

DFID CROP POST-HARVEST RESEARCH PROGRAMME

**ACTION RESEARCH ON THE LIVELIHOOD IMPACT OF IMTs IN GHANA'S
OFF-ROAD SETTLEMENTS (R7575)**

**PROCEEDINGS OF FIVE VILLAGE IMT WORKSHOPS AND
ASSOCIATED FOLLOW-UP ACTIVITIES,
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with

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I BACKGROUND TO THE WORKSHOPS

This document provides a review of the 5 village IMT workshops held in Central Region, Ghana, in late October and early November 2000 as part of project R7575.

Project R7575 aims to select and test a range of IMTs with individuals and groups in a set of study villages in Central Region. The villages are located off the paved road and were selected in a previous project (R7149). Full details of the villages are available in the final technical report of project R7149. The emphasis in this follow-up IMT project is on working mostly with women, who currently carry the major burden of transporting goods.

Only one preliminary workshop was planned for project R7575. This was to take place in November 2000 after the completion of a substantial portion of the baseline studies and prior to the introduction of IMTs in the two study districts of Gomoa and Assin in Central Region. The workshop was thus planned to take place approximately 9 to 10 months after the inception of the project (in February 2000).

Following discussions in the villages, district offices and with the project Consultative Group in August 2000 a decision was made to hold workshops in each of the five study villages, rather than bringing the villagers and other workshop participants to one central point. A decision was also taken to bring the timing of the workshops forward slightly, in order to avoid the national elections scheduled for December 7 2000. The timing of individual workshops was arranged where possible to coincide with non-farm days when a majority of villagers were likely to remain at home.

The aim of the workshops was to review the potential for IMTs in the study villages, to let villagers try out a range of IMTs, and to obtain expressions of interest from villagers - particularly women - who wished to purchase IMTs through the project. (Participating villagers are required to allow monitoring of the use of the IMTs over two years, since the aim of the project is to assess the technical, socio-economic and environmental impacts of adoption of IMTs.)

II PARTICIPANTS AT THE WORKSHOPS

Participants at the village workshops included the following:

Village chief and elders

Village women and men

District administration representatives (including the DCE Assin, Mr Fokuo, at Aworabo and Lome workshops, the Planning Officer, Deputy Agricultural Director and the Extension Agent at Aworabo.)

Mr Vincent Akoto, MOFA Agricultural Engineering Services Department

Representatives of the MOFA Village Infrastructure Project Rural Coordinating Unit

(Mrs Ofori-Bah from Head Office, Mr Larbi and Mr Anang Siaw from the Regional Unit at Cape Coast)

Mr Amoak, power tiller owner, Okyereko (with assistant)

Representatives of SelfHelp Foundation, Kumasi

Project officer of the Agricultural Development Bank (in Assin district)

Project officer of the Akyempim Rural Bank (Gomoa district)

Dr Pascal Kaumbutho, Kendat, Kenya

Project team members: Frank Owusu Acheampong, Kathrin Blaufuss, Roderic Dutton, Gina Porter

III STRUCTURE OF THE WORKSHOPS

The workshops followed a similar pattern, described below, with the exception of the first workshop, held in Gomoa Lome, where heavy rain interrupted the trial of IMTs by villagers and the workshop had to take place in the Adventist Church. All the other workshops took place in an open space within the village residential area. In Gomoa all proceedings took place in Fante, in Assin all proceedings took place in Twi.

1. Prior to the formal opening of the workshop, village women were encouraged to try out the IMTs on display. We particularly encouraged older women to try the light prototype handcart which had been under test in Abora. In many villages there was a reluctance to try to ride the bicycles, unless there were young girls around, so Gina Porter and Kathrin Blaufuss rode around to demonstrate that bicycles could easily be ridden by women, even wearing a skirt.

Village women were then brought together in a group round the IMTs and asked to give their views on each of the IMTs on display. They were then asked to rank the IMTs according to their view of which would be most useful to them in the village. We have already completed many interviews with women around IMTs but felt this short exercise was a useful complement to earlier work because on this occasion we had equipment present for them to comment on.

