



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

PROCEEDINGS

of the

WESTERN FARM ECONOMICS ASSOCIATION

Twentieth Annual Meeting

June 25, 26, 27, 1947

Logan, Utah

THE COLLEGE CURRICULUM IN AGRICULTURAL ECONOMICS FROM THE
POINT OF VIEW OF AN AGRICULTURAL ECONOMIST

by

Orlo H. Maughan
The State College of Washington

We have been struggling with the problem of the curriculum for agricultural economics at the State College of Washington for about a year. We were forced to come to grips with this problem by the moving of agricultural economics courses from the School of Economics and Business Administration to the College of Agriculture, and the establishment of a number of new courses. The more we discussed and studied the problem of an ideal or even a suitable curriculum for the agricultural economics major the less sure we were of correct answers. In order to help clear our own thinking, we sought in January of this year the opinions of men recognized in the field of agricultural economics. At the BS, MS, and PhD level, we asked about:

1. The major sources of jobs for agricultural economists.
2. The sort of training most useful in preparation for these jobs.
3. How much general economic and agricultural economic specialization the agricultural economist should have.

Specifically we asked your opinion as to the desirable balance between general economics, agricultural economics, physical sciences, biological sciences, social sciences, the humanities, and agricultural courses. A few days later I followed with a questionnaire asking you to rank in order of your preference different groups of courses. I will discuss your answers in a few minutes.

I propose as a goal in the agricultural economics curriculum, a broad training with a considerable amount of specialization: A broad man sharpened to a fine point.

I think you will find it easy to agree with this goal. No one wants a narrow man; but what is a broad training? Broad from the standpoint of many interests? Broad in a basic well-integrated foundation of economic theory and principles? Broad in technical agriculture? Most of us, I believe, would vote for considerable variety in the college curriculum; upon the details of courses to be suggested there would be considerable difference of opinion. Some particularly would be concerned about a smattering of experience in many fields rather than a good integration of knowledge. Theodore Schultz in reply to our letter put it this way:

"My experiences cause me to stress the content of these sectors, perhaps more than the number of semester hours in the sectors themselves. I am convinced that we have had a subdivision of major fields to a point where the merits of the work have suffered. We had students from nearly every Land-Grant College in the years that I was at Iowa State College. With few exceptions, they were long on detail, of various bits of specialized knowledge but they had missed the fundamentals in nearly every compartment of their training."

In this discussion I propose we try to answer three questions.

1. What fields of learning should be included in the agricultural economics curriculum, and how many courses should be included from each field?
2. To what extent should specific courses be required or be made elective?
3. At what point in the agricultural economics curriculum should the sharpening process of specialization begin?

Let's get down to cases. Following is a list of courses I would recommend to my son who had an interest in becoming an agricultural economist. Above all, I would want to see him become an educated man to the extent that college can offer that opportunity.

At the outset, most college students are woefully short in their ability to speak and write English. Therefore, I would recommend at least two courses in English composition, one or more courses in speech, one or two courses in literature appreciation.

In the humanities and social sciences, I would want him to have a rich experience. I would surely encourage him to study enough history to appreciate the society in which he lives in relation to its historical past; urge him to study enough of the modern languages to have a better understanding of his own language, and to be of assistance to him if he goes on for graduate study. Schultz in his report for the American Council on Education in 1941 concluded that "Since the time when languages are most useful is usually during graduate study, it is extremely unfortunate that students come to their graduate course without such preparation. One thing seems plain: language requirements for advanced degrees, as administered, keep at a minimum the usefulness of these tools to the scholar and place at a maximum their nuisance value. In general, they have degenerated into mere obstacles placed in the path of the scholar's advance."¹

I would encourage the agricultural economics major to avail himself of his opportunities in the fine arts. He would be more appreciative of much of the richness of life if he had some training in art and music appreciation. We could hardly consider him an educated man unless he had had sufficient training in philosophy to understand and appreciate that part of our heritage. He should be well founded in the basic principles of psychology. In view of the necessity for us to assume world citizenship, he should be well grounded in basic political science. Increasingly, the agricultural economics student should have considerable training in sociology.

If this son of mine had sufficient time to study all the subjects which I would recommend, he would spend considerable training in the physical sciences and mathematics. I would recommend mathematics through calculus. I would like to see him study beginning geology, one or more courses in physics, and enough chemistry to give him a background for soils and animal nutrition. In addition, I would recommend a course in astronomy on the theory that this would enrich his daily living.

