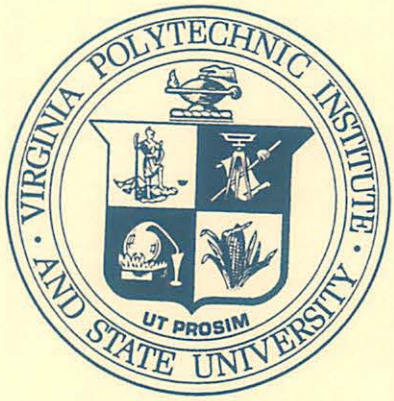

A NATIONAL STUDY OF THE SUPPLY AND DEMAND FOR TEACHERS OF AGRICULTURAL EDUCATION IN 1992

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A NATIONAL STUDY OF THE SUPPLY AND DEMAND FOR TEACHERS OF AGRICULTURAL EDUCATION IN 1992

This is the 28th annual national survey of the supply and demand for teachers of agricultural education in the United States. The annual study is sanctioned by the Agricultural Education Division of the American Vocational Association and is conducted as a service to the profession. Since 1988, the costs of study have been underwritten totally by the Virginia Polytechnic Institute and State University. Because the budget is extremely tight this year, the 1992 study will be very brief. For the review of literature, rationale, and history of the study, the reader is encouraged to see Oliver, J. D. and Camp, W. G. (1993).

Data Collection

This study was a population census. The data came from two sources.

Supply Data -- e.g., teacher education programs, graduates, and placements. The head teacher educator was surveyed at each institution of higher education in the United States with a program for the specific preparation of teachers of agriculture. In several institutions, the head teacher educator regularly passes responsibility for the study to another faculty member. In those cases, the survey is mailed directly to the person who could be expected to respond to avoid delays or even losses in handling the instrument.

Demand Data -- e.g., numbers of teachers, numbers of replacements hired, sources of replacements hired, types of schools, kinds of programs. The state department of education person in charge of agricultural education was surveyed. In several states, the state department official does not have access to the data needed or for some other reason does not respond to the survey. In those states the survey is mailed to the head teacher educator at a teacher education institution.

The initial surveys along with a cover letter and a return envelope were mailed in early September. Collection of the last data required five mailings, a telephone follow-up, and a FAX follow-up. As one might expect, many of the survey responses contained confusing or contradictory responses which required telephone follow-ups to correct or clarify. In the end, a 100 % response rate of usable surveys was achieved for demand data and only Southern University failed to report supply data.

National Analyses

Numbers of Teachers

Nationwide, the number of teaching positions in agricultural education (including junior high, middle, and high schools) appeared to fall by 195.5 (1.9%) between school year 1990-91 and school year 1991-92 (see Table 1). That figure is somewhat inflated by the fact that the person responding for reporting Florida's data in 1992 discovered that data for previous years had included postsecondary teachers. In the past that was appropriate, but since the secondary and postsecondary supply and demand studies were separated in the late 1980s, postsecondary teachers should not have been included in this report. Correcting that oversight resulted in postsecondary teachers who had been reported in these totals in previous years being deleted from the Florida total in 1992. That change produced a decrease of 129. Including that 129 in the number for this report would have made the national total 10,110. Conversely, reducing the 1991 total by 129 (assuming the same number of postsecondary teachers in 1991) would have made the 1991 total 10,047.5. Essentially, that means the actual 1991 to 1992 decline was 66.5, or 0.7%.

The number of teachers still needed as of the beginning of the next school year remained small in 1992 (see Table 1). Clearly, the shortage predicted several years ago in this study has not materialized. Likewise, the number of departments that could not operate because of the lack of a qualified teacher remained small. Finally, emergency or temporary teacher certification remained a relatively minor problem for the profession in 1992.

A real decline of 0.7% or even an apparent decline of 1.9% represents a substantial slowing in the rate of decline in numbers of teachers in the profession that of the late 1980s. Nevertheless, these totals should be cause for major concern in the profession because since 1990, the number of teachers of agricultural education in the United States is the lowest since this study began in 1965 (see Table 2)

Table 1
Overview of Agricultural Education Teaching Positions and Personnel Turbulence in the United States for selected Years [a]

Item	1980 [c]	1988	1989	1990	1991	1992
Total teachers on September 1	12,510	11,072	10,840	10,355.5	10,176.5	9,981 [d]
Number of teachers leaving at end of previous year	NC	920	1,026	1,040	835	844
Change in number of positions (net) [b]	+10	-132	-232	-484.5	-179	-195.5 [d]
Teachers needed but unavailable September 1	117	39	25	23	10	20
Teachers with temporary or emergency certificates on September 1	454	131	105	110	88	71
Departments which will not operate because of the lack of a teacher	55	4	9	9	13.5	11

