Program			
Teachers in full-time production agriculture programs	4,499	3,668	32.7
Teachers in full-time ornamental horticulture programs	1,060	1,084	9.7
Teachers in combination program including production agriculture	3,430	2,362	21.1
Teachers in combination program not including production agriculture	NA	1,263	11.3
Teaches full time in			
Natural Resources	181	168	1.5
Agricultural Products	20	42	0.4
Agricultural Mechanics	632	641	5.7
Agricultural Sales & Services	173	184	1.6
Teachers part time in ag and part time outside ag	112	550	4.9
Information not available	935	1,332	11.9

a Source: head state supervisors

b Percentages may not total 100% due to rounding. N = 11,204

The most common school organization was the regular or comprehensive high school (76.8%), with only 9.7% in area vocational schools and 2.0% in vocational high schools. Most teachers are in single-teacher programs (54.4%) and are full-time production agriculture (32.7%), or some combination including production agriculture (21.1%).

Post-Secondary Teaching Positions

As in years past, the reports of post-secondary teaching positions must be interpreted with care. The organizational structure of agricultural education is very diverse from state to state. In places, the post-secondary programs are in vocational-technical centers. In others, they are in community colleges. In still others, they are at regular colleges or universities. In some places, the programs are college-transfer, while in others they are terminal programs. In some states, the head state supervisor of agricultural education has a degree of administrative responsibility for the programs. In other states, the programs are administered by entirely different agencies.

To the extent that the head state supervisors of agricultural education were able to provide meaningful data, table 5 reflects the employment patterns for post-secondary agricultural education programs in 1986-87. The typical teacher in those programs was a full-time (86.7%) teacher, in a community college (26.0%), working in a multi-teacher department (48.9%), and teaching in some sort of specialized program (21.5%) or production agriculture (19.8%).

Table 5
Types of Post Secondary Teaching Positions in Vocational Agriculture in FY 1986 and 1987 a

Type of Position	Number 1986	Number 1987	Percent of Total, 1987
By Employment Time			
Teachers who teach full-time	921	2,143	86.7
Teachers who teach part-time	394	258	10.4
Teachers who teach part-time as well as adult and/or young farmer classes	41	72	2.9
Information not available	100	--	
Total	1,456	2,473	
By Kind of School			
Teachers in area schools	73	321	13.0
Teachers in community colleges	813	642	26.0
Teachers in technical institutes	305	163	6.6
Information not available	265	1,347	54.5
By Size of Staff			
Teachers in single-teacher departments	260	684	27.7
Teachers in multiple-teacher departments	691	1,209	48.9
Information not available	505	580	23.5
By Kind of Program			
Teachers in full-time production agriculture	579	490	19.8
Teachers in full-time ornamental horticulture	202	342	13.8
Teachers in part-time production agriculture and part-time in specialized programs such as agricultural supplies or other	177	69	2.8
Teachers in specialized programs such as agricultural mechanics or other	247	532	21.5
Information not available	251	1,040	42.1

a Source: head state supervisors

Regional and State Analyses

Secondary Teaching Positions

Examination of table 6 reveals that 33 states lost positions in agricultural education this school year (1987-88) as compared to last year, eight gained, and nine had no change. This year, the largest loss was in Illinois, at -55. That was followed by Texas, with -31 and New York with -13. The largest gain was in California, where a net of 30 positions were added.

Texas, as one might expect, had the largest number of teachers during school year 1986-87, overall, at 1,471, and the largest turnover, at 92. It should be noted, as the preface explains, the data reported in this location for Texas in the 1986 study (Camp, 1987) was in error. The error is corrected in this study, tables 1, 2, and 3. The second largest state, in terms of numbers of vocational agriculture teachers, was California, with 603, followed by Florida with 470 and Oklahoma with 464.

The states with the smallest numbers of teachers were Alaska (10), Maine (11), Rhode Island (12), Vermont (25) and Hawaii (26). In terms of totals, the Eastern region was smallest with 1,220 teachers and the Southern region was largest with 5,212.

It should be noted again, that both Minnesota and Louisiana data are from the 1986 study (Camp, 1987). An explanation regarding the column labeled "Net Teachers Needed" is also in order. This figure represents the number of positions reported lost AFTER the end of the 1986-87 school year and should reflect on the 1988 position totals, to be collected this fall. The net change in number of positions in table 1 refers to the decrease in total numbers from 1985-86 to 1986-87.