The student in agricultural economics should be particularly well grounded in the biological sciences. He should have a basic understanding of the principles in

¹Training and Recruiting Personnel in the Revol Social Sciences, American Council on Education, page 118.

botany, zoology, bacteriology, and entomology, and either human or animal physiology. In addition, I would recommend a good course in ornithology because that, too, would enrich his daily living.

An agricultural economist should be well trained in agriculture. He needs this training in order to arrive at sound conclusions. Furthermore, discovery of truth in the field of agricultural economics is only part of the job. The other part is the extending of these facts by written and spoken word to the folks who apply this information. In this job of education, the agricultural economist needs an agricultural background if he is to be clear and convincing.

I would recommend without question that the agricultural economist have training in each of the major agricultural subject matter fields; animal husbandry, dairy husbandry, poultry husbandry, agricultural engineering, horticulture, animal nutrition, agronomy, and soils.

I am not too happy about the way we teach beginning courses in a number of these branches of agriculture. There is far too much tendency to waste the student's time through non-essentials and there is far too little integration between courses. However, this does not lessen the agricultural economist's need for a broad training in the basic agricultural sciences.

No one will question that the agricultural economist should have a solid foundation in economics, accounting, and statistics. It seems to me that we would have to encourage the agricultural economist to take the following courses in economics and business:

- Principles of Economics
- History of Economic Thought
- Business Law
- Money and Banking
- Economic Geography
- Public Finance and Taxation
- Labor Economics and Problems
- Consumer Economics
- Advanced Principles of Economics
- Economic and Business Fluctuations
- Transportation Economics
- International Trade
- Prices
- Principles of Accounting
- Statistics

Finally, I would want the agricultural economist to be well sharpened in the subject of agricultural economics. I would recommend all of the courses in the following list:

- General Farm Management
- Farm Accounts
- Marketing of Farm Products
- Agricultural Economic Policy
- Land Economics
- Agricultural Prices
- World Agricultural Economics
- Applications of Statistics to Agriculture
- Agricultural Job Analysis
- An Advanced Course in Farm Management or
Field Practices in Farm Management

Cooperative Marketing
Agricultural Finance, Credit,
and Appraisal

On top of all this I would suggest to this son that he spend a reasonable amount of time in extra-curricular activities -- either athletics or (my own personal preference) debate, dramatics, stock judging, college politics, work with the Y.M.C.A., or other college activities. I think it highly important that at an early date he acquire a sense of responsibility of public service and yet learn to budget his time between public service, his professional field, and his family and friends.

To recap my list of suggested courses, I find that I have recommended:

<u>Field</u>	<u>Semester Hours</u>
English and Speech	About 18
Humanities and social sciences, (excluding economics)	About 33
Physical sciences and mathematics.	About 27
Biological sciences.	About 18
Economics and Business	About 33
Technical Agriculture.	About 27
Agricultural Economics	<u>About 38</u>
 Total.	 194

Assuming that 120 semester hours exclusive of physical education and military training are required for the Bachelor's Degree, and 150 semester hours for the Master's degree, the grand total of my list then exceeds the scope of a Bachelor's Degree by about 60 percent, and the Master's Degree by about 30 percent.

Obviously, a most careful job of selection is required. One fact to me seems quite clear. We cannot get a broad man sharpened to a fine point in four years of college training. Therefore, if we are to get a broad man the sharpening must come, by and large, after the B. S. degree. Some of this sharpening will take place naturally in:

- (a) Graduate work for an advanced degree.
- (b) On-the-job in a professional position.
- (c) On the farm as a farmer.

My basic plea at this point is that we should not attempt to produce agricultural economists at the bachelor level.

If we accept this as true, our first problem becomes one of minimum requirements in each of the major fields. Later we will want to discuss whether those minima should be achieved through curricular requirements or through counseling, but first we need to agree as nearly as possible upon a desirable balance between the major fields. If a student comes to college for a broad education, it is logical to argue that the minima for the professional side of his college training in agriculture, in economics and in agricultural economics be kept as low as possible. This is necessary if he is to have time to tap the great wealth of other knowledge that is available to him in college. This is desirable because:

- 1. Most persons expand their intellectual interests only under prodding; such prodding is possible for undergraduates.

- 2. Most persons will continue to study in their chosen field after college but will not expand their interests beyond their professional field. This applies to graduate students as well as to men on the job.

How low these minima in the applied fields should be, is largely a matter of judgment as to balance. If we are prepared to argue that:

- 1. A well-trained agricultural economist is not possible at the end of four college years.
- 2. He should have basic economics, statistics, and accounting, but
- 3. He also needs the basic principle of farm management, land economics, agricultural marketing and finance, and
- 4. He also needs to know the basis of technical agriculture.