NC Data not collected for year indicated
a Source: Head state supervisors
b Net change computed by subtracting total from current year from previous year total.
c Craig (1983)
d Most of the apparent decrease from 1990-91 to 1991-92 is a result of a change in the way Florida data are reported. Prior to this year, Florida postsecondary teachers had been reported as a part of that state's total. Removing postsecondary teachers from Florida's report resulted in 129 of this total. The real decline was 66.5

Table 2
A Comparison of Selected Information on the Supply of Secondary Teachers of Agricultural Education in 1964-65 and Since 1980

Year	Total Number of Positions September 1 [a]	Teachers Needed But Not Available September 1 [a]	Number Qualified For Teaching Prev SY [b]	Percent Qualified Entering Teaching [b]
1965	10,378	120	1,038	64.6
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
1988	11,072	39	838	42.5
1989	10,840	25	588	52.9
1990	10,355.5	23	625	53.0
1991	10,176.5	9	638	50.9
1992	9,981 [c]	11	686	53.4

a Source: Head state supervisors
b Source: Head teacher educators
c Over half of the apparent decrease from 1990-91 to 1991-92 is a result of a change in the way Florida data are reported.

Graduates and Placement

The total number of teachers qualified declined steadily from 1980 to 1989, but has risen gradually since that time (Table 2). In spite of the national reform movement emphasis on graduate teacher preparation, most newly qualified teachers of agriculture (87.7%) are still produced through 4-year degree

programs (Table 3). Programs at the fifth-year level accounted for less than 12% (n = 74) of the total. Almost half of those (n = 33) were from California (not reflected in tables).

When the number of graduates placed in teaching positions (n = 366) was compared to the total number of newly qualified teachers (n = 635), the placement rate was substantially up in 1992 (57.6%). When the placement rate was based on the number of newly qualified teachers who were rated by their professors as "probably wanted to teach," (n = 475), the placement rate went to 75.8%.

Table 3
Newly Qualified Agriculture Teachers and Their Placement [a]

	1974-75 [b]	1989-90	1990-91	1991-92
Total Newly Qualified	1,660	625	638	686
4-Year Program	NC	548	573	550 [c]
5-Year Program	NC	72	61	74
Other Programs	NC	5	4	6
Of Newly Qualified Number Entering Teaching	999	331	325	366
Percent of Newly Qualified	60.2%	53.0%	50.9%	53.4%
Percent of Those Who "Wanted to Teach"	NC	70.1%	69.7%	75.8%
Estimate of Intention				
Probably Wanted To Teach	NC	386	445	475
Probably Didn't Want To Teach		187	193	152 [d]
Uncertain		52	0	0
Number Predicted to Qualify in 1992-93	---	---	745	689

NC Data not collected for year indicated
a Source: Head teacher educators
b Source: Craig (1983)
c N = 550 calculated by subtracting teachers newly qualified through 5-year and other programs from total
d N = 152 calculated by subtracting number of "Probably Wanted to Teach" from total

Table 4 provides national data on the reported demand for new teachers over the past five years. The number of teachers hired for the fall term of 1992 was 844, slightly up from the fall 1991 total of 765.5. When that total was corrected by subtracting the reported 272 teachers who simply moved from

one school to another, the total replacement demand for new teachers in 1992 was calculated as 572.

Table 4
Trend in Estimated Net Demand for New Agriculture Teachers, 1986-92 [a]

Item	1987	1988	1989	1990	1991	1992
Total Teachers Employed by Sept 1	964	1,146	896.5	979	765.5	844
Transfers Between Schools	215	357	261	351	221	272
Net Demand for New Teachers	749	789	635.5	628	544.5	572 [b]

a Source: Head state supervisors
b N = 572 calculated by subtracting teachers moving from one school to another from total number hired.

Table 5 provides data on Agricultural Education bachelors degree graduates. In addition, it provides data on "newly qualified" teachers and their placement. The reader should note that earlier supply and demand surveys assumed that all graduates were teacher education students and collected placement data on the total number of graduates. In an attempt to provide placement data for teacher education program completers, the more recent surveys, including this one, collected placement data only for newly qualified teacher education graduates, but combine 4-year and 5-year completers for this purpose.

Thus, the first part of Table 5 reports BS/BA graduate totals by major. Clearly, teacher preparation remains the dominant part of the program with 579 teacher education graduates and 57 graduates of combined teacher education and extension programs. Those two categories accounted for 74.2% of the total of all BS/BA graduates from Agricultural Education programs nationwide.

The second part of Table 5 shows the job-placement patterns of newly qualified teachers from 4-year and 5-year programs combined. By far the largest portion of newly qualified teachers entered the profession for which they had been educated. Agribusiness jobs (n = 120) and graduate study (n = 60) absorbed most of the remaining newly qualified teachers.