2. Village men were then asked to gather round the IMTs and to vote for the IMT they felt would be most useful to them. Although the project focuses on women, we included this activity with men because we did not wish to alienate them by excluding them from participating in the workshop.

3. While the discussions were in progress with women and men in turn, the group not involved was passed large photographs of IMTs to examine and comment on. Many of the photographs (obtained from Paul Starkey, Reading University) showed women transporting large loads using bicycles. These had been prepared because in the survey villages there seems to be a tendency to perceive bicycles only as passenger transporters, not as load carriers.

4. The formal opening then took place. In Assin Aworabo and Gomoa Lome, Mr Fokuo, District Chief Executive of Assin District and a member of the Consultative Group opened the workshop. In Gomoa Lome, the District Coordinating Director of Gomoa District opened the workshop. Unfortunately, Mr Ayanful, DCE of Gomoa district had prior engagements throughout the workshop period. Elsewhere, the workshop was opened by the village chief. The formal opening was generally followed by prayers led by a village elder and by the introduction of all visitors to the village. At Lome this was followed by a short discussion of the MOFA VIP by Mrs Offori-Bah.

5. Frank Acheampong Owusu, the project coordinator, then outlined the aims of the project, the scheme under which IMTs would be provided to villagers, and the purpose of the workshop. He emphasised that this was a research project, not a development project and thus the need for prospective IMT owners purchasing IMTs through the project to allow monitoring of their IMTs. He also emphasised that our focus was on women and thus we would give women priority, though men could still submit applications for IMTs. He also explained how the prices for each IMT (displayed on card on each IMT) had been calculated and outlined the credit arrangements:

- a. IMTs would be made available at a cash price, based on current prices in Ghana, or
- b. through repayment over one year, with interest in that case at 22% (i.e. the rate used by the district poverty alleviation funds, and by the MOFA Village Infrastructure Project.)
- c. Women, because of their limited funds, would be able to purchase items over 2 years if their circumstances so warranted it. The power tiller, because of its high cost, could in any case be purchased over two years.
- d. The repayments would be collected by rural bank staff who would visit the village regularly to collect money.
- e. That we envisaged repayments being made monthly, but would be prepared to discuss alternative patterns of payment.
- f. That the IMTs could be obtained by groups or by individuals - indeed, that we would prefer a mix of individuals and groups as we wished to compare the relative success of loans to individuals and groups.
- g. That the first installment for the IMT must be paid when the IMT is supplied (probably January).
- h. That persistent failure to make repayments would result in withdrawal of the IMT.
- I. That all maintenance and repair costs would be the responsibility of the purchaser but that project staff would assist initially with teaching basic maintenance of the equipment supplied.

He then asked villagers to come forward with questions and comments, starting with women.

6. Staff from our NGO collaborators, SelfHelp Foundation, who organised the IMT component of the VIP pilot studies in the Kumasi area and Greater Accra, then talked about their projects and how group ownership schemes had operated, the use of group farms to repay the loan etc. They then took each IMT in turn and examined its advantages and disadvantages: this took the form of an interactive discussion with the villagers. Each piece of equipment was brought to the centre of the meeting place and the audience was asked to suggest advantages and disadvantages for use in the village. The SelfHelp staff commented and prompted as appropriate. SelfHelp has been involved in the promotion of donkey carts in the Kumasi area and offered to take any villagers who were interested in seeing these in operation to one of their project villages.

8. Mr Amoak, the power tiller owner and an active farmer, explained his use of the tiller and described the benefits he had gained from its use on his own farm for haulage etc. He also stressed the importance of maintenance.

7. The relevant bank staff (ADB are collaborators in Assin, Akyempim Rural Bank in Gomoa) talked to the villagers about their role in collecting repayments. (We were keen to emphasise the role of the banks in order that villagers would recognise the need to keep up repayments.)

Again, villagers were encouraged to ask questions.