Table 6
Secondary Teaching Positions in Vocational Agriculture by Region and State on Dates Indicated a

	Total Positions During SY 1986-87	Number of Departures During SY 1986-87	Change b In No. of Positions FY 87 to 88	Net Teachers Needed by 9/1/87	Teachers Needed but Not Avail 9/1/87
			Eastern region		
Connecticut	62	3	+1	4	0
Delaware	35	0	0	0	0
Maine	11	1	-1	0	0
Maryland	84	13	-2	11	0
Massachusetts	74	11	0	11	0
New Hampshire	38	9	-1	8	1
New Jersey	80	5	-1	4	0
New York	365	26	-13	13	0
Pennsylvania	318	12	-2	10	3
Rhode Island	12	0	+1	1	0
Vermont	25	4	-2	2	0
West Virginia	116	4	-2	2	0
Region Total	1,220	88	-22	66	4
			Central Region		
Illinois	405	90	-55	45	0
Indiana	259	17	+2	19	0
Iowa	268	9	-2	7	1
Kansas	175	16	-2	14	0
Michigan	183	16	+1	17	0
Minnesota	459	64	-10	54	0
Missouri	336	25	-6	19	0
Nebraska	132	18	-3	15	0
North Dakota	86	20	-3	17	0
Ohio	590	35	-9	26	0
South Dakota	82	13	0	13	0
Wisconsin	288	23	-6	17	0
Region Total	3,263	346	-93	253	1

Table 6 (continued)
Secondary Teaching Positions in Vocational Agriculture by Region and State on Dates Indicated a

	Total Positions During SY 1986-87	Number of Departures During SY 1986-87	Change b In No. of Positions FY 87 to 88	Net Teachers Needed by 9/1/87	Teachers Needed but Not Avail 9/1/87
			Western Region		
Alaska	10	0	0	0	0
Arizona	68	8	+2	10	0
California	603	32	+30	62	0
Colorado	84	4	0	4	0
Hawaii	26	2	0	2	0
Idaho	82	10	0	10	0
Montana	77	11	-2	9	0
Nevada	20	2	0	2	0
New Mexico	74	0	-3	-3	0
Oregon	120	12	-6	6	0
Utah	65	11	-2	9	4
Washington	230	19	-8	11	0
Wyoming	50	9	-1	8	0
Region Total	1,509	120	+10	110	4
			Southern Region		
Alabama	383	24	+2	26	3
Arkansas	264	19	+1	20	0
Florida	470	18	-6	12	0
Georgia	329	21	-2	19	0
Kentucky	246	12	0	12	0
Louisiana	267	0	-5	-5	0
Mississippi	233	9	-5	4	0
North Carolina	375	35	-10	25	0
Oklahoma	464	38	-3	35	0
South Carolina	151	26	-8	18	2
Tennessee	234	10	-1	9	0
Texas	1,471 c	92	-31	62	0
Virginia	325	16	-4	12	0
Region Total	5,212	320	-72	248	5
U. S. Total	11,204	874	-177	697	14

a Source: head state supervisors

b Reported net change by state refers to difference between number of positions in 1986-87 and 1987-88.

c Texas total for 1985-86 was incorrectly reported as 999 in the 1986 study. The correct total should have been 1539.

Graduates and Placements

Table 7 shows the overall teacher numbers, numbers of teachers newly qualified, numbers of those placed in agriculture teaching positions, and placement percentages, for school years 1985-86 and 1986-87, by region. As was noted last year (Camp, 1987) the placement rate, both nationally and by regions, remained well below the 20-year norm (about 50%), for another year, at 41.6%. All regions' placement rates were below that benchmark, with both Southern and Central region schools reporting 39.8% placement rates.

Southern region schools produced a slightly decreased number of newly qualified teachers -- from 478 in 1986 to 427 in 1987. All other regions' schools reported small increases.

