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THE COLLEGE PREPARATION OF AGRICULTURE TEACHERS IN AGRICULTURE AND RELATED SUBJECTS

The agriculture teachers of Minnesota gathered at a summer conference in June, 1926, were asked to give information about the courses which they had taken during their college years. The teachers who co-operated in this study received their training in various agricultural colleges. Most of them were trained at the University of Minnesota College of Agriculture. Others are graduates of agricultural colleges in Iowa, Wisconsin, North Dakota, and Pennsylvania. Each teacher was furnished mimeographed questionnaires which were arranged to give the following information when filled out:

(a) Years of experience in teaching.
(b) The names of courses taken together with the quarter hours of credit received.
(c) The teacher's idea as to whether he should have taken more, the same amount, or less work in that course.
(d) Provision was made for suggestions for improvement of content and methods in teaching the respective courses.

Forty teachers co-operated in this study by furnishing information according to the above clasification.

The table gives the results in tabular form.

In order to interpret the table let us analyze Course No. 5, Engineering. According to the table, 3 teachers had no credits in Engineering, 14 had from 1 to 6, 20 from 7 to 12, 2 from 13 to 18 with no teachers having more than 18 credits. Under the heading "Mode of credits taken" we find that for Engineering, the largest number of teachers have had 5 credits of work. The next column shows that the range of credits taken extends from 0 to 18. In order to give more significance to the interpretation of the ideas of the teachers the table gives the reaction of teachers below the mode, at mode, and above mode. Thus in Engineering, of the students having less than the 5 credits indicated as the modal number, 5 teachers indicate that they should have had more training in Engineering, 0 for the same amount, and 0 for less. Of those teachers at mode or having the previously mentioned 5 credits in Engineering, 4 say they should have had more training, 2 indicate that the amount they took was satisfactory, and 2 indicate that they should have had less work in Engineering. Of those teachers having above the modal number of credits, 10 indicate that they should have had more, 13 the same, and 3 less. In total we find that in the case of Engineering 19 indicated a desire for more training, 15 the same and 5 less.

It will be noted that in Dairy Production Course No. 3 that a large number of teachers indicate that they should have had more credits in this line of work. This is to be expected because of the importance of dairying in Minnesota. The teachers express a desire for more work in poultry as will be seen by examining the figures for Course No. 14 in the table. The college preparation in poultry seems to be rather meager with nine teachers having no work at all, fifteen having but three credits and only 11 having four or more credits. It would seem that more emphasis should be placed upon training in poultry because of its importance as a part of farming in most Minnesota communities. Precise knowledge and definite skills are necessary for success with poultry upon the modern farm.

As indicated by the figures for Course No. 15, Soils, the amount of credits seems to be satisfactory, at least very much more so than for any other course in technical agriculture.

In general it will be noted that teachers are desirous of more training in technical agriculture in preparation for the teaching of agriculture.

Very few agriculture teachers have had any special training in athletics. The statistics indicate a strong desire for such training. Agriculture teachers are often asked to help with the school athletic program. In addition to this, agriculture teachers can use athletic training in their community work. Many agricul-

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ture teachers are introducing some athletic activity into evening school and part-time work because farmers have little of such activity.

Teachers of agriculture find many opportunities to write for local papers, to do publicity work, and to help their students in such activities. This probably accounts for the desire for training in journalism which is indicated in the table.

In relation to their community activities agriculture teachers often find themselves in need of parliamentary law. How to conduct a meeting in a proper manner seems to fall within the realm of a teachers work; at least it is so indicated by the desire expressed in the table.

The teachers in their remarks concerning the college courses which they took are quite definite in expressing their desire for practical work in college courses. The following comments are typical: "More regular shop work," "Make course more practical; example, study common weeds rather than plants in other capacities," "Make trips to fields examining crops being studied," "More practical and less pure science," "Present on problem basis," "Too general, nothing useful," "More agricultural in aspect," "Keep in mind how much can the students put into practice of what is given at college," "A thorough course in well known principles but don't waste time on unproved theories."

It is evident from the above statements that many teachers find it hard to use phases of their college course work under actual conditions of teaching vocational agriculture in high school. In the present system of college instruction, not all students in a given class ordinarily expect to become teachers of agriculture. The college course must necessarily be designed to meet the needs as nearly as possible of students who subsequently choose one of many phases of agricultural endeavor.

In the future, probably, much will be done to fit college work to the needs of the individual. This phase of the problem is a large subject in itself and cannot be considered in this paper. There are, however, some phases of the situation suggested by the statistics which may well be discussed here.

It cannot be expected that college training will anticipate every need experienced by the teacher in his work. A training course which would meet all needs would have to be extended over a longer time than four years.

