

# FACULTY AND FARM <sup>1)</sup>

## THE ROLE OF UNIVERSITARY AGRICULTURAL EDUCATION IN RURAL WELFARE DEVELOPMENT

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It is an undeniable fact that modern science of agricultural technology has reached an unprecedented standard, and, if only applied by the farmers in the field, would certainly improve their farming considerably. We have a large arsenal of technological devices at our disposal to create a rural world of abundance, in which a multiple of the present-day world-population could live in dignity and comfort. Day in day out the agricultural scientists in the laboratories and experimental stations are breaking their heads to step up agricultural production further and further. The agricultural graduates usually leave their schools with a sufficient knowledge of how to increase and improve agricultural production . . . under the ideal circumstances of the experimental or demonstration field.

Why, then, is agriculture, such as it is carried out by the farmers in their daily work and life, not developing more rapidly in so many countries – more especially in the tropical and sub-tropical parts of the world – and why is it that the rise of rural welfare-standards in those areas still leaves so much to be desired?

The solution of this basic problem is, obviously, not to be found by the search of still more agro-technological devices of production-increase. These have turned out to be merely potential. So there must be another approach to agricultural development at the same time in order that these potential improvements may result in actual ones.

This additional, but nevertheless essential, approach to rural reconstruction can only be realized if we are fully aware of the fact that the way in which farming is carried out is, throughout the world, the result of the farmer's "response" to the technological and economic conditions of his environment. This response is, like any other human reaction, not only dependent on the challenge of the world he lives in, but moreover on, let us call it, his "inner world" that is the totality of his ideas, his ideals, his wishes, his hopes and fears, his abilities, his habits and behaviour, the traditions obtaining in his community, and many other so-called "intangibles", all of them being the manifestation of his personality, which bears the stamp of his social surroundings and cultural heritage. In a word, this response is the result of a complex of factors demonstrating the real panorama of rural life. It explains why it can frequently be observed that farming shows such a great diversity in, even adjacent, areas with the same ecological conditions. Is there a better evidence imaginable for the great influence of the human factor on agriculture, and for the farm-people themselves being an important, often even a decisive, element in the total concept "agriculture"?

From this important influence of culture on agricultural techniques it fol-

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lows that the study of agriculture is not complete without the study of the human factor. This was realized by those who were responsible for the building-up of an adequate curriculum of the Faculty of Agriculture: at the lectures in "Agricultural Organization" the students are introduced into the study of the „human side" of agriculture, as we might call it, and they are taught to see the structure of farming, such as it can be observed in the field, as the result of the inter-action and inter-relationship between environmental challenge with its technical potentialities on the one hand, and the farm-people's response, dependent on their pattern of wants and values, on the other.

I shall give you some examples which demonstrate how closely related agricultural production-methods are with life in the rural community.

The first example is from my practice as an agricultural advisory officer in Indonesia. At the time, the Agricultural Advisory Service tried to introduce a small and simple threshing-machine for rice, by means of which much more rice could be threshed in less time and in an easier way. The people of the area in question – the Batak tribe in the Northern part of the island of Sumatra – used to thresh in the rice-fields, and with their feet, a very laborious and time-consuming way, as you easily can imagine. Nevertheless, our efforts to persuade those peasant-farmers to use the machine had no success at all. In the beginning we could not think of any reason why they did not want this practical and functional innovation. It was, from a technical and economic point of view, much better than the old method. But after a closer inspection we found that the basic reason for their reluctance was not a technical or an economic one. It was a social one or, if you like, a cultural one: threshing time was very important in the life of these simple villagers, since during this period the young men and the girls, charged with the threshing, had a natural opportunity to meet each other in the fields, and as a consequence of these contacts future marriages were settled. Thus, social motives had a most important function in the disinclination to follow up the agricultural extension advices which, in this case, aimed too one-sidedly at a techno-economic improvement instead of seeing farming as an integral part of rural life.

As another example of this kind I quote one which has been recorded from Burma (1949). In a certain region of this country it happened that an agricultural extension expert tried to improve the breed of pigs by importing better boars. These boars were white, or pink, or whatever you would call such a pig. So the cross with the black Burma pigs gave a progeny that was piebald. Now, the ultimate fate of those pigs is to be eaten, and the goal was one of increasing the food supply. But the demand for pigs among those Upper Birma tribes is largely associated with religious festivities, and for this purpose they have to be black. So there was no demand at all for the piebald pigs, though they were, from a technical and economic point of view, much "better" than the former black ones. Had the significance of this factor been fully appreciated, it would have been possible to satisfy everybody by introducing boars of the right colour. Much trouble and waste of money and time would then have been avoided.