Table 7
Placement of Agricultural Education Graduates by Regions in 1987

	Teaching Positions [a]		Number of New Teachers Qualified [b]		Number of Newly Qual. Placed in Teaching [b, c]		Percent of Graduates Placed in Teaching	
Fiscal Year:	1986	1987	1986	1987	1986	1987	1986	1987
Southern	5,433	5,212	478	427	172	170	36.0	39.8
Central	3,321	3,263	270	284	109	113	40.4	39.8
Western	1,526	1,509	157	179	92	88	58.6	49.3
Eastern	1,302	1,220	59	62	24	25	40.7	40.3
Total	11,582	11,204	964	952	397	396	41.2	41.6

a Source: head state supervisors

b Source: head teacher educators

c Total differs from that reported in Tables 1 and 7. Those table totals refer to new BS/BA graduates. These totals refer to all newly qualified teachers.

Table 8 breaks down the graduation and placement data by institution, and region. It provides a much more detailed look at the placement picture than the previous table. One noteworthy difference between data in this and previous tables, is that the "# Grads" refers to the number of four-year graduates in all agricultural education programs: teacher education, agricultural extension, and others (such as agricultural communications). This differs from the total qualified in tables 2 and 7, which refers only to teacher education program completers: four-year, five-year, and "other."

The institutions reporting the largest numbers of graduates were Mississippi State (65), Nebraska (58), and Texas A & M (46). On the other end of the continuum, six institutions with active undergraduate programs reported only one graduate each: Delaware, Vermont, Western Illinois, Tuskeegee, Tennessee Tech, and Tennessee-Martin. Because of the changes in certification patterns, several California institutions reported no four-year graduates.

Table 9 provides a breakdown, by region, of the sources of teacher replacements for the current school year. The largest number came from new BS/BA graduates (351). The second largest group was from transfers between schools (215). Teachers with emergency certification made up the third largest group (129) followed by returning agriculture teachers (101). That figure is particularly interesting, because returning former teachers provided almost one-third as many teachers as did new graduates. If that number is added to the number of previous agricultural education graduates entering teaching for the first time (47), the total is 148, which is over 40% of the number of new graduates entering teaching. The implication is that many of the teaching positions are being filled

by people in the pool of potential teachers trained in previous years. A question that must arise is how many years will that pool of earlier graduates and former teachers last?

Table 8
FY 1987 BS/BA Graduates in Agricultural Education and Placement, by Region and Institution [a]

Institution	# Grads	Teaching In	Teaching Out	Agri-Bus	Extension	Farming	Grad Sch	Other Jobs	Unemployed [b]
				Eastern Region					
U of Conn	2	1	0	1	0	0	0	0	0
Delaware State	0	0	0	0	0	0	0	0	0
U of Delaware	1	0	0	0	0	0	1	0	0
U of Mass	3	1	1	0	0	0	1	0	0
U of MD, Col Pk	3	1	0	1	0	0	0	1	0
U of MD, E Shore	3	0	0	0	0	1	1	0	1
U of Maine	0	0	0	0	0	0	0	0	0
U of New Hamp	5	0	0	1	0	0	0	2	1
Cornell U	18	6	0	1	3	1	3	7	0
Penn State	14	4	3	4	0	1	0	6	0
U of Rhode Is	4	1	1	1	0	0	0	2	0
U of Vermont	1	0	0	1	0	0	0	0	0
West Va U	11	4	2	0	3	0	2	0	0
Totals, Region	63	18	7	10	6	3	8	18	2
				Central Region					
Iowa State	35	10	3	15	1	2	1	2	1
Illinois State	6	4	0	0	0	1	0	1	0
Southern IL U	22	8	1	0	0	3	3	0	0
U of Illinois	8	3	0	2	0	0	0	3	0
Western IL U	1	0	0	1	0	0	0	0	0
Purdue U	22	9	0	10	0	0	2	6	0
Kansas State U	19	7	1	0	0	1	4	2	1
Mich State U	13	5	0	4	0	0	1	3	0
U of Minnesota	17	4	0	3	1	0	2	4	3
NW Missouri St	8	1	1	1	0	1	2	2	0
U of Missouri	19	13	2	2	0	0	0	4	0
North Dakota St	25	8	3	4	2	3	3	1	1
U of Nebraska	58	5	1	5	0	1	1	1	7
Ohio State U	31	7	0	4	0	0	3	1	9
South Dakota St	26	4	1	6	2	4	4	3	2
U WI Platteville	7	6	1	0	0	0	0	0	1
U WI Madison	16	1	0	7	0	3	1	4	0
U WI River Falls	16	3	1	8	0	2	1	0	2
Totals, region	349	98	15	72	6	21	28	34	27