Table 5
Number (and Percentages) of Agricultural Education Graduates Entering Various Occupations During Selected Years [a,b]

Graduates and Placement	1974-75	1979-80	1984-85	1989-90	1991-92
BS/BA Graduates [c]	1,660	1,584	1,207	769	857
Teaching Majors	NC	NC	NC	529	579
Extension Majors	NC	NC	NC	41	40
Teaching & Extension	NC	NC	NC	54	57
Other Majors	NC	NC	NC	145	181
Newly Qualified [d]	1,660	1,584	1,207	625	686
Teaching Ag Ed	999	824	493	295	366
	(60.2)	(52.0)	(40.8)	(47.2)	(53.4)
Ag Business	125	219	222	157	120
	(7.5)	(13.8)	(18.4)	(25.1)	(17.5)
Graduate Work	163	163	166	109	60
	(9.8)	(10.3)	(13.8)	(17.4)	(8.7)
Other Work	164	139	118	61	35
	(9.9)	(8.8)	(9.8)	(9.8)	(5.1)
Farming	136	120	115	46	26
	(8.2)	(7.6)	(9.5)	(7.4)	(3.8)
Other Teaching	55	36	53	19	23
	(3.3)	(2.3)	(4.4)	(3.0)	(3.4)
Armed Forces	18	25	18	3	1
	(1.1)	(1.6)	(1.5)	(0.5)	(0.1)
Extension Service	NC	NC	29	29	20
			(2.4)	(4.6)	(2.9)
Unemployed		57	88	16	16
	NC	(3.6)	(7.3)	(2.6)	(2.3)

NC Data not collected for year indicated
a Source: Head teacher educators.
b Numbers in parentheses represent percent of newly qualified
c Note that not all BS teacher education graduates are certified to teach. In many states, teacher education requires graduate study.
d In addition to the teacher education BS graduates, 125 undergraduate "teacher certification only" graduates were reported. This figure also includes persons certified through graduate and other programs. Placement numbers do not reflect responses of "unknown."

Types of Teaching Positions

An examination of Table 6, reveals that the vast majority of teachers of agricultural education worked exclusively in high school programs in 1992 (n = 7,775). Most of the remaining teachers (n = 1,641) taught in combination high school and

junior high or middle school settings. When the small number of teachers teaching in two separate schools (n = 180) is considered, it appears that most of the "combination" teachers must be on adjacent or single campuses. Most teachers are in single-teacher departments (n = 5,820) and teach in either production agriculture (n = 2,095) or some combination of agriculture courses (n = 3,905). Because many states are either revising their curricula or renaming their existing curricula to agriscience, that category will be added in the 1993 study, which is nearing completion.

Table 6
Estimated Types of Secondary Teaching Positions in Agricultural Education on September 1, 1992 [a]

Type of Position	Number	% [b]
Teachers by Grade Level of School		
High School Classes Only	7,775	77.9
Combination Junior High or Middle School and High School	1,641	16.4
Junior High/Middle School Only	294	2.9
Adult and Young Farmer Only	157	1.6
Information not Reported	114	11.4
Teachers of Combination In-School and Out-of-School Classes (i.e., Adult and/or Young Farmer Classes)	2,595	26.0
Teachers Teaching Between 2 or More Schools	180	1.8
Teachers by Size of Staff		
Single-Teacher Departments	5,820	58.3
Multi-Teacher Departments	3,512	35.2
Information not Reported	649	6.5
Teachers by Program (Primary)		
Combination of Ag Courses	3,905	39.1
Production Agriculture [c]	2,095	21.0
Ornamental Horticulture	882	8.8
Agricultural Mechanics	538	5.4
Part Time in Ag & part time outside Ag	293	2.9
Natural Resources	161	1.6
Disadvantaged/Handicapped Ag	168	1.7
Agricultural Sales & Services	99	1.0
Exploratory/Introductory Ag	330	3.3
Agricultural Products	40	0.4
Information Not Reported	1,470	14.7

a Source: Head state supervisors
b N = 9,981 on September 1, 1992
c Includes BOTH Production Agriculture and Agri-Science.

Regional, State, and Institutional Analyses

Numbers of Teachers

Table 7 provides detailed data by state and region [1] on the numbers of teaching positions and demand for new teachers at the beginning of school year 1992-93. The Southern Region accounted for almost half (n = 4,721) of the total number of teachers of agriculture in the United States at the beginning of school year 1992-93. By far the largest state, in terms of teaching positions was Texas (n = 1,436), followed by California (n = 545) and Ohio (n = 524). The smallest programs are Alaska with 7 and Rhode Island with 10.

The Southern Region also accounted for almost half (n = 272) of the new teachers hired (n = 572). Only 9 states reported any teachers still unavailable at the beginning of the new school year. California reported the largest number at 10, accounting for exactly half of the nationwide total of 20.

Teacher Education Completers and Placements

Table 8 shows the reported numbers of newly qualified teachers of agriculture during the 1991-92 school year by institution and by region. The reader should understand that the number of "newly qualified teachers" represents a composite of BS/BA graduates of teacher education programs, undergraduate certification-only program completers, and graduate teacher certification program completers. In fact, the number should be considered potential teachers, since just over half actually enter teaching.