The number of these examples, by no means referring to special, more or less anecdotal, cases but, on the contrary, representing a picture of normal rural life and work, could easily be increased ad libitum.

They prove that regional agriculture, such as it represents itself to our observations, has to be seen against its social and cultural setting.

Consequently, "agriculture" is a wider conception than "agricultural production", with its main aspects of "crop growing" and "stock raising". It is for this reason that the technological and economic approach to agriculture is not sufficient for a complete knowing and understanding of agricultural reality. Our approach must be comprehensive.

Therefore it is one of the important aspects of the task of the Faculty of Agriculture to bring home to its students that everyone who enters into contact with the farm-people has to be familiar with their social and cultural background. Otherwise he will not be able to persuade them to improve their agriculture, which is in compliance with the generally accepted rule that he who wants to teach latin to Johnny, has not only to know latin, but Johnny as well.

This essential prerequisite to approach agriculture from its techno-economic as well as from its socio-cultural side, is one of the reasons why the study of agriculture is so interesting: there does not exist any other study (with one exception perhaps, that of medicine) in which nature and man are scientifically approached in so intimate a relationship. So we see in agricultural science, in its over-all sense, the striking phenomenon that the traditional controversy between natural science and the humanities is dissolved in the all-comprehensive approach to agriculture as the exponent of life and work of the greater part of the world's population. For is it not so, that any science has to be the truest and most exact reflection as possible of its study-object? Only in this way agricultural science will be able to find the right and applicable answers to the needs of a country or a region.

It would be most illogical to study only soils, crops and farm-animals, and to ignore the farmer himself. For, after all, it is agricultural development that is the ultimate end of the study of agriculture, and how could agricultural development ever be possible if we would neglect the man who carries out agriculture, the farmer?

This implies that agricultural development is only partly a matter for technicians and economists. Every all-round agronomist — and if he is not all-round he can never be a good agronomist — has to understand that, in the end, the farmer himself is the central point in farming. It is the farmer who turns the earth into "arable land", the plants into "cultivated crops", and the animals into "livestock". The gifts of nature are organized by the farmer into a unit, the farm, in which we are able to distinguish two main features: the production-aspect and the consumption-aspect, or the farm-husbandry and the farm-household, each of them representing the acquisition of satisfaction-filling possibilities respectively the farm-family's pattern of needs and wants.

This is what I'd like to call "complete farming". We find it in so-called "folk-agriculture", that is to say, in agriculture such as it is carried out by some 70% of the population of the world; by the farmers of the world, who live on, and by and for their farm-lands and farm-homes, whose farms are units of business and living. But there are forms of incomplete farming too: they are represented by the plantations or agricultural estates managed by the state, or by private companies, or by financially strong individuals. These undertakings, these "firms", do not show, as distinct from the "farms", any

consumption feature ; the way in which they are run has nothing to do with the living-standard of the manager, with the size of his family, with his personal possessions and debts, with his consumption habits, in a word, with his complex of needs and wants. These undertakings are mere business-like production-units in which it is mainly a point at issue whether things are technically possible and economically justified in order that the interest of the invested capital be as high as possible.

So we see that "folk-agriculture" and "profit-agriculture" show completely different features. Only the first-mentioned one could be called farming in the true sense of the word, for in the latter the real farmer's function does not exist.

This, in addition to the fact that folk-agriculture refers to the greater part of most countries' populations, the peasantry, will be the reason why I shall confine myself to the discussion of complete farming. Besides, the farm-people form the main factor that determines whether agriculture will either be an ailing and needy element in the nation's life, or a firm foundation of national (and international) welfare. And therefore the farm-people form the main object of agricultural development policy.

In this folk-agriculture the question whether something is technically possible and economically justified, is important too, of course. But this is not enough, because we have seen that farming is more than a mere technical art ; therefore it is not a technical art, although it has its techniques like any other human activity. It is also more than pure business ; therefore it is not merely a business, although it has its economy like any other human activity. Folk-agriculture is the result of the extent in which the farm-people are knowing, able and willing to accept and to utilize their opportunities, on the basis of their technical skill, their economic conditions and their socio-cultural pattern, of which their pattern of wants and valuations is a function.

