"Preparing and enhancing the advancement of teachers is the grand strategy facing faculty who are specialists in agricultural education. Preparing and Advancing Teachers in Agricultural Education *is a valuable resource to assist faculty in meeting that challenge.*

—J. ROBERT WARMBROD

Curriculum Materials Service

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TORRES
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Preparing and Advancing Teachers in Agricultural Education

The Ohio State University
Curriculum Materials Service

PREPARING AND ADVANCING

Teachers

IN AGRICULTURAL EDUCATION

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chapter 2

PHILOSOPHICAL UNDERPINNINGS IN AGRICULTURAL EDUCATION

George W. Wardlow and
Edward W. Osborne

There is more to teaching than serving as a conveyor belt that transmits the materials of a book to the minds of students.

—H. G. Hullfish (1961, 22)

Thoughtful educational practice is grounded in an acknowledged or sometimes unstated set of beliefs that is exercised individually and by a collective body of educators. Agricultural education as a discipline and as an educational program in public schools and higher education has been shaped by multiple, and in some cases competing, philosophies. These perspectives have historically pulled agricultural education programs into, alternatively, a legislatively driven work-based arena, a knowledge-based program that aligns with academic learning standards, and a student-centered endeavor that focuses on developing the capacity of individuals to become independently productive citizens and lifelong learners. Amid these divergent philosophical bases is an educational program that continues to evolve, much like a democracy whose design is never fully complete and an individual learner whose capacity is never fully reached.

In this discussion of the philosophical underpinnings of agricultural education in schools and university teacher education programs, attention to a few simple questions will provide the foundation for further discussion. What is philosophy? What is education? Why study philosophy? These questions will lead into a brief historical review of primary philosophical views of agricultural education and their influence on educational goals, learning environments, student and teacher roles, and the contributions of education in a democratic society.

WHAT IS PHILOSOPHY?

While there is no broadly accepted definition of philosophy, many would agree that it can be viewed in at least three ways: as an academic discipline; as a set of beliefs and values held by individuals to guide their behaviors, either individually or collectively; or as a set of standards anchored in propositions or premises that are constantly subject to inquiry and reexamination. An excellent summary of these three views of philosophy, particularly as it may enlighten agricultural education, was presented by Gordon I. Swanson in an October 1980 issue of *The Visitor*.

Professional agricultural educators have a kinship of sorts. While an English teacher at a local high school may not know the English teacher at the middle school, it is common for the agriculture teacher to have a friendly relationship with colleagues throughout the state and even across the nation. One reason for this distinction is agriculture teachers' involvement in professional organizations. Participation in such associations provides the teacher with opportunities for professional development, policy development, and social networking. It develops the teacher's leadership ability, strengthens the discipline as a whole, and encourages friendly competition among teachers and their students.

Theologian John Donne wrote, "No man is an island," pointing out the connectedness between all human beings (Alford 1839, 574). As a professional, the agriculture teacher has many mutually beneficial connections with people and organizations.

THE AGRICULTURE TEACHER AS A TOTAL PERSON

In his well-known and highly respected personal management book *Seven Habits of Highly Effective People*, Stephen Covey (1989) proposed that maximum effectiveness comes from balance between the production of desired results and caring for the ability or asset that produces those results. In the case of an agriculture teacher, this means that there must be a balance between fulfilling the roles described in this chapter and caring for the person who fulfills those roles.

Agriculture and teaching are dynamic and ever changing. In order to effectively do their jobs, agriculture teachers must be lifelong learners. Today, there are more opportunities than ever for teachers to enhance their knowledge and hone their craft. Schools, agencies, organizations, and businesses offer workshops on topics ranging from instructional technology to the latest developments in production agriculture. Many universities offer advanced degrees with coursework providing immediate benefit to teachers. In addition, the Internet provides access to a world of information that helps a teacher broaden perspectives and teach more effectively.

If left unchecked, teaching agriculture, like many other careers, can be all-consuming. To guard against becoming overwhelmed by the job, teachers should be well rounded, with interests and personal relationships independent of agricultural education. Covey's (1989) seventh habit is *renewal*, in which social, physical, mental, and spiritual development builds the total person.

So what can agriculture teachers do to charge their batteries? Some find hobbies such as hunting, golf, or reading to be good diversions. For others, involvement in organizations or causes such as their churches or civic clubs allows them to express their values and use their talents away from work. For many teachers, time with their families can provide the uplifting support needed to give them balance. Proper eating habits and exercise programs are essential for teachers as well; they must think about the physical sphere of living and take care of their bodies. Sports like golf, tennis, or softball, or specific health-promoting activities—weight lifting, calisthenics, pilates, jogging, or power walking—must have a place in the role of the agriculture teacher. Renewal activities should enrich the teacher's life and allow him or her to be an effective total person.