Table 8 then provides the placement of those persons newly qualified to teach as reported by their teacher education institutions. The Southern region produced by far the largest number of persons newly qualified to teach (n = 366) followed by the Central Region (n = 156). Texas has nine teacher education institutions, and reported a total of 168 newly qualified potential teachers in 1992. The two institutions reporting the largest number of newly qualified teachers were also from Texas: Tarlton State with 42 and Texas Tech with 37.

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1 Region as specified in the organization of the American Association for Agricultural Education (AAAE).

Table 7
Teachers of Agricultural Education, by Region and State, 1991-92 [a]

	Total Positions 9/1/92	Number of Teachers Hired for SY 1992-93	Positions Filled by Existing Teachers	Net New Teachers Hired for SY 1992-93	Teachers Not Available 9/1/92
Central Region					
Illinois	342	30	8	22	1
Indiana	239	12	4	8	1
Iowa	223	18	6	12	0
Kansas	166	12	4	8	0
Michigan	146	8	0	8	0
Minnesota	201	15	4	11	0
Missouri	310	33	9	24	0
Nebraska	131	11	4	7	0
North Dakota	80	11	4	7	0
Ohio	524	22	10	12	0
South Dakota	85	10	3	7	1
Wisconsin	286	32	16	16	0
Region Total	2,733	214	72	142	3
Eastern Region					
Connecticut	62	9	0	9	0
Delaware	30	6	3	6	0
Maine	25	0	0	0	0
Maryland	67	0	0	0	0
Massachusetts	71	5	0	5	1
New Hampshire	36	4	1	1	0
New Jersey	74	3	2	1	0
New York	291	6	1	5	0
Pennsylvania	254	12	3	9	0
Rhode Island	10	0	0	0	0
Vermont	31	0	0	0	0
West Virginia	102	1	1	0	0
Region Total	1,053	46	11	35	1

a Source: Head state supervisors

Table 7 (continued)
Teachers of Agricultural Education, by Region and State, 1991-92 [a]

	Total Positions 9/1/91	Number of Teachers Hired for SY 1991-92	Positions Filled by Existing Teachers	Net New Teachers Hired for SY 1991-92	Teachers Not Available 9/1/92
Southern Region					
Alabama	375	16	4	12	0
Arkansas	261	15	5	10	0
Florida	295	21	3	18	0
Georgia	270	19	6	13	0
Kentucky	242	13	3	10	0
Louisiana	232	11	0	11	0
Mississippi	208	22	5	17	1
N. Carolina	317	40	26	14	0
Oklahoma	442	21	0	21	0
S. Carolina	127	4	3	1	3
Tennessee	226	11	9	2	0
Texas	1,436	198	67	131	0
Virginia	290	26	11	15	0
Region Total	4,721	417	142	275	4
Western Region					
Alaska	7	2	1	1	0
Arizona	70	17	3	14	1
California	545	62	21	41	10
Colorado	89	8	0	8	0
Hawaii	32	3	0	3	0
Idaho	85	9	1	8	0
Montana	74	7	2	5	0
Nevada	24	2	0	2	0
New Mexico	75	18	9	9	0
Oregon	113	10	2	8	0
Utah	70	3	0	3	1
Washington	244	22	5	17	0
Wyoming	46	4	3	1	0
Region Total	1,474	167	47	120	12
U. S. Total	9,981	844	272	572	20

a Source: Head state supervisors

Table 8
BS/BA Graduates 1991-92 in Agricultural Education and Their Job Placement on September 1, 1992, by Region and Institution [a,b]

Institution	Newly Qual	Teach In	Ag Out	Agri Bus	Ext Ser	Farming	Grad Sch	Other Work	Unemploy
CENTRAL REGION									
Iowa State Univ	20	5	0	13	0	2	0	0	0
Ill State Univ	0	0	0	0	0	0	0	0	0
Southern Ill Univ	6	4	0	0	0	1	1	0	0
Univ of Illinois	7	2	0	2	0	0	0	0	0
West Ill Univ	1	1	0	0	0	0	0	0	0
Purdue Univ	7	5	1	0	0	0	0	0	0
Kansas State Univ	14	2	2	3	2	1	1	2	0
Michigan State Univ	6	6	0	0	0	0	0	0	0
Univ of Minnesota	8	1	2	0	0	0	3	2	0
Northwest Mo St Univ	4	2	1	1	0	0	0	0	0
Southwest State Mo Univ	7	5	0	1	0	1	0	0	0
Univ of Mo	17	13	3	0	0	0	0	1	0
North Dakota St Univ	9	5	1	0	2	1	0	0	0
Ohio St Univ	23	11	1	7	2	0	2	0	0
SD State Univ	10	3	2	2	0	2	0	1	0
U of Wisc-Madison	5	5	0	0	0	0	0	0	0
U of Wisc-Platteville	3	1	0	1	0	0	0	1	0
U of Wisc-River Falls	9	5	1	1	0	0	1	1	0
Regional Totals	156	80	14	35	6	10	10	8	0
EASTERN REGION									
Univ on Connecticut	2	1	0	1	0	0	0	0	0
Univ of Delaware	4	1	1	1	0	0	0	1	0
Univ of Massachusetts	5	1	0	3	0	1	0	0	0
Univ of MD Eastern Shore	1	0	0	0	0	0	0	1	0
Univ of New Hampshire	2	1	0	0	0	0	0	0	0
Rutgers Univ, Cook Col	3	1	0	0	0	0	0	2	0
Cornell Univ	10	5	0	0	1	0	1	3	0
Penn State Univ	14	7	2	6	0	0	2	0	0
Univ of Rhode Island	2	2	0	0	0	0	0	0	0
Univ of Vermont	0	0	0	0	0	0	0	0	0
West Virginia Univ	7	2	0	3	0	0	1	1	0
Regional Totals	50	21	3	14	1	1	4	8	0