This implies that we have to revise our view on the concept "agricultural". Generally one is used to understand by this term everything that has a bearing on the technical aspects of agriculture only. Some agronomists include also the economic aspects in their views, but mostly it is still common practice to separate the concepts "agricultural" and "economic", as if the economic side of agriculture were not "agricultural"! And still more this applies to the social side of agriculture, as if the farmer had nothing to do with it! How many times can we not hear people saying : "From an agricultural point of view it is so, but from an economic or social point of view it is like that". This is a prove that "agricultural" is still identified, too often, with what is merely "agro-technological". Now, after all that has been said about the three-fold structure of agriculture, it will be clear that the old use of the word "agricultural" is irrelevant. This obsolete use gives evidence of a lack of understanding of the interdependency of the agro-technical, agro-economic and agro-social aspects.

There is no train of thought, no conclusion and no plan or scheme that could pretend to be, really and completely, "agricultural", if not has been taken into account that, besides what is technically possible and economically justified, also that which is socially adequate and desirable, ought to be an indispensable element of our agricultural judgements on the applicability and practicability of the results of agro-technological research and of our economic

considerations. As little as it is possible to imagine a triangle without one of its three angular points, neither our agricultural judgements can be complete and functional without the, balanced, synthesis of their technical, economic and social foundations. Only in this synthetical way our agricultural views and measures will be able to make sense and to give lasting and viable results with regard to the practice of regional agricultural development.

These considerations, arising from present-day views on agricultural reality, are not likely to be given attention by the so-called "practical man" who is anxious to accomplish quickly something that can be seen or measured. But this "practical man" should be aware of two things. First, that one ought to realize that what is not seen immediately at the surface of an object, can be at least as important as what one does see. By paying attention only to the technological aspects of agriculture, many people think that nothing is lacking any-more in their way of studying agriculture. But then they forget that every whole is more than the arithmetical sum of its parts so that, even in the case that due attention has been paid to every part, less is explained about the whole than seems at first sight. Because every whole is a synthesis of the parts and their mutual relationships. And in the second place, we have to realize that nothing is as practical and useful as a theory based upon reality, and from which, therefore, can be deduced the direction in which to work, and the method to use.

Consequently, development of agriculture, or rural welfare police, is by no means simple. It is as varied as farming itself, that is to say: as life itself which is reflected in the agricultural reality of a country or an area.

What have we to do, and to think of, in relation to the promotion of agricultural development?

This question may be answered against the background of the evolution of agricultural science. In its short history of hardly 150 years we are able to distinguish the following three periods.

In the beginning it was only the technological possibility that was considered worthwhile to be studied. Agricultural science was strongly under the influence of the XIXth century, with its lopsided stress on nature and technology. It was the period of positivism in which it was not realized that it is impossible to get at the very substance of things and their interrelationships by a mere studying of phenomena as if they were things in and by themselves. And this in spite of KANT and HEGEL or was it, rather, a reaction against their philosophy? Anyhow, positivism does not go further than the knowledge of things in such semblance as we perceive them. In agricultural language we might say: all agronomic interest was focussed upon the crops, the livestock and the soil, irrespective of their functions in the whole of farming under varied circumstances. Everything was considered a separate object, and not more than a display of physical laws, chemical reactions and biological processes.

In the second phase the economic justification was added as a factor in agricultural scientific study. It was no longer considered a mere investigation of an agglomerate of physical, chemical and biological phenomena, but its adepts began to look at the business-side of agriculture as well. This was mainly caused by the serious agricultural world-crisis at the end of last century. The financial results and the statistical figures relating to production

and export became most significant criteria in the importance of national agriculture. But still agricultural science was under the spell of positivism, materialistic interpretation of history and their logical conclusion: determinism. So it was no wonder that in this stage everything that was able to increase agricultural production was considered justified in itself. The problems of commercial agriculture completely dominated agricultural thinking and policy. This was the phase in which agriculture was merely considered a "factory" of foodstuffs and raw material for the sake of the country's wealth. The "farm" was looked at through spectacles which were only fit for the "firm", and the farmers were merely producing objects in the service of some economic policy. In those days a simple dissemination of the results of laboratory or accountancy among the farm-people was considered sufficient for agricultural development. Indeed, if applied, these results could serve as an equal number of means and methods to increase and improve the revenue of the farm.