Then I would propose minimas about as follows:

- 21 semester hours of technical agriculture
- 15 semester hours of economics and business
- 15 semester hours of agricultural economics

Some will argue that 21 semester hours of agriculture and 15 hours of agricultural economics is too much in relation to 15 semester hours of economics and business; that the student will more likely learn the more technical phases of agriculture and agricultural economics than he will the principles of economics. My answer would be again the question of balance; that the undergraduate student should be introduced to the basic principles of agricultural economics and technical agriculture as well as economics.

Some will argue that 21 semester hours of required agriculture is too few. Toward this point of view I am personally sympathetic, yet if the student is to have a broad liberal education the number of required technical courses must be kept to a minimum.

Schultz in the 1940 Study for the American Council on Education proposed a Model Curriculum,

"The materials on which these generalizations are based do not lend themselves readily to qualification and averaging. However, it seemed desirable to construct a model curriculum, characteristic of no school, which represents the middle ground from which actual curricula depart in all directions."^{2/}

	<u>Semester Hours</u>
Technical Agriculture (such as Animal Husbandry, Agronomy, Soils, Horticulture)	24
Basic Sciences (Physics, Chemistry, Botany, Zoology, Geology, etc.)	20
Agricultural Economics.....	19
Social Sciences (All non-rural social sciences)	12

^{2/} Training and Recruiting of Personnel in the Revol Social Sciences.
American Council on Education. P. 119

English	9
Mathematics and Statistics.....	9
Military and Physical Education	9
Agricultural Sciences (Plant Path., Entomology, Ag. Bact., Ag. Chemistry, Genetics, etc.)	5
Electives	27
	134

The questionnaire sent to you attempted to sample your opinion as to a well-balanced agricultural economics curriculum, Table 1 was divided into three sections with 44, 56, and 68 semester hours of humanities, social, biological, and physical sciences. A summary of your replies is as follows:

Semester Course Hours in Humanities, Social, Biological and Physical Sciences	Average Pref- erence 24 Replies	Number selecting this group as		
		First Choice	Second Choice	Third Choice
44 Semester Hours	3.8	14	10	1
56 Semester Hours	4.9	8	9	7
68 Semester Hours	6.3	2	5	16

This table would seem to indicate heavy preference for 44 semester rather than 68 semester hours in liberal arts and sciences. However, an examination of detail within groups shows that conflicting considerations make a clear-cut tabulation of the results difficult, if not impossible. For example, R. R. Renne and Marion Clawson select as second choice 68 hours of arts and sciences, 30 hours of agriculture, and 22 hours of economics and agricultural economics, but Renne selected as 9th and Clawson as 8th choice 68 semester hours of arts and science, but 18 hours of agriculture and 34 hours of economics and agricultural economics. (See Table 1) Difficulties encountered with the questionnaire are illustrated by the comments of O. B. Jesness. "I started to register my preference but it was not long before I found so many exceptions creeping into my mind that I decided instead to ask that I be relieved from voting in this way." (More from Jesness later)

This difficulty with the questionnaire perhaps explains why only about one-third of those who wrote letters returned the questionnaire. Nevertheless, from the 24 replies received the most favored curricula appears to be 56 hours of arts and science, 30 hours of agriculture, and 34 hours of economics and agricultural economics.

In my proposed minima I suggested 15 semester hours in economics and business and also 15 semester hours in agricultural economics. Most of you preferred more training in economics and agricultural economics than this, but preferred about a 50-50 ratio between the two fields in general as follows:

Aggregate Preference	Number 1st, 2nd or 3rd Choices	Semester credit hours of:	
		Economics and Business	Agricultural Economics
1st	14	25	15
2nd	13	27	25
3rd	12	15	25
4th	9	14	14

The second major question which should be discussed at this meeting is the problem of specifically required courses, required groups of courses

or a wide use of electives under the guidance of counselors. On this subject your answers are quite clear-cut. Most of you want a wide range of electives. O. B. Jesness wrote:

"Students vary in their talent and interests. Some students have a clear-cut idea of what they want to do and others do not. I will be the first to grant that if considerable leeway is left to the student and his adviser to work out a satisfactory program, a good many mistakes may be made. This, I think, is less serious than to have the faculty make wholesale mistakes for a number of students. I, therefore, find myself coming back to the idea that I think we will do better if we prescribe certain basic courses to give a man a fairly well-rounded foundation and then leave it up to him to elect courses beyond that under the guidance of an adviser."

