Use of Diagnostic Skills In Everyday Extension

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What is Your Role as an Extension Officer?

How do you see yourselves in terms of comparative professions?

Would you compare your role with that of a Preacher who has the job of proclaiming the message of "good farming" and is judged by the number of converts (master farmers) he accumulates?

Or would you compare your role with that of a Physician to whom patients come who are not functiong as well as they might because of health shortcomings and who has to discover what is wrong and give them the appropriate treatment to help them improve and function better?

Maybe the good extension officer is both a preacher and a physician. In the past though the role of the preacher has been emphasised over that of the physician.

First you are taught what the "true word" should be. That is you are taught the best or ideal way to grow maize or cotton or raise beef cattle or whatever. Then you are taught the skills of delivering that message of "the one true word" to as many farmers as possible. Finally you are taught how to count up how many converts you have made.

Much less emphasis is given to teaching you diagnostic skills to enable you to determine what key aspects of a farmer's set of practices is in most need of healing and what is causing the farmer to operate that way. You are not taught how weigh up the evidence to identify the cause of the problem. Neither are you taught how to relate causes to solutions and how to judge which of an array of possible solutions is likely to be the most appropriate. Finally your performance is not judged on how well you diagnose causes and suggest suitable changes to farmers that allow them to improve on their current production. You are judged on how many converts to tied-ridging or to cotton production or to applying recommended fertiliser rates.

In short you are trained to preach a single "true" message and are judged by the number of converts you make and so you

You are not trained how to diagnose shortcomings and prescribe improvement medecine and you are not judged on how many farmers you helped to do things a little better, so you do not act and behave like **Physicians.**

Ask your farmers if they would prefer for you the be a preacher of a physician. What will they say.

On what basis do I make the assertion that you are trained as and act as preachers. On the basis of a common sentiment that I have heard as I have participated in provincial diagnosic training courses. That sentiment is expressed thus:

> **In response to the question "what is the major production problem in the area"**
>
> **The answer comes back "the biggest problem is that the farmers don't listen to us and follow the recommendations".**

Towards a Good Physician's Role

There are some bad physicians. Those that have a fixed set of treatments for all ailments are bad physicians. Some physicians will have a set prescription of say a dozen asprins for all headaches or stomachaches.

For a proportion of the patients that come to them the asprin treatment will be appropriate. For those with headaches caused by a nagging wife or with stomach aches caused by eating too many mangoes, the asprin treatment is probably as appropriate as anything.

But for those with headaches caused by bacterial infection of the eyes or nose, the asprin treatment will do little good. And for those who have a stomach ache because of an inflamed appendix or an ulcer, the asprin treatment is a waste of time.

A good physician will take a medical history from each patient and then check on the functioning of critical organs (heart, lungs, eyes etc). He will use this information to form an opinion of what is causing the symptom the patient came in with. If he cannot get a clear idea from the initial investigation he may ask for more detailed investigations such as blood tests, urine tests etc. Only after he has developed an understanding of:

a) What the problem is that is producing the symptom
b) What' causing the problem

will the good physician start thinking about an appropriate treatment.

Diagnosis Skills in Extension

Farmers are already raising a set of enterprises in a certain way and this should be our starting point. From that starting point you should be able to do the following things:

1. Develop a knowledge about how your farmers currently operate. Develop some ideas about the way in which they are currently operating may be improved.

2. Develop an appreciation of the circumstances under which your farmers are operating. Difficult climate, poor soils, lack of cash, lack of labour, no draught oxen etc.

3. Relate 1 and 2 to each other. Try to develop an understanding of how the circumstances under which farmers operate influce the way they do things.

4. Use your assessment of the major problems giving low production and your understanding of what is causing farmers to have this problem or management compromise to develop ideas about appropriate treatments of the problems (not necessarily cures, start with treatments).

5. If there seem to be no appropriate treatment available from research for a particular cause of a problem alert reseach to this knowledge gap.

How do you acquire the skills to do the above. Mostly through in field service and common sense coupled with an appreciation of your role as a **Physician.**

But it is possible to provide some guidelines and principles to help you develop such diagnostic skills. These have been provided through some of the AGRITEX/CIMMYT diagnostic courses that some of you have attended.

How Might this Work in Practice?

First you already do some of this. You are not completely like the bad physician with only one set of cures. You do make adjustments to recommendations according to different agroecological potential or farmer resource base.

You have probably stopped recommending that farmers apply basal dressings at planting because you know that farmers have very good reasons for waiting until the plants have

emerged before they apply any fertiliser. If so you have diagnosed farmer circumstances, understood why they are doing what they are doing and responded by adjusting the current recommendations.