But ... in many cases — which are the rule rather than exceptions — it turned out that the farm-people did not, without more ado, accept those advices on techno-economic improvement possibilities. In this stage the agricultural scientists were puzzled in no small measure. "For", so they argued, basing themselves on the assumption as if agricultural development were simply a matter of "push the button", "if all these devices and innovations are able to increase the production of the farm, what, then, would be more logical than that the farm-people would accept them eagerly?". In this way those agronomists argued; however, they forgot that agriculture covers a wider field than technology and economy. So, many of these improvements remained only potential ones. And this is the reason why still so often those big dumps can be observed in the backyards of the offices of many field-workers of the agricultural services, full of unused and, under the circumstances, unusable, farm-implements and machinery, the only fate of which it is to waste away as heaps of scrap iron.

In their surprise at the fact that the farm-people did not do what was anticipated, those agricultural scientists showed the tendency to look for the causes of their disappointments not at themselves, but at the peasant-cultivators of the soil, and it became a frequent habit to blame the latter, and to put the root of all the trouble down to laziness, stupid conservatism and easy-going backwardness. However, so long as the critic does not know how to explain the peculiarities of farming except through such less flattering qualifications, serving as a scapegoat for own shortcomings, he does not understand farming nor its socio-cultural background.

But now we know better. For now, thanks mainly to the world-crisis of the thirties, the rise of social and cultural anthropology, and the recent recognition of human rights, we have arrived at the third phase of agricultural science, as is evidenced, inter alia, by the wide choice of, chiefly American, literature on rural sociology and agricultural extension. In this phase we have learned that the techno-economic problems "still bulk very large, as they should, but that they no longer tell the whole story" (1940). In this phase we have learned that the study of what is socially adequate and desirable, has to complete our agricultural-scientific approach. After many trials and errors we have learned to see agriculture as an inter-action between the farmer's life and his environment, and that this environment merely conditions his life

rather than determining it, as a cardplayer may play the cards dealt him, in a number of ways. So it becomes clear why it is not always to be expected that some potential improvement will be eagerly applied by those concerned who, on the contrary, often "evaluate a new proposal in terms of the accustomed or conventional, rather than on the basis of its economic rationality". So, in this phase, we left the deterministic doctrine behind us, in order to enter the realm of more realistic thought, based upon our critical analysis of the farm-people's world.

Now we are so far that we are able to realize that the purely economic motives — i.e. those referring to production or income-increase as a thing in itself, and the input-versus-output calculations — are by no means the only determinants of agricultural development. Since agriculture is the result of the farmer's response to the conditions of his habitat, the improvement of agriculture is not only dependent on those conditions, whether improved or not, but on the will of the rural population as well.

This will is not free; it is a function of the totality of regional rural culture, the main attributes of which are the standards applied to life, and the level of needs and wants. From this it follows that only when the rural people are educated towards a more advanced culture pattern and towards a higher level of needs and wants, they will be inclined to apply the improvement devices leading to production or income-increase. Only the man who wants more, will be disposed to produce more. Thus, real — as contrasted with potential — agricultural improvement is not so much the result of propagation of techno-economic "know-how" among the farm-people, as to how to arise the desire to accept and to apply that "know-how". Training the rural people in techno-economic "know-how", in conjunction with educating them towards a more advanced pattern of wants, is called "agricultural extension". It is its task to make technical changes acceptable and functional.

Therefore, the techno-economic approach from the production-side of farming, and the socio-cultural approach from its consumption-side, cannot do without each other. Apart, both would find themselves on a blind road after a very short time. The educational approach must create the outlet and stimulus for "know-how" and skill. And vice versa, the techno-economic approach must be the backing of an elevated pattern of wants in order that this may have a firm foundation.

I cannot repeat enough that the promotion of production or income-increase is only one side of the agricultural development problem. There are many examples out of the practice of agricultural extension which may prove this statement.

Let us, for instance, have a look in the labourers' quarters of a big factory or an experimental station, where each member of the group in question has the same amount to spend. Then it is interesting to note the divergence of welfare — finding its expression in the cleanliness of the houses, the greater or lesser taste in the choice of furniture, the composition of the diet, the way in which the children are dressed, the appearance of the strips of garden in front of the houses, while there are also families who have saved for a radio-set, a sewing-machine or a bicycle, whereas in other households every penny that could have been saved is spent on gambling, drinking or any other unwise use of the income whatsoever —. And all this in spite of the equality

of the incomes. If the assertion were true that a higher state of welfare simply could be achieved by production or income-increase, and if welfare would only be a function of the economic potential, then people with the same income would have the same state of welfare; but this example has shown that that does not correspond with reality.