Table 8 (Continued)
BS/BA Graduates 1991-92 in Agricultural Education and Their Job Placement on September 1, 1992, by Region and Institution [a,b]

Institution	Newly Qual	Teach In	Ag Out	Agri Bus	Ext Ser	Farming	Grad Sch	Other Work	Unemploy
SOUTHERN REGION									
Alabama A & M	7	6	0	0	0	0	0	1	0
Auburn Univ	23	12	1	0	0	0	1	2	4
Tuskeegee Univ	2	1	0	0	0	0	1	0	0
Arkansas State Univ	1	1	0	0	0	0	0	0	0
U Arkansas-Fayetteville	14	5	0	6	1	1	1	0	0
U Arkansas-Pine Bluff	0	0	0	0	0	0	0	0	0
Univ of Florida	14	13	0	1	0	0	0	0	0
Fort Valley St College	3	1	0	0	0	0	0	1	1
Univ of Georgia	14	9	1	2	1	0	0	0	0
Morehead State Univ	5	1	1	3	0	0	0	0	0
Murray State Univ	6	0	0	0	0	2	4	0	0
Univ of Kentucky	5	1	1	2	0	1	0	0	0
Western Kentucky Univ	8	3	1	0	0	0	2	1	0
Louisiana Tech	3	2	0	0	0	0	1	0	0
Louisiana State Univ	3	3	0	0	0	0	0	0	0
Southern University	Data Not Reported								
Southwestern LA Univ	2	0	0	0	0	0	1	1	0
Alcorn State Univ	0	0	0	0	0	0	0	0	0
Mississippi State Univ	4	1	0	1	0	1	1	0	0
North Carolina A & T	5	1	0	1	1	0	1	0	1
North Carolina State	6	2	0	1	1	0	1	0	1
Cameron Univ	4	1	2	1	0	0	0	0	0
Oklahoma State Univ	26	9	4	5	0	3	2	3	0
Panhandle State Univ	5	1	0	4	0	0	0	0	0
Clemson Univ	4	0	2	3	0	0	0	0	0
Middle Tennessee State	3	3	0	0	0	0	0	0	0
Tennessee State Univ	1	0	0	0	0	0	0	1	0
Tennessee Tech Univ	4	2	0	0	2	0	0	0	0
U Tennessee-Knoxville	7	2	1	1	0	0	2	1	0
U Tennessee-Martin	0	0	0	0	0	0	0	0	0

Table 8 (Continued)
BS/BA Graduates 1991-92 in Agricultural Education and Their Job Placement on September 1, 1992, by Region and Institution [a,b]

Institution	Newly Qual	Teach Ag In	Out	Agri Bus	Ext Ser	Farming	Grad Sch	Other Work	Unemploy
SOUTHERN REGION (Continued)									
East Texas State Univ	14	5	2	3	0	0	1	2	1
Prairie View A & M	12	0	1	1	0	0	2	3	1
Sam Houston State Univ	19	10	0	0	0	0	0	4	3
Southwest Texas State	10	4	0	0	0	0	1	0	0
Stephen F Austin St U	7	3	0	1	1	0	0	2	0
Tarlton State Univ	42	19	0	11	0	1	4	6	0
Texas A & I Univ	12	5	0	0	0	0	2	4	0
Texas A & M Univ	25	6	0	5	0	2	4	4	0
Texas Tech Univ	37	18	0	5	5	2	6	1	0
Virginia State Univ	2	1	0	0	0	0	0	1	0
Virginia Tech	7	4	0	3	0	0	0	0	0
Regional Totals	366	155	17	60	12	13	38	38	12
WESTERN REGION									
Univ Of Arizona	7	6	0	0	0	0	1	0	0
CA Poly San Luis Obispo	16	11	0	0	0	0	1	1	2
CA State U-Chico	8	3	3	1	0	0	0	1	0
CA State U-Fresno	7	7	0	0	0	0	0	0	0
CA State U-Pomona	3	3	0	0	0	0	0	0	0
Univ of CA-Davis	2	2	0	0	0	0	0	0	0
Colorado State Univ	8	6	0	1	0	0	1	0	0
Univ of Hawaii	0	0	0	0	0	0	0	0	0
Univ of Idaho	10	6	3	0	0	0	0	0	1
Montana State Univ	8	1	2	3	0	1	0	0	0
Univ of Nebraska	9	4	0	1	0	0	0	0	1
New Mexico State Univ	14	5	1	1	1	1	3	0	0
Univ of Nevada	1	0	0	0	0	0	0	1	0
Oregon State Univ	3	0	0	1	0	0	0	2	0
Utah State Univ	6	4	1	1	0	0	0	0	0
Washington State Univ	9	7	0	0	0	0	2	0	0
Univ Of Wyoming	3	0	1	2	0	0	0	0	0
Regional Totals	114	65	11	11	1	2	8	5	4
US Totals	686	321	45	120	20	26	60	59	16