Table 8 (continued)
Graduates in Agricultural Education and Placement, by Region and Institution [a]

Institution	# Grads	Teaching In	Teaching Out	Agri-Bus	Extension	Farming	Grad Sch	Other Jobs	Unemploy [b]
				Southern Region					
Alabama A&M	12	1	0	1	0	0	4	3	3
Auburn U	14	9	4	1	0	0	0	0	0
Tuskeegee U	1	0	0	1	0	0	0	0	0
U Ark Pine Bluff	10	5	2	1	0	1	0	1	0
Arkansas St U	6	4	0	1	0	0	1	0	0
U Ark F-ville	16	12	0	2	1	0	1	0	0
U Florida	4	1	0	0	1	1	0	1	0
Ft Valley State	3	0	0	1	1	0	0	0	0
U Georgia	10	16	0	2	2	0	1	2	0
Morehead St U	9	0	0	3	0	2	3	2	0
Murray St U	8	1	0	3	1	2	1	0	0
U Kentucky	10	1	1	2	1	2	1	0	0
Western Ky U	13	2	2	1	0	1	2	4	0
LSU	5	2	0	0	0	0	0	2	0
Louisiana Tech U	5	3	0	1	0	0	1	0	0
SW Louisiana U	3	1	0	1	0	0	1	0	0
Alcorn St U	6	4	0	1	0	0	0	1	0
Miss St U	65	2	2	2	0	3	1	3	0
N Carolina A&T	13	2	0	2	3	0	3	4	0
NC State	17	11	0	4	0	0	1	3	0
Cameron U	3	0	1	0	0	2	0	0	0
OK State U	37	12	2	5	0	4	7	4	3
Panhandle St U	7	3	0	3	0	0	0	1	1
Clemson U	10	1	0	2	1	0	7	0	0
Middle TN State	8	2	0	3	0	1	1	1	0
Tenn Tech U	1	15	1	0	0	0	0	1	0
Tenn State U	4	2	1	0	0	0	0	1	0
U TN Knoxville	6	0	0	2	0	1	1	1	1
U TN Martin	1	1	0	0	0	0	0	0	0
East TX State U	4	3	0	1	0	0	0	2	0
Prairie View A&M	8	0	0	4	0	0	4	0	0
Sam Houston St	22	8	0	5	0	0	2	8	2
Southwest TX St	17	4	0	7	0	2	3	1	0
Stephen F Austin	13	2	0	4	0	0	4	3	0
Tarlton State U	21	3	0	5	0	3	3	7	1
Texas A&I U	9	0	0	2	1	0	0	1	3
Texas A&M	46	8	0	11	2	4	8	13	2
Texas Tech U	24	7	1	5	0	1	3	4	0
Virginia St U	3	0	0	1	2	0	0	0	0
Virginia Tech	24	5	0	4	0	4	2	6	3
Totals, Region	497	153	17	93	16	34	66	68	21

Table 8 (continued)
Graduates in Agricultural Education and Placement, by Region and Institution a

Institution	# Grads	Teaching In	Teaching Out	Agri-Bus	Extension	Farming	Grad Sch	Other Jobs	Unemploy b
				Western Region					
U of Alaska	0	0	0	0	0	0	0	0	0
U of Arizona	10	7	0	0	0	0	1	1	0
Cal St U Fresno	20	4	0	9	0	0	1	6	0
Cal Poly Pomona	0	3	0	1	0	0	0	0	3
Cal Poly San Luis Obispo	0	17	0	0	0	0	0	2	1
Cal State Chico	13	5	0	2	0	0	0	2	5
U Cal Davis	10	5	0	2	0	0	2	1	0
Colorado St U	20	1	3	6	0	7	3	0	0
U of Idaho	12	8	1	0	0	1	2	0	1
Montana State U	9	3	0	2	0	0	0	5	0
New Mexico St U	20	10	5	0	0	0	0	0	0
U Nevada Reno	10	01	0	3	0	0	0	7	0
Oregon State U	11	4	0	2	0	0	0	0	0
Utah State U	9	2	1	1	1	0	0	3	1
Washington St U	13	6	1	1	0	1	3	0	0
U of Wyoming	10	2	3	3	0	1	0	0	1
Totals, Region	170	74	14	32	1	10	12	28	10
Totals, US	1,079	343	53	207	29	68	114	142	60

a Source: Head teacher educators

b Meanings of column headings:

Grads = graduates of 4-year agricultural education programs
Qual = qualified to teach from all sources (4-yr, 5-yr, oth.)
Teaching In = teaching vocational agriculture, in state
Teaching Out = teaching vocational agriculture, out of state
Farming = farming full time
Agri Bus = working in agricultural businesses
Extension = employed by extension service
Grad Sch = attending graduate school full time
Other Jobs = teaching other than Ag + military + miscellaneous jobs
Unemploy = unemployed and looking for work on September 1, 1986

c No response

Table 9
Sources of Teacher Replacement by Region, for beginning of SY 1987-88 a

Sources of Teacher Replacement	Region				
	Central	Eastern	Western	Southern	Total
Transfers Between School	73	16	22	104	215
Ag. Ed. B.S. 1987 Graduates b	125	16	67	151	359
Ag. Ed. M.S. 1987 Graduates	1	6	5	16	28
Other Agriculture 1987 Graduates	0	3	0	2	5
Other Education 1987 Graduates	0	1	4	0	5
Previous Ag./Ag. Ed. Graduates	9	8	16	14	47
Former Vo. Ag. Teachers	50	7	16	14	101
Non-degree	13	0	0	9	22
Emergency Certification	60	22	5	42	129
Other	20	13	5	15	53
Total	351	92	140	381	964

a Source: head state supervisors

b Total graduates placed as reported by teacher educators differ from reported sources of replacement from new ag. ed graduates as reported here, see tables 6 and 7

The number of extension positions taken by agricultural education graduates last fall totaled 29, table 8. But, table 10 reveals that only 9 of those were agricultural extension graduates. Overall, there were 67 extension graduates, 38 combination extension and teaching graduates, and 92 graduates of other programs, primarily agricultural communications.

Table 10
Non-Teacher Education Graduates and Placements, by Region, 1986-87 a

	Extension Graduates b	Extension Placed in Extension	Other Graduates
Southern	71	6	47
Central	26	0	30
Western	3	0	13
Eastern	5	3	2
Total	105	9	92

a Source: Head teacher educators

b Extension only (67) + combination extension/teaching (38)

There is one final finding that is not reflected in any table. Several years ago, the question arose as to why an apparently increasing proportion of our graduates were seeking other careers rather than teaching. In an attempt to get at part of the answer, at least from the teacher educator's perspective, the question was asked "In your opinion, of your graduates qualified to teach, how many wanted (didn't want) to teach vo. ag.?" Respondents estimated that over two-thirds (640) of the newly qualified graduates wanted

to teach. That compares to only 41.9% (396) who found teaching jobs.

Conclusions

The job market for vocational agriculture teachers appeared to remain roughly in equilibrium in 1987. It is possible that a minor surplus of teachers was available at the salary levels being offered. More newly qualified prospective teachers were seeking employment in agricultural education than were hired. There were increases in the numbers of former teachers returning to the classroom and previous agricultural education graduates entering teaching for the first time. That implies that, in many cases, some experience, either in the classroom or in other positions, was needed to secure employment in teaching. On the other hand, the number of teachers still needed in September, the number of departments that could not open, and the number of emergency certified teachers all increased. Because the signs were so mixed, we conclude that, even though the job market was geographically spotty, with regional surpluses and regional shortages, overall, there was a minor nationwide surplus in the supply of qualified agriculture teachers in 1987.

That minor surplus resulted partly from a return to the profession of previously qualified teachers and teacher education graduates and was produced by increasing teacher salaries. The pool of potential teachers from previous years is not bottomless, yet the number of newly qualified prospective teachers continues to decline. The situation of former teachers and previous graduates returning to teaching cannot last forever. When the pool of prospective teachers consists almost totally of newly qualified graduates, a new shortage is quite likely.