After the rubber-boom of 1926–1929 a large number of small Indonesian rubber-growers in the southern part of Sumatra bought motorcars, although there were not more than some tens of miles of road accessible to motor-traffic. But they laid up their cars under their pile-dwellings, and so they made a show of their social, though uneconomic, wealth. Years afterwards the relics of the symbols of their social prestige were still to be seen as wrecks which only now got a more economic function since the people used this scrap iron as prime material for the making of primitive implements and utensils. Consequently, their considerable income-increase has not led to any lasting agricultural development.

Think also of the big quantities of golden trinkets with the Baqqara tribes in the Central Sudan, and of the large herds of cattle with the Dinka and Nuer tribes in the Southern Sudan, representing an enormous, though only potential, wealth which nevertheless is not directed to any actual and intended rise of their agricultural development. Consequently, any increase of this "wealth" in itself – that is, without a synchronized educational approach – will do neither.

It was in Brazil where I have been working as an FAO-expert to advise the government on the establishment of an agricultural extension service, that I made the following observation. Some years ago it happened, in the state of Sao Paulo where commercialization and urbanization in the rural areas have since long made a spectacular progress but where nevertheless the educational level of the farm-people has remained extremely low, that the cotton-prices went up unexpectedly so that a substantial possibility had arisen to raise the standard of life effectively. But what happened actually? Shortly afterwards a great many of those illiterate peasants and tenants could be seen with golden spectacles and two or three golden fountain-pens in their pockets. Well, nobody would think to identify these extravagances with a higher standard of living. It is plain that these people are apt to lose their new acquisitions quite readily to money-lenders and swindlers, or to any further extravagance like alcoholics and gambling. They had not learned (a question of educational approach!) how to spend their increased economic gains wisely on the constructive improvement of their state of social welfare.

A similar situation could be observed during the initial stages of the Gezira-Scheme in the Sudan. The sudden "injections" of piles of money into the community, as a result of the spectacular increase of the farm-income, did by no means result in a higher state of agricultural development. The change in the circumstances was much too fast; there was no time left for any social and educational approach to prepare the people to adapt themselves to the newly created conditions. They used their money for all kinds of socially undesirable things, and the social welfare-aspect was set far back compared with the original situation. It was plain that here the requisite equilibrium was ignored between the technically possible, the economically justified, and the socially adequate.



From these examples we may learn that the human consumption-pattern can not always digest too sudden and too large an increase of the means of livelihood, so that a measure which is justified on the basis of formal economic theory is not always as socially desirable and adequate as it looks. We have to realize that "increase of the farmer's income" and "agricultural development" are no synonyms at all; leaving the matter at production or income-increase would be the same as leaving the field after a half-won battle. In this connection we may remember the words of GANDHI: "What does it benefit man if his status is raised, when he himself is not raised?". So we may conclude that a potential production or income-increase is by no means a panacea for a higher stage of agricultural development.

These conclusions will, perhaps, sound as heresy in the ears of those formal economic theoreticians who do not sufficiently realize that they are, as such, students of economic life as it prevails in industrialized and commercialized urban societies, so that the results of their theory cannot be credited with a general and matter-of-course validity and applicability to rural life.

This supposed general validity of formal economic theory is concluded from the speculative assumption of the equality of human reactions, independent on the society we are dealing with. But the student of rural or agricultural economics, having the windows of his study wide open upon the field and the people who work and live in it, knows better. He knows that their demands upon life are different in kind and in order of priority, according to the different phases of economic, social and cultural development. It is mainly the theoretical-economic postulate of unlimited needs and wants which lies at the root of the assertion that a higher state of welfare simply could be achieved by means of production or income increase. But we have seen that in rural life the complex of needs and wants has a different structure from that under the more urbanized conditions in the so-called high-developed countries where the hedonistic principle is predominant, and that the techno-economic needs and wants in the rural community are kept within bounds by a great variety of intangibles. So that the rural pattern of wants is definitely limited.

There are more differences between the objects of the theoretical economist and the rural economist, but it would carry us too far to go further into this matter.

It will suffice to say that the divergence in economic life of the urban and the rural society is the reason why formal theoretical economics should not be given absolute power. Just as it is possible to build up different geometries besides that of EUCLID by starting from different axioms, it is imaginable to have different economic structures of thought besides that which is based upon the formal starting-points. This divergence is, at the same time, the justification of agricultural or rural economics, and it explains why agricultural economics is, actually, more than a mere application of formal economic theory to agriculture.

