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The 'fertiliser bush' game: a participatory means of communication

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• The problem - alley farming

This paper describes some of the problems I encountered, and the strategy I used to resolve them, while supervising an on-farm-research (OFR) project in south western Nigeria during 1985 and 1986 for the International Institute of Tropical Agriculture (IITA). This involved living in villages comprising the research site and working closely with community members.

I was hired by IITA to live and work in some of the Yomba villages comprising IITA's on-farm-research sites. My job involved 'testing' alley farming under field conditions with limited resource farm families. As a change agent I was constantly faced with dilemmas related to managing and facilitating the change process that alley farming involved. This job was made even more difficult since my 'clienteles' were resource poor and illiterate.

Three factors discourage farmers adopting, much less experimenting, with alley farming technologies. One is the need to satisfy certain essential subsistence requirements. The second is the reluctance of small farmers to adopt conservation farming techniques because the benefits accrue well beyond the limited planning horizons within which they are accustomed to operate. Third, in Nigeria, there are important differences between men and women in the terms under which they gain access to resources. Men inherit their land, while women usually farm on land allocated to them by their husbands or other male villagers.

Being a woman I was keenly aware of how these factors usually make conventional extension channels impractical, especially

since the vast majority of change agents in Africa are men. Clearly, there was a need for mechanisms to help change agents and their constituencies respond to change brought about by the introduction of alley farming and to adapt effectively.

Now I do not know how many of you are familiar with the alley farming technology. I would like to ask you for the moment to just pretend you know nothing about the technique and just look at the words 'alley farming'.

Let us see... 'alley farming', well 'farming' tells me it must have something to do with agriculture, but there is no word in the three major languages spoken in Nigeria that is even remotely similar to the word 'alley'.

This was unfortunate, indeed, a great deal of time and money was spent on designing a poster illustrating and explaining the alley farming system. And although the poster was translated into a number of African languages, there were no indigenous equivalents to the English phrase 'alley farming'. When I came across a number of technicians in the field, speaking their local dialect to promote alley farming, I was disappointed and shocked to hear them repeatedly fail to translate the phrase 'alley farming'. Even if it could be sufficiently translated, what does an avenue of sorts have to do with farming and what do trees have to do with crop production?

An additional weakness of the poster as a mechanism to aid in the transfer of the alley farming technology was its continuous use of the word 'trees' and its use of scientific measurements to convey the precise distance between the alleys and the shrubs within each

row. These explanations were so technical and alienating that they were useless to the farmers in the area.

Finding a logical solution

I tried to encourage farmers' active participation, but came up against more, equally troublesome, constraints. There are a number of reasons why people will not accept something that is deemed beneficial in the eyes of others. Perhaps the most important is that many African farmers share the conventional belief that trees have no place on the farm field. The farmers in my area reported spending more time and money clearing the land (i.e. cutting and burning brush), than any other stage of production. So when an outsider like myself happens on the scene and says "you all should plant trees on your farms because it will bring you benefit", a number of things happen.

- One, when I explained to the men and women that if they plant trees, they can farm on the same piece of land continuously, their initial reaction was "You've got to be crazy! Why do you think we pulled all the trees out for, so some white whimsy looking woman could come and tell us we made a mistake?";
- Two, as I mentioned before, in Nigeria men control most land resources. Men own and allocate land to women to farm on. Traditionally, trees left standing on a farm offer direct economic benefit and are considered men's domain. Although women are actively engaged in farming, they are reluctant to plant, fearing the repatriation of the farmplots. In addition 98% of the extension agents in Africa are men, therefore it is generally men who are engaged in outreach programs in alley farming. Other studies, as well as my own work, indicate that husbands often do not pass on to their wives complete and accurate information concerning an innovation; and,
- A third problem was getting farmers to sit and listen to the detailed explanations of planting an alley farm, as well as the new

management strategy necessary to reap the benefits of the system.

The participatory approach

There were other constraints inhibiting adoption, as well, but by far the biggest one, at least initially, came with using the word 'tree'. What I came up with, in partnership with a few villagers and primary school teachers, was a play or drama, titled 'The Fertiliser Bush', or 'Igbo Ajile' in the local Yoruba dialect.

The skit deliberately played down the fact that alley farming involved planting trees on farms. The phrase 'fertiliser bush' made the alley farming system immediately appealing, conveying the primary attribute of the system in one short phrase. Therefore, if villagers could not be present for an explanation, or just overheard others talking about it, they would have a general idea of the primary attribute of the innovation.

The village theatre, composed of 5 community members, was based upon the long established and respected method of relaying important historical information known as 'oral tradition'. All the roles in the play were acted out by community members. The lively drama and catchy tunes informed whole communities about the powers of the fertiliser bush invoking a sense of project ownership. The script, though never the same twice, highlighted the salient features and critical processes necessary to make alley farming a success. The drama was presented to whole villages. The broad based appeal of the group allowed the community to judge the worth of alley cropping whether participating or not.