H. C. M. Case wrote as follows:

"About 25 years ago I took the initiative in suggesting that we dispense with practically all of the special curricula and require all of our general agricultural students to take about the same work for two years and provide for election beyond that point for specialization. Later our major departments determine field of specialization purely on the basis of a special examination in an elected field of specialization. A student will usually have about 20 hours of work in his field of specialization."

Asher Hobson expressed this opinion:

"Students are held for a considerable number of required courses in the first two years, with virtually no specific requirements for the junior and senior years. In general our system places a considerable responsibility upon advisers, and in our department staff members take considerable time with each student to help him work out the combination of courses which most nearly fits his own needs....."

"Regarding the general requirements, all students who major in agricultural economics must take at least 15 hours in agricultural economics, and may take as many as 25 hours in the department beyond the required course, Agricultural Economics 1.

"We do not have any fixed requirements regarding specific courses in general economics for our undergraduate majors. However, most of them take the second semester of principles and the course in elementary economic statistics."

W. I. Myers wrote:

"We do not have the system of majors in our undergraduate curriculum. We do have a system of rather free election so that a student may specialize to some extent in one department if he wishes to do so. However, our general recommendation for undergraduates is that they should attempt to get broad training in biological sciences and agricultural subjects with a minimum of specialization."

By a middle course, it seems to me, we could avoid the inflexibilities of a large number of required courses and at the same time prod the student toward a broader development of his personality. To do this I would suggest a curriculum which would require very few specific courses and yet would require a minimum of credits in each of several broad fields about as follows:

	<u>Semester Hours</u>
English and Speech	9
Humanities and Social Sciences (excluding Economics and Business)	12
Mathematics and Physical Sciences	12
Biological Sciences	9
Economics and Business	15
Agriculture	21
Agricultural Economics	15
Total	<u>93</u>
Electives	27

I would confine specifically required courses to approximately 24 semester hours as follows: Technical agriculture--perhaps only a course in soils and one in feeds and feeding; in economics and business--principles of economics, statistics, and accounting; in agricultural economics--general farm management, and a principles course in marketing of farm products. This curriculum allows the student considerable latitude within fields and gives him about 27 elective hours to concentrate in one or more fields if he so chooses. It is quite likely that the 27 elective hours would be concentrated in agriculture, agricultural economics, or economics by the agricultural economics major.

It is also likely that in the process of counseling a good deal of guiding would take place depending upon the counselor's inclinations, the reputations of various instructors, and the mood of the times. The need for experienced, able and interested counselors should be emphasized. The success of a flexible curriculum depends in large measure upon the quality of counseling.

In all this I am assuming that the graduate student in agricultural economics would concentrate his studies in economics, agricultural economics, or in the production fields in which he is doing agricultural economics research.

REPLIES TO QUESTIONNAIRE - Headed with the Following

Please rank from 1 to 9 in order of your preference (see * below) the following combinations of semester course hours for a B.S. in Agriculture with a major in Agricultural Economics. We would like you to assume a cross-section of Agricultural Economics students, including those who plan to go back to the farm, into agricultural business, into the professions, into other businesses, or in preparation for further study for a Master's or Doctor's Degree in Agricultural Economics. These alternative programs assume a total of 120 semester course hours. Please ignore the problem of the proportion between required and elective courses. In this question we are primarily interested in your judgment as to balance between the major divisions as listed under 1, 2, and 3 in Table 1.

Table 1.

1. English, humanities, social sciences, biological, and physical sciences	56	56	56	44	44	44	68	68	68
2. Agriculture	24	18	30	24	18	30	24	18	18
3. Agricultural Economics, General Economics, and Business Administration	<u>40</u>	<u>46</u>	<u>34</u>	<u>52</u>	<u>58</u>	<u>46</u>	<u>28</u>	<u>34</u>	<u>34</u>
Total	120	120	120	120	120	120	120	120	120