Table 8 (Continued)
BS/BA Graduates 1991-92 in Agricultural Education and Their Job Placement on September 1, 1992, by Region and Institution [a,b]

a Source: Head teacher educators. Institutions are alphabetically ordered by state within region.

b Newly Qual = newly qualified teachers from all sources
Teach Ag In = teaching agricultural education, in state
Teach Ag Out = teaching agricultural education, out of state
Agri Bus = working in agricultural businesses
Ext Ser = employed by extension service
Farming = farming full time
Grad Work = other work (unspecified) + teaching other subjects + military service
Other Jobs = teaching other than Ag + military + misc. jobs
Unemploy = unemployed and looking for work Sept. 1, 1991

c Row subtotals exclude 24 "unknown" responses

Sources of New Teachers

In Table 9, the sources of teacher replacements are indicated by region. In all four AAAE regions, the primary sources of teachers hired are new BS/BA graduates and transfers of existing teachers from one school to another. As in years past, former teachers of agriculture returning to the classroom comprise a major source of teacher replacements. The question of how long returning teachers can be relied upon to supply significant sources of teacher replacements has been asked in previous studies. The "well" of former teachers does not seem to be "drying up," at least not in 1992. Non-degreed teachers remain a very minor source of new agriculture teachers.

Table 9
Sources of Teacher Replacement by Region [a]

Sources of Teacher Replacement	Region				
	Central	Eastern	Southern	Western	Total
Transfers Between School	72	11	142	47	272
Ag. Ed. B.S. 1992 Graduates [b]	82	9	129	73	293
Ag. Ed. M.S. 1992 Graduates	3	4	15	1	23
Other Agriculture 1992 Graduates	1	2	4	3	10
Previous Ag./Ag. Ed. Graduates	13	3	34	22	72
Former Ag. Ed. Teachers	32	4	61	12	109
Non-degree	1	1	1	1	4
Uncertain	1	2	23	3	29
Agribusiness/Farming	9	10	8	5	32
Total	214	446	417	167	844

a Source: Head state supervisors
b Total graduates placed as reported in Table 5 by teacher educators differ from reported sources of replacement from new ag. ed. graduates as reported here.

Table 10 presents data on the gender and race/ethnicity of teachers by region and state. The stereotypical view of the teacher as a white male is certainly confirmed by these numbers. Gender was reported on 9,945 teachers. Of those, 9,078 (91.3%) were reported as males. Race/ethnicity was reported on

Table 10
Teacher Gender and Race by Region and State, September 1, 1992 [a]

	Male	Female	African-American	White Non-Hisp	Native American	Hispanic	Asian/Pac Isle
Central Region							
Illinois	342	30	8	22	1	0	0
Indiana	239	12	4	8	1	0	0
Iowa	223	18	6	12	0	0	0
Kansas	166	12	4	8	0	0	0
Michigan	146	8	0	8	0	0	0
Minnesota	201	15	4	11	0	0	0
Missouri	310	33	9	24	0	0	0
Nebraska	131	11	4	7	0	0	0
North Dakota	80	11	4	7	0	0	0
Ohio	524	22	10	12	0	0	0
South Dakota	85	10	3	7	1	0	0
Wisconsin	286	32	16	16	0	0	0
Region Total	2,733	214	72	142	3	0	0
Eastern Region							
Connecticut	62	9	0	0	9	0	0
Delaware	30	6	3	0	3	0	0
Maine	25	0	0	0	0	0	0
Maryland	67	0	0	0	0	0	0
Massachusetts	71	5	0	1	5	0	0
New Hampshire	36	4	1	0	3	0	0
New Jersey	74	3	2	0	1	0	0
New York	291	6	1	0	5	1	2
Pennsylvania	254	12	3	0	9	0	0
Rhode Island	10	0	0	0	0	0	0
Vermont	31	0	0	0	0	0	0
West Virginia	102	1	1	0	0	0	0
Region Total	1,053	46	11	1	35	1	2

a Source: Head state supervisors. NOTE: Both gender and race are under-reported.