This applies also to the task of agricultural economics. It has not only to study its object as it is (like it is done by the pure scientist, the pure economist or the pure social anthropologist), but it has to investigate too what can be done in order to achieve our goals in relation to agricultural development, and to judge these goals critically, especially on their social adequacy, referring to the realization of the successful adjustment of men to their environment.

In this organic whole, of the relationships between agricultural man and his environment we may easily lose our way when we look at it too much from one certain angle, thus often seeing one facet of our total object through a magnifying-glass. So we obtain a distorted picture of reality. When we look at a painting through a magnifying-glass, we may find that we see nothing else than little dots and lines. The detail, having thus been lifted out from its relations and proportions, now shows no longer anything of the sense and the meaning which it had in the representation of the picture as a whole. The same holds true if we do not consider agriculture a synthetic whole; then agriculture can only be studied chemically, or botanically, or entomologically, or economically. Then the component parts are studied out of their mutual relations, and then agriculture is not understandable agriculturally.

Now this would not be so serious if it would only be a question of theoretical and academic approach to agriculture. The situation becomes more serious if it concerns the search for a solution of the problems in agricultural reality.

Therefore, higher education in agriculture must not only produce agricultural specialists, but agricultural "generalists" as well, who will be able to see the organic relationships between everything and everything. No matter whether we start our approach from the soil or the crop or the livestock; or from the farmer as a producer and as a member of his community; or from the agricultural produce, or the inter-action between farm and society. Every agriculturist should be able to bring into practice a comprehensive and critical view.

With the realization of this agricultural-educational policy we shall have overcome the common adoration of one-sided specialism as a scientific attitude, a heritage of the XIXth century. In this connection I would like to quote an illustrative anecdote which I once found in the book "The Importance of Living" by the Chinese philosopher LIN YU TANG. "Once, during the collapse of a dynasty, a rich Chinese official was able to secure as his cook a maid who had escaped from the palace kitchen. Proud of her, he issued invitations for his friends to come and taste a dinner prepared by one he thought an Imperial cook. As the day was approaching, he asked the maid to prepare a dinner. The maid replied that she could not prepare a dinner. 'What did you then', asked the official. 'Oh, I helped to make the patties for the dinner', she replied. 'Well then, go ahead and make some nice patties for my guests'. To his consternation the maid announced: 'Oh, no, I can't make patties. I specialized in chopping up the onions for the stuffing of the patties of the Imperial dinner.'" "Some such condition", LIN YU TANG adds to it, "obtains to-day in the field of human knowledge and academic scholarship."

I hope that I have been able to make it clear to you, how intimately university education in agriculture, and the rural community itself, are connected with each other. Over the gaps between them there has to be built a bridge, called rural welfare or agricultural development. The building-material for this bridge has to be created in the Faculty of Agriculture. It is our graduates in whose hands lies the fate of Sudan's rural population.

With the help of an agricultural education, based upon the technical, economic and social foundation of agricultural development, the farm-people's mind must be moulded and guided in such a way, that the future can attest:

here was understanding and appreciation of what was new, with preservation of the best of tradition and own original culture. Only then we shall have laid the healthiest and firmest foundation we can think of, for the future of our rural population who deserve, collectively as well as individually, our keen interest for the sake of national prosperity.

Those who are responsible for this future should be aware that the welfare of a country is dependent, more than on its natural and capital resources, on the abilities and aspirations of its inhabitants.

Therefore it is necessary for our agricultural leaders to realize that the natural conditions and the pure-economic motives are, in spite of modern materialistic interpretation of history, by no means the only determinants of the standards of life. Every agricultural reformer must become "community-minded", that is, that he is conscious of the all-important function of man. So that, speaking of agricultural development, it is not "production" that is our ultimate objective; "production" is only a means, a tool. Our ultimate objective is pointed to the people who are the foundation of the nation, and if the foundation is firm, the nation will enjoy its most valuable asset for a harmonious progress towards a better future.

This new aspect of the task of our graduates will increase their responsibility, but at the same time, it will enrich their daily work. It will show them the dignity of their duty and, although they may never see their names in the headlines of the newspapers, yet an actual welfare-development of the rural Sudan will be the finest monument for their efforts!

And it is mainly by realizing these things that they, themselves, may contribute to the maintenance, and possibly, the raising of the standard of our higher education in agriculture.

#### REFERENCES

- Essentials of rural welfare. FAO-publication, Washington, U.S.A. (1949).  
Farmers in a changing world. The yearbook of agriculture, United States Department of Agriculture, Washington, U.S.A. (1940).