Post-secondary programs of agricultural education are vastly different, in administration and in the nature of training required for teachers, from secondary vocational agriculture programs. As a result, the data sources that are good for collecting information on secondary programs is inadequate at the post-secondary level. Although this is the only source of national information on the status of post-secondary program teacher supply and demand, the data reported here must be held suspect.

As colleges and universities continue to expand agricultural extension programs at the undergraduate level, the placement rate for graduates remains dismally low. Training in agricultural extension at the undergraduate level appears not to be an effective pre-employment option if actual placement in extension is the primary goal.

The supply and demand study for secondary level agricultural education remains a viable and important study to the profession.

Recommendations

1. Serious, nationwide, coordinated efforts at recruitment need to be considered by the professional associations. Although this recommendation is somewhat mitigated by the current balance in the job market, the pipeline cannot be allowed to "dry up" for teacher replacements.

2. The National Study of the Supply and Demand for Teachers of Vocational Agriculture should be continued, but in modified form.

3. Separate secondary level and post-secondary level studies should be conducted. Sources of data and interpretation of the results are so divergent, that one study cannot effectively analyze both populations.

4. Advisory committees should be established to help determine the form, purposes, and future of both studies. Because this is not a study initiated by any single researcher, but rather a service of an to the profession of agricultural education, the Professional Personnel Recruitment Committee of the Agricultural Education Division of the American Vocational Association should take responsibility for the formation of those committees.

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SURVEY OF TEACHER SUPPLY IN VOCATIONAL AGRICULTURE IN 1987

Name _____ Institution_____ State _____

1. Total full-time, 4-year degree undergraduate enrollment in your institution, in school year 1986-87.

   a. in college/school of agriculture_____ b. in agricultural education _____

2. Total number of ag. ed. BS/BA graduates for school year 86-87 _____

   a. teaching only _____ c. teaching & extension _____

   b. extension only _____ d. other major _____
   (please specify: _____
   _____

3. Total number of vo ag teachers newly qualified for school year 86-87 _____

   a. 4-year program _____ c. other type program _____
   (please specify: _____

   b. 5-year degree or program _____ _____

4. Of your newly qualified teachers, how many are in teaching jobs? _____

5. In your opinion, of your graduates qualified to teach, how many:

   a. didn't want to teach vo-ag _____ b. wanted to teach _____

6. Of your total graduates, indicate their employment status as of September 1:

   a. teaching vo-ag in your state _____ f. farming full time _____

   b. teaching vo ag in another state _____ g. graduate school _____

   c. teaching some other subject _____ h. full time military _____

   d. working in agri-business _____ i. other work _____

   e. employed by Extension Service _____ j. unemployed & available _____

7. Of your extension graduates, how many are in extension jobs? _____

8. Of the graduates who took Vo-Ag jobs in other states, please list the numbers going to each state.

STATE	NUMBER	STATE	NUMBER	STATE	NUMBER
_____	_____	_____	_____	_____	_____

==========

Please return by October 1, 1987 to: Dr. William G. Camp
121 Lane Hall
Virginia Tech Blacksburg, VA 24061

SURVEY OF TEACHER DEMAND IN
VOCATIONAL AGRICULTURE IN 1987

Name _____ Position _____ State _____

SECONDARY

1. Number of SECONDARY teachers of vocational agriculture employed in your state during 1986-87 school year. (Note: This should match your 1986 report) _____

2. Total number of those teachers leaving their teaching positions during or at the end of the school year. _____

3. Number of vocational agriculture teachers still needed (on Sept 1) but not available. _____

4. Change in number of vocational agriculture teaching positions:

   a. Number of new and additional positions which have become available for the current school year over the number for 1986-87. _____

   b. Number of positions discontinued at end of 1986-87 school year. _____

   c. Net change in number of positions from 1986-87 to this school year. _____

5. Of the teachers hired for this year, how many were:

   a. transfers from one school to another _____

   b. new Ag Ed BS/BA graduates _____

   c. new Ag Ed MS/MA/MED graduates _____

   d. other new agriculture graduates _____

   e. other new education graduates _____

   f. previous ag ed graduates _____

   g. former vo ag teachers _____

   h. from agri-business _____

   i. from farming _____

   j. non-degree _____

   k. other _____

6. Number of vocational agriculture teachers who held emergency certificates on September 1, 1987 _____

7. Number of departments which probably will not operate this year because of the lack of a teacher _____

SECONDARY (Continued)