*Rank in order of preference

		A			B			C		
		1	2	3	4	5	6	7	8	9
Wisconsin	K. H. Parsons	2	3	4	1	8	5	6	9	7
Purdue	Butz & Young	1	5	3	2	6	4	7	9	8
Ohio State	Talcones	2	3	1	8	9	7	4	6	5
U. of Maine	Merchant	4	6	3	2	5	1	7	9	8
Cornell	Myers	5	6	4	8	9	7	2	3	1
Alabama	Alvord	3	6	4	2	9	1	5	7	8
Mississippi	Welch	5	4	6	1	2	3	9	7	8
Virginia	Love	2	7	1	6	9	5	3	8	4
New Mexico	Cockerill	3	9	1	7	8	2	5	6	4
Montana	Ag. Ec. Dept.	1	3	6	2	5	8	7	4	9
Washington State	Buchanan	4	7	1	5	9	2	6	8	3
Oregon	Mumford	4	6	2	3	5	1	8	9	7
Nevada	Mason	1	3	2	5	6	4	8	7	9
Montana	Renne	3	6	1	5	7	4	8	9	2
Utah	Thomas	7	8	9	2	1	6	4	3	5
TCA	Engberg	1	2	3	6	7	5	8	4	9
Ext.	Gilimon	2	1	3	5	4	6	8	7	9
Bur. of Land Mngt.	Clawson	4	7	1	6	9	3	5	8	2
Exp. Station	Sayre	4	6	5	2	3	1	7	9	8
B.A.E.	Calhoun	4	2	6	3	1	5	8	7	9
Ford Ferguson	Walker	1	3	2	8	9	7	4	6	5
Nat. Coop. Milk	Herrmann	2	8	1	4	9	3	6	7	5
GLT Coop.	Butler	5	6	4	2	3	1	(8)	(8)	(8)
Unidentified		5	6	1	8	9	7	3	4	2
Average preference		3.1	5.1	3.1	4.3	6.3	4.1	6.1	6.8	6.0
Number of 1st, 2nd, or 3rd choices		13	8	15	11	5	10	3	2	5
Number of 1st and 2nd choices		10	3	11	9	3	7	1	0	4
Number of 1st choices		5	1	8	2	2	5	0	0	1

REPLIES TO QUESTIONNAIRE - Headed with the Following

In this part of the questionnaire we are interested in the balance between courses in General Economics, Business Administration, and Agricultural Economics. Will you please rank from 1 to 9 in order of your preference (see * below) the following alternative curricula assuming in the first group of three,* 40 hours total of General Economics, Agricultural Economics, and Business Administration; the second group, 52 hours; the third group, 28 hours. Again will you please rank these from the standpoint of a cross-section of undergraduates in Agriculture with a major in Agricultural Economics. This should include those who plan to go back to the farm, into agricultural business, into the professions, into other businesses, or in preparation for further study for a Master's or Doctor's Degree in Agricultural Economics.

Table 2.

		Semester Course Hours								
		7	11	15	8	18	26	20	6	32
General Economics		7	11	15	8	18	26	20	6	32
Business Administration		7	7	9	7	7	10	7	10	14
Agricultural Economics		14	10	4	25	15	4	25	16	6
Total		28	28	28	40	40	40	52	52	52
*Rank in order of preference										
		1	2	3	4	5	6	7	8	9
Purdue	Butz & Young	2	3	7	4	5	8	1	6	9
Ohio State	Talcones	1	5	7	2	4	8	3	6	9
U. of Maine	Merchant				(1)	(2)				
Cornell	Myers	1	2	3						
Alabama	Alvord	7	8	9	4	2	5	1	3	6
Mississippi	Welch	7	9	8	3	4	6	1	2	5
Virginia	Love	6	5	7	3	2	8	1	4	9
New Mexico	Cockerill	3	4	5	1	2	6	7	8	9
Montana	Ag. Ec. Dept.	8	7	9	4	1	6	2	3	5
Washington State	Buchanan	2	1	3	7	8	9	5	4	6
Oregon	Mumford	6	5	9	1	4	8	2	3	7
Nevada	Mason	5	6	9	1	3	8	2	4	7
Montana	Renne	7	1	2	9	3	4	5	6	8
Utah	Thomas	(1)	(2)	(3)						
TCA	Engberg	9	7	8	6	1	5	2	3	4
Ext.	Gilimon	6	5	9	2	4	8	1	3	7
Bur. Land Mgmt.	Clawson	6	4	5	3	1	2	9	7	8
Exp. Station	Sayre	5	4	8	7	1	9	2	3	6
B.A.E.	Calhoun	9	7	6	8	3	5	1	2	4
Ford Ferguson	Walker	3	4	8	2	1	7	6	5	9
Nat. Coop. Milk	Herrmann	3	4	7	1	2	8	5	6	9
GLT	Butler	2	1			4		3		
Unidentified		2	4	5	1	3	8	6	7	9
Average preference		4.2	4.1	5.7	2.9	2.5	5.3	2.7	3.5	5.7
Number of 1st, 2nd, or 3rd choices		9	6	4	12	14	1	13	8	0
Number of 1st and 2nd choices		5	3	1	8	10	1	11	2	0
Number of 1st choices		3	3	0	6	4	0	6	0	0