SUMMARY

It takes a special kind of person to be a secondary agricultural educator. Successful agriculture teachers tend to be highly motivated, multitalented, service-oriented people with eclectic interests. They are also knowledgeable about a wide variety of areas, such as technical agriculture, teaching methodology, program administration, and human relations. Such job expectations present strong challenges to teacher educators preparing young people for a career as a secondary agricultural instructor.

Agriculture teacher educators have the task of developing and implementing programs that will provide preservice teachers with the knowledge and experiences needed to develop their competence and confidence. This task is complicated by university degree requirements such as general education expectations and the constraints of degree credit hour limitations. In addition, these programs must comply with teacher certification regulations created by external agencies on the state and national levels.

So what roles does the agricultural education teacher fill? How many different hats might the teacher wear on the job? Let's review:

1. "Traditional" classroom teacher
2. Laboratory instructor
3. Field instructor
4. Motivator
5. Disciplinarian
6. Adult educator
7. Agricultural literacy consultant
8. FFA chapter advisor
9. Coach of students in competitive activities
10. Leadership development expert
11. Supervisor of experiential learning (SAE) activities
12. Experiential learning specialist
13. Program manager
14. Accountant
15. Public relations agent
16. Event organizer
17. Volunteer coordinator
18. Counselor
19. Professional
20. Lifelong learner
21. Well-balanced, total person

Given this eclectic collection of roles, the old figure of speech "Jack of all trades, master of none" may seem to be an appropriate description of agriculture teachers. There is no questioning the fact that they need to know *something* about many different things. However, the adage fails to provide an accurate depiction of effective agriculture teachers. While the best teachers are proficient at many different skills, they are also masterful in their ability to positively impact agriculture, their communities, and the young people with whom they work.

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TEACHER INITIAL LICENSURE PROGRAM PRE-REQUISITES
Agricultural Education

Credits Area		Course #	Course Title	Credits
Agricultural Breadth Competencies	or	◯ AG 111	Computers in Agriculture	3
		◯ AG 211	Survey & Construction	3
		◯ AG 221	Metals & Welding	3
	or	◯ AG 312	Engine Theory & Operation	3
		◯ AG 412	Agricultural Safety & Health	3
		◯ AG 421/521	Leadership Development	3
		◯ AREC 211	Management in Agriculture	4
		◯ AREC 221	Marketing In Agriculture	3
	or	◯ HORT 301	Principles of Horticulture	4
		◯ HORT 351	Floriculture & Greenhouse Systems	4
		◯ CSS 205	Soils Sustainable Ecosystems	4
		◯ CSS 305	Principles of Soil Science	4
		◯ CSS 300	Introduction to Crop Production	4
		◯ ANS 121	Introduction to Animal Sciences	4
		◯ ANS 231	Livestock Evaluation	2
		◯ ANS 313	Applied Animal Nutrition: Ration Formulation	4
		◯	Natural Res (Range, F&W, F, NR)	3
Pre-Licensure Core		◯ AED 313	Theory & Practice III: Field Experience	4
		◯ TCE 253	Learning Across the Lifespan	3
		◯ TCE 411	Education Psych. Learning & Development	3
		◯ TCE 216	Purpose, Structure of Education in a Democracy	3
		◯ TCE 516	Foundational Perspective in Education	2
		◯ TCE 219	Civil Rights & Multicultural Issues in Education	2

Pre-Requisite Teacher Initial Licensure Admission Requirements in Agricultural Education:

1. Baccalaureate degree.
2. Appropriate breadth and competence in agriculture for all teaching areas.
3. 3.00 GPA on last 90 graded credits.
4. 3.00 GPA on course work in agriculture.
5. Competence in working with children (AED 313).
6. Interview with program advisor.
7. Good moral character (as identified on TSPC Form).
8. 4000 hours work experience in agriculture (verified).
9. AG 412 must be taken in order to teach tractor operation.
10. Complete CBEST with Oregon passing score.
11. Complete PRAXIS in Agriculture with Oregon passing score (PRAXIS 10900).
12. Complete ORELA Civil Rights in Education.

FIGURE 7.3
Subject matter requirements for students pursuing an initial teaching licensure program and master's degree in agricultural education at Oregon State University, Corvallis, 2008–2009 academic year
Source: Taken from Oregon State University 2009.