It would seem that the responsibility for remedying any deficiency in training, falls upon the teacher. A teacher should not feel that he is excused from teaching any very important phase of his work because of a lack of training while in college. After all, education is a matter of individual development and some of the most efficient learning takes place when one is face to face with an actual problem. Teaching is not entirely a giving process. It is a great learning situation for the teacher himself. Indeed a teacher who does not grow in wealth of useful experiences is doomed to disappointment. With the wealth of excellent literature available, the help which may be gained through contact with farmers, the contacts with other trained workers, and the incentive coming from contact with the actual situation suggests a real opportunity for the teacher to remedy any deficiencies of the college training period.

Conclusions might be drawn as follows:

1. Experienced teachers of agriculture point out the need for more work in courses dealing with technical agirculture.
2. It is emphasized by these teachers that the courses should be of a very practical nature.
3. There seems to be need of work which cannot be classified as technical courses in agriculture such as training in athletics, journalism, and parliamentary law.
4. Teachers should not excuse themselves from teaching evidently desirable phases of agriculture because of a lack of training. Facilities appear to be available while actually on the job, for remedying many training deficiencies.

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TABLE SHOWING ADEQUACY AND INADEQUACY OF THE COLLEGE PREPARATION OF AGRICULTURE TEACHERS IN AGRICULTURE AND RELATED SUBJECTS BASED UPON THEIR VOLUNTARY REPORTS

Names of Courses	Number of Persons Taking the Designated Number of Credits						Credits Taken		Number of Persons Expressing Desire for More, Same, or Less College Preparation											
									Below Mode			At Mode			Above Mode			Totals		
	Cr. None	Cr. 1–6	Cr. 7–12	Cr. 13–18	Cr. 19–24	Above 24	Mode	Range	M	S	L	M	S	L	M	S	L	M	S	L
1. Bees	23	11	3	..	..	1	0	0–26	..	..	..	20	2	0	3	10	2	23	12	2
2. Crops	0	2	21	13	2	1	12	6–27	4	10	..	12	4	..	3	4	..	19	18	0
3. Dairy Production	0	17	15	6	1	0	6	3–21	9	2	0	4	2	0	13	5	1	26	9	1
4. Dairy Manufacturing	19	16	3	0	0	0	0	0–30	..	..	..	11	3	0	5	10	2	16	13	2
5. Engineering	3	14	20	2	0	0	5	0–18	5	0	0	4	2	2	10	13	3	19	15	5
6. Entomology	6	22	11	0	0	0	3	0–12	5	1	0	5	10	0	8	7	2	18	18	2
7. Farm Management	2	25	11	1	0	0	6	0–18	9	2	0	5	10	0	2	10	0	16	22	0
8. Forestry	15	18	1	0	0	0	0	0– 8	..	..	..	9	3	0	5	13	0	14	16	0
9. Fruit Growing	5	27	4	0	1	0	3	0–21	4	0	0	8	8	2	6	5	2	18	13	4
10. Landscaping	18	18	2	0	0	0	0	0–12	..	..	..	13	4	0	6	13	0	19	17	0
11. Vegetable Growing	8	29	1	0	0	0	3	0– 9	9	1	0	4	14	0	1	5	1	14	20	1
12. Livestock	0	4	12	15	7	1	14	1–30	12	4	0	2	5	0	3	11	0	17	20	0
13. Plant Pathology	9	22	5	0	0	0	5	0–10	8	3	0	6	8	0	2	5	0	16	16	0
14. Poultry	9	25	2	1	1	0	3	0–24	9	0	0	11	4	0	7	4	0	27	8	0
15. Soils	0	20	16	3	0	0	6	3–14	2	5	0	1	11	0	5	12	1	8	28	1
16. Veterinary	4	25	9	2	0	0	5	0–14	13	0	0	3	7	0	7	7	2	23	14	2
17. Athletics	29	5	2	0	0	0	0	0–12	..	..	..	24	2	0	4	1	0	28	3	0
18. Botany	2	2	25	8	1	1	9	0–27	2	2	1	3	19	1	0	11	2	5	32	4
19. Chemistry	0	0	9	9	7	14	26	9–32	4	14	3	0	7	0	0	3	0	4	24	3
20. Economics	0	6	21	6	4	0	9	2–24	5	5	0	4	4	1	5	11	2	14	20	3
21. Genetics	8	24	4	0	0	0	3	0– 9	7	1	0	7	11	0	1	8	0	15	20	0
22. Journalism	30	7	1	0	0	0	0	0– 8	..	..	..	22	4	0	6	2	0	28	6	0
23. Parliamentary Law	33	4	0	0	0	0	0	0– 2	..	..	..	22	8	0	0	4	0	22	12	0