THE POLICY OF THE TEA QUARTERLY

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In the Tea Quarterly for December 1961, we published an article on "The nature of the phenolic oxidation products in manufactured black tea" by Dr E. A. Houghton Roberts. One planter was moved to enquire how many planters could understand the sentence "Polymerisation beyond the dimer stage is unlikely on steric grounds" and went on to suggest that all articles should, at least in parts, be comprehensible to planters, as he says they have been in the past. Our sympathies go out to anyone who is not a specialized organic chemist and who tried as hard as our correspondent seems to have done.

Now there is no danger of this article becoming the normal standard of the Tea Quarterly—it was re-published from the Russian so as to make it available to research workers on tea in other parts of the world; most journals do not print material that has already been published. But we are glad that the question of the content of the Tea Quarterly has been raised and the opportunity of considering this anew is now taken. There have been some discussions among the senior members of the Tea Research Institute about the matter, but complete unanimity has not been achieved. What do our readers think?

In order to help on the discussion, we have outlined some of the considerations below and given some opinions. We hope that it will not be only those who are dissatisfied that will write in. If the Tea Quarterly is approved of, wholly or partly, we hope to be told that as well, so that we can make some sort of tally.

First of all, what is the purpose of the Tea Quarterly? Is it an advisory journal for the tea planters of Ceylon? Is it a means of showing the industry what is going on in the Tea Research Institute? Or is it an outlet for scientific research?

It seems worth while to begin by considering the nature of advisory work. If all the facts and all the inter-relations between the facts were known in a particular case, in a completely orderly world, advice would be easy to give with assurance and could always be right. But in real life the facts are only partly known, the inter-relations or scientific principles are sometimes uncertain, at any rate in their application, unexpected new factors come into the situation, and in practice a great deal of personal judgement has to be used, as every Superintendent knows. It is seldom, if ever, possible to say to a planter with assurance "Do this and the result will certainly be that".

Upon what basis, then, can our Advisory Officer give advice? First, on the basis of a training in agriculture, so that the principles of the subject are implicit in all his thinking; second, on the basis of his and the Superintendent's personal experience of the crop and of similar situations; and third, advice can be given on the basis of experimental evidence. No one of these is sufficient and all must be used.

What is this experimental evidence? Experiments constitute an attempt to reveal some principle or information of general validity. In agriculture they have to be fairly elaborate if they are to mean anything useful and, especially with perennial crops like tea, they may take a long time. Further, if we do field experiments

on St Coombs, the results may not be fully valid for another estate or even another field on St Coombs. Even for the place and time where the experiments are done, we can never be absolutely sure that a difference that is found is not due to chance; what we can do is to specify the *probability* (P value) that a difference of the size that has been ascertained by measurement is not due to chance. If P=0.05, the statisticians will tell us that, under the conditions of the experiment, about 5 times in 100 we could expect to get such a difference by random variation. These odds, of 19 to 1 on, or 95% probability, are usually accepted as being reasonably good in agricultural trials.

Because the basis for advice is so complex and because even experimental evidence has some uncertainty, we think that it is best to present the evidence to the industry and discuss it, and then often only to arrive at some suggestions for trial. No authoritarian attitude can be taken up by the Tea Research Institute and naturally decisions for action will be taken elsewhere. That is to say, such evidence as is available has to be put before the planters and the proprietary interests.

Such matters printed in the Tea Quarterly come in several classes. There are accounts of fully replicated trials of a high scientific standard. These do not necessarily give planters a clear indication for action because such trials are usually carried out under a limited variety of conditions. Indeed, where the trials contain enough that is sufficiently new in principle to interest a wider audience, they would be described in international journals of a purely scientific character. Dr Eden published much of his original work in this way and used it as a basis for more popular articles.

There are, however, other scientific articles which, for example, merely report results on tea in Ceylon, results which are sufficiently well known for other crops to be unacceptable to an international scientific journal. There are still other articles which describe work in progress, to show the planting community—and indeed, other members of the staff—what is being done in the Tea Research Institute. In fact there is information in many Tea Quarterly articles which can be useful but which would never see the light of day if it were not recorded in our own journal; and this information, when available in this way, may contribute to the process of making decisions about estates.

Then there are review articles and the purely advisory articles, which discuss the pros and cons of a particular course of action. These seem generally to be desired and appreciated by planters although there must be included information and opinions which—stated as such—do not rest reasonably securely on a basis of experimental science. It is these advisory articles and the most erudite ones which, side by side, make the Tea Quarterly so heterogenous.

Because the contents of the Tea Quarterly are so heterogenous, it has been suggested that two or more series of publications should be substituted for it. For example, the Tea Quarterly would be purely advisory, there would be a second journal for scientific work of local interest (or the Annual Report might cover this), while papers of wide scientific interest would be offered to international scientific journals. One difficulty about this is that not all scientific workers have the knack of writing popular articles; and it is sometimes very difficult to put scientific work into popular form at all. Consequently there would either be a very troublesome problem of writing and editing in those cases, distracting from research, or an unfairly heavy burden would fall on to those who can write popular articles well. It would be difficult to maintain a journal of reasonable size, if it were restricted to popular articles.

It must not be forgotten, moreover, that the Tea Quarterly is read outside Ceylon. Reference to Dr Visser's review articles on shade in volume 32 of 1961 (pages 69 and 113) shows how much one tea research institute uses data and evidence from the others, often of a preliminary nature, to build up a general impression.

So far, the Tea Quarterly has been considered from the readers' point of view, mainly as a service to the tea industry in Ceylon. But there is also the point of view of the research worker. Without publication, scientific research would wither away. Publication at high scientific standards is essential not only to the progress of the tea industry but also to the well-being of the Institute. It may be held, however, that the proper outlets for the research work of the Institute are the international scientific journals; but if this were insisted upon, there might be a tendency to concentrate research on subjects and at standards acceptable to such journals. If this were done, no doubt the scientific reputation of the Institute would rise; but at the same time the Institute might serve less well the short-term interests of the tea industry in Ceylon. It is felt that one important function of the Tea Quarterly is to serve the Institute as a valuable record of the work done; this function cannot be fulfilled entirely by international journals and, if this were attempted, the results of much of the work would not be seen by planters.

It has been said in some quarters that the Tea Quarterly is neither an advisory journal nor a scientific one. More accurately it is a bit of both. Is this what is wanted? No fear need be felt that the journal will shortly consist exclusively or even to any considerable extent of articles that are incomprehensible to planters. as in the very exceptional case quoted in the first paragraph. It would be valuable if readers would (*a*) state their views on what the contents should be and (*b*) make a census of the last half a dozen volumes and say how many articles would not have been published if their views were accepted.