Table 10 (Continued)
Teacher Gender and Race by Region and State, September 1, 1992 [a]

	Male	Female	African-American	White Non-Hisp	Native American	Hispanic	Asian/Pac Isle
Southern Region							
Alabama	375	3	55	NR	NR	NR	NR
Arkansas	253	8	NR	NR	NR	NR	NR
Florida	230	62	20	270	0	5	0
Georgia	250	20	53	216	0	0	1
Kentucky	229	13	0	242	0	0	0
Louisiana	226	6	19	211	0	0	0
Mississippi	204	3	49	158	0	0	0
N. Carolina	282	35	50	264	2	0	1
Oklahoma	435	7	21	NR	0	0	0
S. Carolina	118	6	23	100	0	0	1
Tennessee	218	8	7	219	0	0	0
Texas	1,381	55	21	1,353	0	62	0
Virginia	251	39	34	255	0	1	0
Region Total	4,452	265	352	3,288	2	68	3
Western Region							
Alaska	6	1	0	7	0	0	0
Arizona	60	9	65	0	1	3	0
California	432	112	5	503	0	25	2
Colorado	82	7	0	89	0	0	0
Hawaii	31	1	0	4	0	0	31
Idaho	82	2	0	85	0	0	0
Montana	71	3	0	73	0	1	0
Nevada	21	3	0	66	1	8	0
New Mexico	71	4	0	113	0	0	0
Oregon	107	6	0	23	1	0	0
Utah	68	1	0	69	0	0	0
Washington	225	19	0	242	1	0	1
Wyoming	44	2	0	46	0	0	0
Region Total	1,300	170	70	1,320	4	37	34
US Total	9,078	867	455	8,343	10	106	39

a Source: Head state supervisors. NOTE: Both gender and race are under-reported.
NR Not Reported. NOTE: Totals will be affected by 1,028 non-reported race.

8,953 teachers. Of those, 8,343 (93.2%) were reported as white non-hispanic and 455 (5.1%) were indicated as African-American.

Extension Graduates

Table 11 provides data regarding the placement of extension BS/BA graduates, by region. A total of 97 BS/BA degrees were awarded in extension or in teaching and extension combined in 1991-92. Of those graduates, 17 were placed in extension positions, for a placement rate of 17.5%

Table 11
Extension Education Graduates and Placements in Agricultural Extension, by Region, 1990-91[a]

	Graduates of Extension Programs	Graduates of Teaching and Extension Combined	Placed in Agricultural Extension
Central	11	6	8
Eastern	5	7	3
Southern	22	31	5
Western	2	13	1
Total	40	57	17

a Source: Head teacher educators

Agricultural Education Faculty, Staff, and Programs

In 1991-92, there were 89 active programs of Agricultural Education (see Table 12). Table 12 also provides numbers of faculty of all ranks and staff in agricultural education programs, by region. There were 215 ranked faculty members reported in agricultural education programs. There were an additional 116.3 graduate teaching assistants, instructors, and staff members reported. These numbers do not include faculty and staff members in other programs housed in the same departments with agricultural education but without agricultural education responsibilities. The graduate students are limited to teaching assistants.

Table 12
Teacher Education Faculty (FTE), by Region [a]

	Central	Eastern	Southern	Western	Total
Programs	18	13	41	17	89
Professors (all ranks)	51.8	35.2	94.8	34.1	215.0 [b]
Instructor	5.5	3.0	6.5	1.5	16.0
Grad Teaching Asst	13.5	3.5	24.0	4.5	45.0
Others	21.0	11.2	21.1	2.0	55.3
Total	91.8	53.0	146.4	42.1	331.3

a Source: Head teacher educators
b Totals do not sum because of rounding

Conclusions

The number of teachers of agriculture in the United States continued its pattern of decline through fall 1992. For the first time in at least 28 years, the total number of agriculture teachers fell below 10,000. The net rate of annual decline (0.7% corrected for the change in Florida's reporting procedure) fell to the lowest since 1983. The gains that the profession experienced after the 1963 Vocational Education Act had been lost by 1990 and the trend indicates further erosion in terms of the number of teaching positions.

There has been a relatively minor shortfall for several years in the number of newly qualified potential teachers of agriculture actively seeking teaching positions. The shortfall is evidenced by the number of teachers still needed on September 1 and by the number of emergency or temporary certificates in force. Four years ago this study predicted a widespread shortage of teachers beginning fall, 1989. In fact, the teacher shortage continues to be smaller than expected. That predicted shortage has been partially remedied by former agriculture teachers returning to the profession and by recent agricultural education graduates who had been unable to secure initial employment in teaching. That pool of already qualified potential teachers surely must be nearing exhaustion. Two additional factors that seem to have helped postpone what still appears to be an impending teacher shortage were the ongoing loss in the total number of teaching positions and a rise in the placement rate for newly qualified teachers. In 1992, the placement rate (53.4%) remained stable near the historic norm of just over 50%. Fortunately, the teacher shortage appears not to have materialized as predicted in 1989. An encouraging sign this year is a small increase in the number of newly qualified potential teachers which will

help maintain the quality of local programs of agricultural education.