Have you stopped recommending early planting to all farmers for all crops. Have you understood that circumstances dictate that some farmers will plant all or some of their maize area late. Have you recognised that there are a number of more useful things you can tell such farmers than that they must plant early. You can tell them about later maturing varieties for late planting, you can tell them about wider plant spacing for late planting, you can tell them about lower fertiliser rates for late planting, you can tell them about alternative crops for late planting. Some of these things will be more appropriate for some farmers than others. You are in a position to judge which types of information are going to be most useful to which farmers.

However it is probably less easy for you to advise farmers who are short of cash which of the basal or topdressing they should leave out. We need to generate information about the tradeoffs with these options. That is the job of research. But if research is not told what questions they should be asking they will not provide the information needed.

Through using a diagnostic approach you are in a good position to:

a) give farmers appropraite information

b) suggest to research what types of questions they should be attempting to answer.

Also in the future, with a diagnostic approch you are going to be able to use information coming from research more effectively. This is because research is moving towards a problem oriented approach to setting their research agendas (maybe this is happening more slowly in R&SS than most other countries in the region, but it is happening).

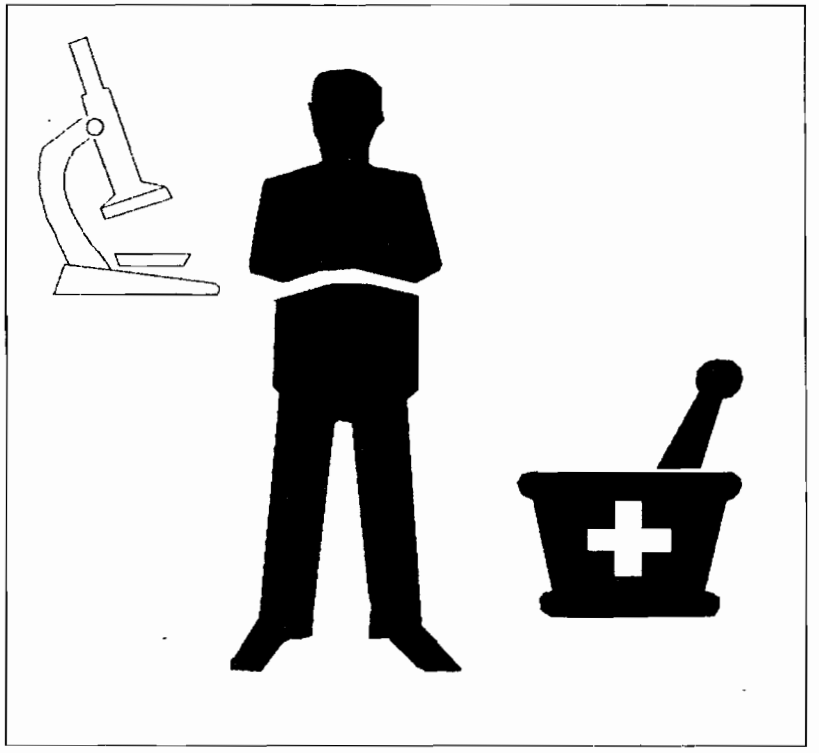
What implications does this have for you. One of the implications is that the types of information you will be handed down by resarch will be different from the standard packages you are used to today.

As an example of the type of information you will be given refer to the attached Field Support Guide on Maize Topdressing. In order to use this information effectively you will have to use a diagnostic approach to develop an appropriate recommendation. You will have to determine what soil type your farmer is on, you will have to determine what yield potential he has (not would like to have), you will have to know something about the rate of basal fertilisation

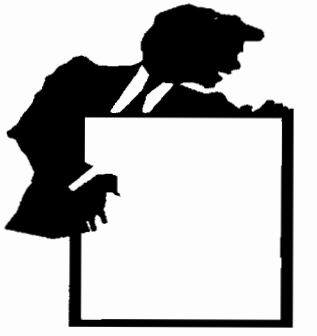
he used. Then you can use the information to formulate a recommendation for that farmer. The farmer next door will likely be different in some respect and therefore warrant different advice.

The time when you will need to change from being **Preachers** to being **Physicians** is coming. You may as well practice now so you can be prepared for it.

The Future

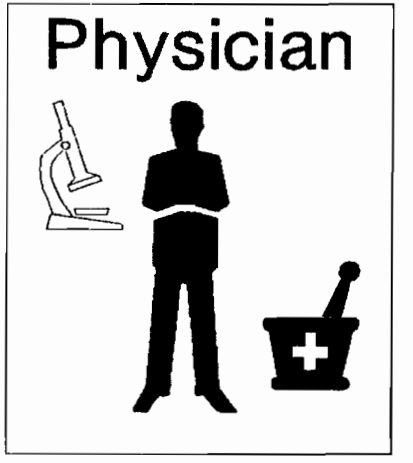


Physician from Preacher



The Past

OR?



Diagnostic Skills

1. Develop knowledge of different farming practices
2. Appreciate circumstances in which farmers operate
3. Understand how circumstances influence what farmers do
4. Develop ideas on ways to make current production better
5. Inform research of opportunities for production improvement