TABLE 7.1
Semester hours required to earn a baccalaureate degree: A historical trend

Hours Required	% of Institutions			
	1953[a]	1965[b]	1976[c]	2009[d]
	N = 48	N = 30	N = 17	N = 44
Less than 40	2	20	18	36
40–45	10	13	18	30
46–49	19	17	18	16
50–54	23	23	35	14
55–59	19	17	12	2
60 or more	35	10	0	2
Total	99	100	101	100

Sources: [a]C. Oscar Loreen (as cited in McCracken 1967), "A Study of the Agricultural Education Curricula"; [b]M. J. Peterson and A. P. Torrence (as cited in McCracken 1967), "The Curriculum: Agricultural Subject Matter"; [c]J. D. McCracken (1967); and [d]Thompson and Edwards (2009).

referred to as "enrichment" or "controlled electives." At some institutions, requirements also involve coursework—introductory and/or advanced—in horticulture, agricultural communications, and agricultural leadership (see figures 7.2 and 7.3). Table 7.1 depicts a trend in the semester hours of agricultural subject matter required to earn a baccalaureate degree in agricultural education, as reported by forty-four institutions in the United States.

Although course titles may vary and the proportion of "required" versus "recommended" or "elective" technical agriculture courses may differ between institutions (see figures 7.2 and 7.3), teacher preparation programs of agriculture require that preservice students demonstrate a prescribed level of content knowledge or technical competence. A student's demonstration of competence in technical agriculture may be indicated by grades received for prescribed agricultural coursework, an overall or cumulative grade point average for a group or series of courses, and/or by subject matter examination(s). Teacher educators should play a primary role in advising students regarding course requirements for degree completion in agricultural education, and guide their selection of elective courses and related learning experiences.

A 2009 national survey of teacher education programs in agriculture indicated that slightly more than one-half of the programs that responded required some type of verification of occupational hours in agriculture as a prerequisite to teacher licensure in agriculture (Thompson and Edwards 2009). Additionally, almost one-half of the programs required a standardized test in agricultural subject matter knowledge to assess candidate competency. Teacher educators indicated that challenges facing teacher education programs in agriculture included lack or loss of agricultural mechanics curriculum, students entering teacher preparation programs with a lack of practical experience, technical courses at the university that did not necessarily match what candidates would teach in high school agriculture programs, and the disconnect between theoretical and practical technical coursework offered at many universities.

Common to almost all technical agriculture courses undertaken by preservice agricultural education students is the curricular element of science. The importance of preservice students understanding the scientific vocabulary, principles, and

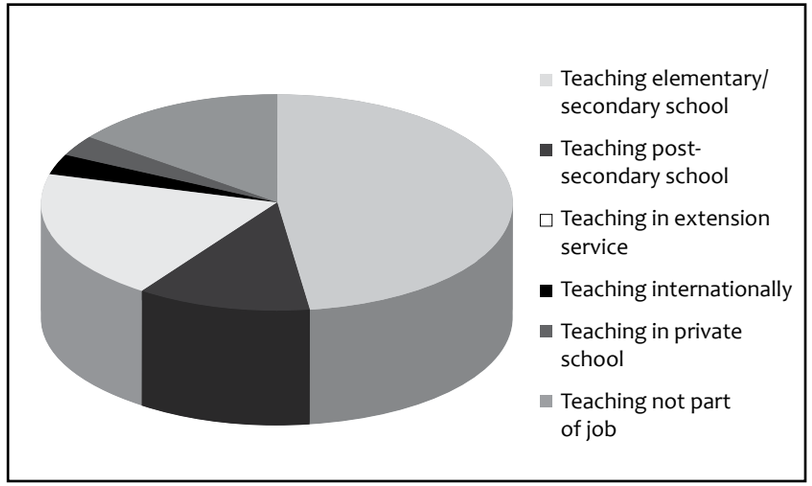

FIGURE 10.4
Job description of recipients of graduate degrees in agricultural education (N=22)

of Instructional Programs (CIP) Code 13.1301—even though more than eight out of ten of the academic departments surveyed in 2008 were administered in colleges of agriculture. This issue affects both accurate reporting and formula-funding levels in some states and will be addressed more fully later in the chapter.

