II. Specialization vs. Generalization in Training Agronomists

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I GREW up on a farm. I graduated with the B. S. degree from an agricultural college. My M. S. and Ph. D. degrees were obtained from another agricultural college. In the various steps upward, I did not deviate more than the required minimum from physical and biological science studies, and I do not remember that anyone encouraged me to deviate. In all of this period of education, my contacts with the humanities and with the social sciences were sporadic, and what few experiences I had with them I regarded largely as necessary evils to be cleared away before getting on with my objective. In the eyes of most educators, I had a narrow, technical education. After reviewing many treatises on liberal vs. technical education, I am impressed that from the point of view of many of these writers it is only by sheer luck that I escaped barbarism.

Even though many of the arguments for a liberal arts education leave my prejudiced mind cold, I have always felt vaguely uneasy as to whether I had missed something vital in life. In my professional experiences, I have again had many reasons to question the adequacy of my background. The problem has never been one of knowing too much about science, but one of knowing too little about history, logic, philosophy, and many other fields.

If you will endure one more personal reflection, I feel that in too many courses I was cheated through needless repetition, or, perhaps even worse, through being subjected to academic “busy work”, barren of challenging principles or intellectual interest. In the first category I can list several graduate courses in chemistry for agricultural students which added nothing to what I had already had as an undergraduate. This crime against the intellect was perpetuated under the guise of applying principles to a select field. Under busy work, I remember numerous laboratory exercises in soils that kept us busy but which, insofar as I can see, neither developed skill nor improved my understanding of the subject. I recall such questions in forage crops as "How much alfalfa was grown in the United States in 1927".

Certainly the experiences of one person cannot be used as a guide for all, but in discussing with others the deficiencies in my educational experience I find that in one form or another a large proportion of my colleagues have had similar educational disappointment. The significance of my reflections has been strengthened by my experience as a teacher on several campuses and further confirmed in my administrative capacity as I talk with new and old staff members.

Let us look at the destination of our agronomy students. We are told that liberal arts studies are the answer to this problem of the whole man. In spite of that for the liberal arts curriculum, students are and there seems little possibility that any scholar will buy it. The day of the dilettante is passed and the demand for specialized products is too great for any large number of students to find satisfying careers. In fact, we question whether a liberal arts education is the ideal education for the whole man, or even for his period. There are certainly many elements of education in technical course work. Paul Willis has shown this in the following:

"Oh, so you're an engineer.
I never would have guessed—you're so pleasant
No offense of course I mean most engineers
Are you narrow, don't you think?
Well, I mean they just aren't educated
What? Yes, well yes I guess I do
Mean liberal education, don't you think?
What's the difference?
Oh, I took my degree in History
And now I'm studying American History
Because I feel everyone should know
All about their own country's history
Who? Gibb's?
Willard Gibb's? Gosh no I haven't
Yes, he does sound interesting,
I'll have to look him up.
No, but I read a review
And it sounded interesting,
But my field is history."

A college education must first of all be useful and, therefore, in the minds of students and parents first attention must be given to professional training. In the educational arena, we must show the student how a liberal arts education can be made relevant to the needs of modern life. The traditionalists may still hold that liberal arts education is the answer, but time and the market place are working against that concept.