Many nonplacements result from new graduates who really do not want to teach. Thus, the placement rate is at least as high as the historical rates of 50% to 60% reported by the Craig studies of the 1970s. However, the placement rate of those who are newly qualified and who probably wanted to teach is much higher (over two-thirds).

An allied conclusion is that graduation from an agricultural education program no longer means certification to teach. The number of programs other than teacher education which are included under the agricultural education umbrella appears to have expanded over the years. As recently as the 1984 national supply and demand study (Craig, 1985) the number of BS/BA graduates was used directly as the estimate of the number of newly qualified potential teachers. That is obviously no longer a valid assumption as other majors such as agricultural extension and agricultural communications make up an important and growing part of our graduates.

This is the first time that gender and race/ethnicity data have been reported. Teahcers of agriculture at the secondary level are primarily white males. Only a miniscule number of our teachers are of either native Americans, Asian, or Pacific Islander descent.

For the fourth consecutive year, production agriculture does not represent the largest category of teachers. Rather, combination programs are larger with production agriculture second. On the other hand, for anyone familiar with the teaching patterns in agricultural education, it is a reasonable assumption that most of those combination programs are dominated or at least heavily influenced by production agriculture. Based on the findings of this study, a typical agricultural education teacher in the United States works in a general or comprehensive high school in a single-teacher department teaching production agriculture much of the day. On the other hand, reporting patterns in 1992 indicate that a new category (agriscience) must be included in the 1993 study. Reported numbers of production agriculture teachers can be expected to fall markedly in the next study.

Recommendations

A major effort needs to be undertaken by the profession to further increase the number of newly qualified potential teachers of agriculture. At a time when teacher education programs nationwide are bulging with students, why did the number of newly qualified teachers of agriculture grow so slowly from 1989 through 1992? Research is needed to pinpoint the nature and cause of the problem. What can and should be done to correct the problem?

A study needs to be conducted to examine the loss of teaching positions in agriculture. Is this a function of a general decline in school-age population? Is it partially explained by a reduction in the proportion of students enrolling in agriculture at the secondary level? Is the loss concentrated in high schools or in middle/junior high schools? What can, and should the profession do to counteract the problem? Can the curriculum shift toward agriscience and technology alleviate the enrollment decline?

Research is needed to determine why students enroll in and complete teacher education programs, then choose not to seek teaching positions. Is there something that the profession should be doing to increase the proportion of our graduates and other program completers who seek teaching careers? How can the profession be made more attractive to qualified potential agriculture teachers?

Research is needed to describe the kinds of programs of agricultural education in the various states. What is being taught? How dominant is production agriculture or agriscience in the classroom? Are curriculum reforms that are being reported actually affecting the instruction being delivered by the 9,981 teachers in their classrooms and laboratories? These questions and many more allied questions have been answered for individual states, but cross-state, regional, even national data are needed.

This Supply and Demand study provides only a brief glimpse at some interesting and important questions. As sincere and dedicated professionals attempt to reform agricultural education, do we really known where the curriculum is now? And if we do not really know what is being taught in local schools, how will we know when the profession has changed?

References

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Craig, D. C. (1985). A national study of the supply and demand for teachers of vocational agriculture in 1984. Knoxville: College of Education, The University of Tennessee.

NEWS RELEASE

FOR IMMEDIATE RELEASE

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The agricultural education classrooms in America are faced with a shortage of new teachers. An estimated 572 new agriculture teachers were needed in the nations schools in fall of 1992. But, there were only about 475 new graduates looking for teaching positions. Over one-hundred schools were unable to hire fully qualified teachers by the beginning of school in September, 1992.

Agricultural education teachers are probably best known as FFA advisors, 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 agriculture colleges or land-grant universities.

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FACT SHEET

A NATIONAL STUDY OF THE SUPPLY AND DEMAND FOR TEACHERS OF AGRICULTURAL EDUCATION IN 1992

BASED ON SCHOOL YEAR 1991-92 DATA

Total number of agriculture teachers	9,981
Number of Openings	844
Net number of new teachers needed	572
Number of newly qualified potential teachers	686
4-year program graduates	550
5-year program graduates	74
Other programs	6
Teachers needed but not available September 1, 1990	11
Teachers with emergency certificates	71
Types of teaching positions	
High school only	7,775
Combination High with Middle/Jr high school	1,641
Middle/Junior high school only	294
Adult teacher only	157
Number of teachers with both in-school and adult or Young Farmer programs	2,595
Subjects taught	
Production Agriculture only	2,095
Ornamental Horticulture only	882
Specialty Programs, Such as Natural Resources Management or Agricultural Mechanics	1,336
Combinations of Above Programs	3,095
Combinations of Agric and Some Other Subject	293
Texas had the Largest Number of Teachers	1,436
Alaska had the Smallest Number of Teachers	7

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