The USDA's Food and Agricultural Education Information System (FAEIS 2008) reported that the cumulative enrollment of students pursuing master's degrees in agricultural teacher education in thirty-five universities between 2003 and 2007 was 608, 610, 597, 643, and 633 per year, respectively. During the same period, FAEIS reported that the enrollment of master's students earning degrees in agricultural and extension education services (CIP Code 01.0801) among eleven universities was 207, 202, 189, 137, and 198. The enrollment of master's students in programs classified as agricultural communication/journalism (CIP Code 01.0802) among six universities was 84, 63, 63, 186, and 52. The general trend during this period was an administrative move of the master's degree from colleges of education to colleges of agriculture.

The twenty-two universities surveyed in 2008 reported six types of master's degrees in agricultural education. Master's degrees were principally course-driven degrees with one-half or more of the credits coming from within the primary academic unit. Graduate committees supervise and approve degree plans that include resident courses, transfer courses, extension courses, and certain other types of coursework. Master's degrees typically require a minimum of one year of study in residence and are normally limited to twelve semester hours of transfer credits. Nonthesis master's degrees may also include directed studies, professional internships, and/or seminars.

As depicted in figure 10.5, seventeen of the twenty-two universities offered the Master of Science, thesis, with an average credit requirement of thirty-one semester credit hours; fifteen offered the Master of Science, nonthesis, with an average requirement of thirty-three semester credit hours; five offered the Master of Education with an average requirement of thirty-one semester credit hours; four universities offered

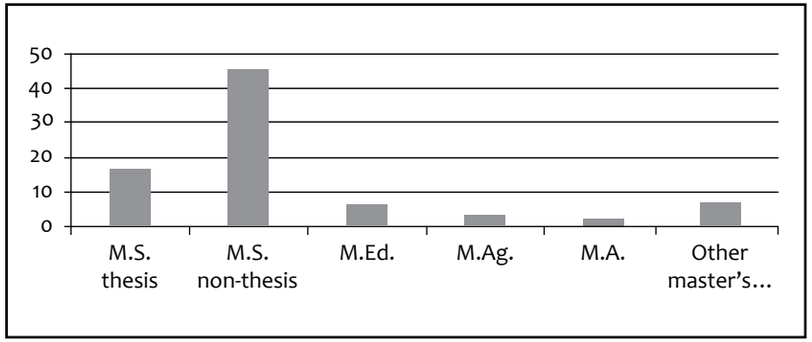

FIGURE 10.5
Frequency of master's degrees offered in agricultural education, 2007–8 (N=22)

the Master of Agriculture with an average requirement of thirty-one semester credit hours; one university offered the Master of Arts with a requirement of thirty-two semester credit hours; and five universities offered other master's degrees—often a composite agriculture degree or education degree—with an average credit requirement of thirty-two semester credit hours.

Finally, the twenty-two universities offered a total of forty-eight master's degrees as on-campus delivery and twenty-nine master's degrees as off-campus delivery (figure 10.6). From among the 483 master's degree–seeking students, 57 percent were women and 62 percent of master's students were enrolled in part-time study. In conclusion, the diversity of graduate degrees and nature of enrollment raises questions concerning the number of full-time equivalent (FTE) faculty members and allocated

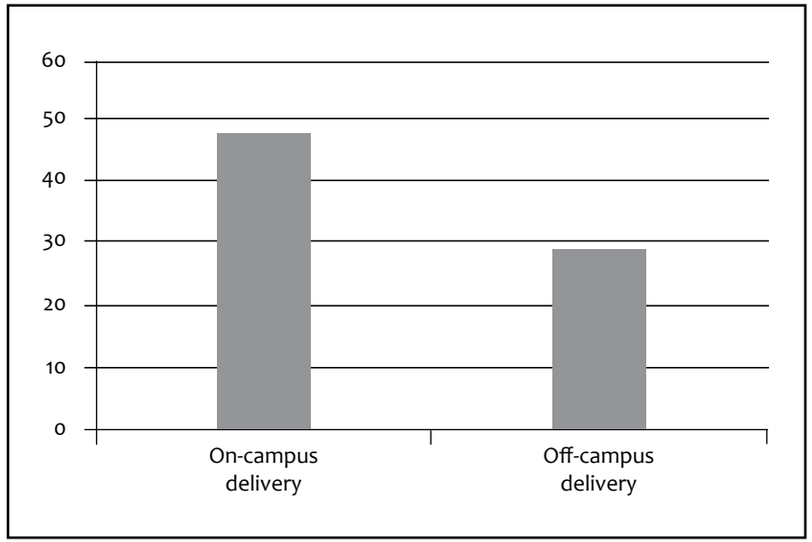

FIGURE 10.6
Type of delivery of master's degrees in agricultural education (N=22)