The play was presented within the framework of a family squabble, where the husband tries to pass his worthless farm off to his wife and shift to better land. She is annoyed at the prospects, but feels pressured to take it despite its low worth, lest she be left with nothing. A friendly peer appears on the scene, with her child hoisted on her back, offering advice on alley farming based on her experience. Their curiosity is aroused. All questions posed by the couple are answered in a gentle, casual way. All objections are handled with an eye to

involving all able bodied family members to assist in the experience.

- **All things start with the soil**

Throughout the play the problem of poor production is constantly related to soil quality. The costs of applying commercial fertiliser are weighed against the cost of abandoning the farmland and beginning anew somewhere else, where the long term is no more promising than the present circumstances. The play proposes using alley farming as a superior choice.

Taming the tree

The bearer of alley farming method was deliberately cast as a woman and her child to encourage women to participate. In addition, traditionally, trees have always been a man's domain in Nigeria. Women were dissuaded, even scared off, from planting trees on their farms, lest they forfeit their rights of tenancy. The very idea of planting a tree on a farm was contrary to any planned farming activity for the people in the OFR area, men as well as women. Consequently, the decision to refer to cassia and leucaena as the fertiliser bush was a deliberate attempt to dampen any objection and calm any initial fears of its use. The attribute fertiliser made planting trees immediately appealing, while conveying the fundamental benefit of the system. When the first unhappy, now curious farmer displays his knowledge that cassia is actually a tree, the alley farming friend is able to focus attention on the management aspect of farming and reinforce the attractive attribute of fertiliser. The pertinent exchange runs as follows:

- **Farmer:** Look here, cassia is a tree, like the one growing over there. What about the roots, won't they disturb my crop?
- **Alley farming friend:** Good question. But you are the farmer and it is your farm, so if you want trees, well, then let it grow to a tree. Otherwise igbo ajile is maintained as a bush, periodically cut back. When you continue to prune your leucaena and cassia you force the roots of igbo ajile to go down, down, down, deep into the ground. These deep roots bring moisture and nutrients to the upper layers of the soil.

When a weak protest is made about the amount of work involved in managing an alley farm, the friend explains how the whole family benefits and how each able bodied person should be involved. The whole family was usually involved in the planning to safeguard against anybody mistakenly weeding leucaena and cassia seedlings. Some of the inter-household processes of farming are brought to light in the play's opening song:

Please people come out and hear what we have to say because the Ministry of Agriculture, University of Ibadan, and IITA are here with the igbo ajile.

We are talking to everybody, both male and female, calling all of you people to come out and hear what we have to say. What are you doing shifting your farm from one place to another and spending all your hard earned money clearing the land and making new heaps?

If men plant the igbo ajile, with nurturing and care they will succeed and they will be praising God.

If women plant the igbo ajile, they will have more security on their farms, no need to be nagging after the men in the village for new farmland once their old one has lost its fertility, and they will be praising God.

Yes, even children come close. If you plant igbo ajile you will spend less time fetching firewood, weeding, and making new heaps. Praise be to God!

The alley farming woman, eager to demonstrate her knowledge, starts to explain the spacing in terms of centimetres within rows and meters between row. The squabbling couple now turn their ridicule towards her, teasing her mercilessly for adopting the foolish terminology of the white people. After joining them in a good laugh, she proceeds providing the couple with some practical training using a more traditional yardstick, "let's see...25 centimetres is about the size of your foot, and 4 to 5 metres between these rows is about equal to 4 to 5 strides".

After a detailed and thorough explanation, the once curious now excited husband and wife are anxious to obtain the seeds to plant the fertiliser bush to solve their production problems. "Now wait a minute", the alley farmer warns. "The fertiliser bush is not magic. You should know by now that nothing in life is free and easy". Again, she explains by using her own situation analogously. "The fertiliser bush is like this small child on my back. During the first year both need care and attention, even a little nurturing wouldn't hurt". At this point she removes the child from her back and places her next to her husband's drum. "Now ask her to play this drum". The child taps it, but loses her balance and the drum tips over.

She continues with her analogy. "I don't see much return from the fertiliser bush, but I continue my vigil because I know in time it becomes like this school child. If I am as good a farmer as I am a parent, I will begin to see a number of benefits". She grabs a child from the audience and asks him to play the drum. As most village boys do, he plays quite well. "After the first year the fertiliser bush is like this child and I begin to see some returns to my labour. I can send him to fetch some water or firewood and he can help me on the farm and he is even attending school!"

"This is all fine and good but my love and attention doesn't stop here because I know in time it will become a partnership, like husband and wife". At this point she is standing beside her husband and her child with her hands on her hips and a suspicious looking smile, she says, "At this point, you see, the fertiliser bush and the farmer is like husband and wife. I take care of him and he sure takes care of me". After this line the whole troupe breaks into song, dancing off, singing the wonders of the fertiliser bush.

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