8. How many teachers are teaching this fall in:

   a. junior high/middle school only _____

   b. high school only _____

   c. high school & jr/middle school combined _____

   d. in-school & adult or young farmer combined _____

   e. adult &/or young farmer only _____

   f. uncertain _____

9. How many teachers are teaching this fall in:

   a. regular or comprehensive high schools _____

   b. vocational schools _____

   c. area vocational high schools/centers _____

   d. uncertain _____

10. How many teachers are teaching this fall in:

   a. single teacher departments _____

   b. multiple teacher departments _____

   c. uncertain _____

11. How many teachers are teaching primarily in programs of:

   a. production agriculture _____

   b. ornamental horticulture _____

   c. natural resources _____

   d. agricultural products _____

   e. agricultural mechanics _____

   f. agricultural sales and service _____

   g. part time production agriculture & some other program _____

   h. some other combination of agriculture courses _____

   i. part time agriculture & part time something other than agriculture _____

POST-SECONDARY

1. What is the total number (as of fall 1987):

   a. institutions offering agriculture programs _____

   b. different programs of agriculture in those institutions _____

   c. teachers in those programs (total number) _____

2. How many of those teachers (as of fall, 1987) are teaching:

   a. full time, in school only _____

   b. part time, in school and other employment _____

   c. combination in school and out of school adult _____

   d. uncertain _____

3. How many teachers (as of fall, 1987) are teaching in:

   a. area vo-tech schools _____

   b. community colleges _____

   c. technical institutions _____

   d. at a 4-year college or university _____

   e. uncertain _____

4. How many teachers (as of fall, 1987) are teaching in:

   a. single teacher dept _____

   b. multiple teacher department _____

   c. uncertain _____

5. How many teachers (as of fall, 1987) are teaching primarily in:

   a. production agriculture _____

   b. ornamental horticulture _____

   c. other specialized program _____

   d. part time production agriculture and part time other ag program _____

   e. uncertain _____

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Return by October 1, 1987 to:

(Envelope is provided)

Dr. William G. Camp
121 Lane Hall, Virginia Tech
Blacksburg, VA 24061

VIRGINIA TECH

Division of Vocational &
Technical Education

College of Education
Blacksburg, Virginia 24061

August 17, 1987

Dear Colleague:

Well, it's about time again--time for the annual VO AG TEACHER SUPPLY AND DEMAND STUDY. For the past 22 years, the Ag Ed Division of AVA has sponsored this continuing and important study. I hope you received your copy of last year's study in June. If not, please let me know and I will send you another copy.

According to my records, you are the correct person to complete the enclosed VO AG TEACHER SUPPLY/DEMAND SURVEY. If that is incorrect, please:

1. send this to the correct person, AND
2. let me know the correct person and address, so I can contact the right person for any necessary followups.

Otherwise, will you please take a few minutes and complete the enclosed survey form and return it to me within two weeks? Last year's study took 4 written followups and then a long series of telephone calls to complete. Because of that, it couldn't be printed until June. Please help me beat that schedule this year.

I realize that the survey is long and takes some time to complete, but this study is important and it is used by teacher educators and state supervisors throughout America. If you don't have absolutely accurate data on a given item, please give me your best guess.

A self addressed, postage-paid envelope is enclosed for your use. Thank you for your dedication to agricultural education and for your assistance in completing this survey.

Sincerely,

Bill

William G. Camp
Associate Professor
Agricultural Education

NEWS RELEASE

FOR IMMEDIATE RELEASE

For further information:
William G. Camp
224 Lane Hall
Virginia Tech
Blacksburg, VA 24061
(703) 961-6836

Nearly 900 new vocational agriculture teachers were hired in US schools last year. Vocational agriculture employed over 11,200 teachers nationwide in 1987, teaching such subjects as production agriculture, ornamental horticulture, forestry, agricultural mechanics, and natural resources conservation.

Vocational agriculture teachers are probably best known as advisors of FFA (Future Farmers of America) chapters, but their main job is preparing students for entry into jobs in the industry of agriculture and agri-Business.

Most people study to become agriculture teachers by majoring in agricultural education at their state land-grant colleges.

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