8. Frank Owusu Acheampong finished by explaining how project staff would return with the bank staff to collect applications at a specific time and place (mostly approximately four days later, so that villagers had a chance to discuss the idea), and that we would take photographs of each applicant and help potential applicants to fill in forms at this time.

9. A final general question and answer session took place.

IV IMTs DISPLAYED AT THE WORKSHOPS AND THEIR PRICES

The IMTs were transported from village to village by a lorry and driver kindly provided by MOFA Agricultural Engineering Services department and supervised by Mr Vincent Akoto of that department. Their assistance is gratefully acknowledged.

The IMTs selected for display at the workshop were generally ones which can be purchased locally in Ghana, with the exception of the power tiller. Although there had been some interest when we showed photographs of a tricycle in R7149, enquiries to dealers in Accra indicate that these are very expensive, not particularly robust, and would have to be ordered from overseas. Very few are present in Ghana. The power tiller was included in the selection of items, however, because there seems to be considerable interest among farmers in Ghana in them, and they have been purchased by some farmers in Central Region. (Unfortunately, we did not include the power tiller in our R7149 study). When photographs of IMT types were ranked by women in the study villages in R7149 (see project Final Technical Report), the 'Kencart', a push cart on two wheels, was often the first choice. Consequently, we had had a prototype made at GRATIS, Tema, utilising drawings from IT Transport.

We also made the point, at the workshops, that if participants had seen or heard of other IMTs which they were interested in, we would try to follow this up and ascertain prices and availability.

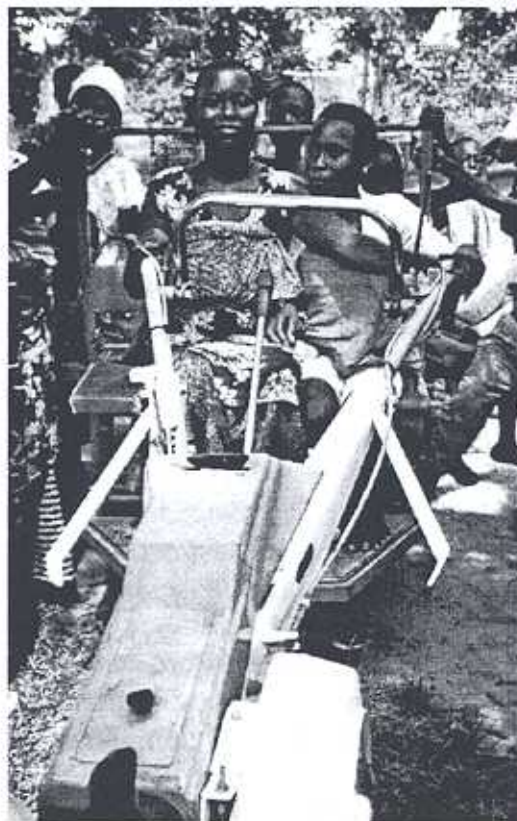
All prices quoted (and displayed on each IMT) at the workshop were those prevailing just prior to the start of the workshops in late October 2000. We made a decision to hold prices at this level as it is difficult to estimate what cedi costs will be in January 2000 when the IMTs are supplied. The prices are already extremely high for villagers in the study area. In sterling terms prices are unlikely to increase significantly over the next few months, but they have risen substantially in cedi terms as a result of cedi inflation since the inception of the project in February 2000.

1. The power tiller

Cash Price: C20,500,00

Credit (one year): C24,900,000 (22%) i.e. 2,075,000 per month

Credit (two years): 29,520,000, i.e.1,230,000 per month



The power tiller on display was borrowed from Mr Amoak, a farmer at Okyereko in Gomoa district who has been active in encouraging local farmers to adopt the equipment. It was demonstrated at each workshop by his assistant (his son).

The power tiller price was the lowest (cedi equivalent) price we had been quoted in Accra (i.e. based on the dollar price from RST). The VIP pilot used Daedong tillers supplied by AFCO, the sole distributor, but this is more expensive and according to SelfHelp Foundation there were problems in obtaining parts from the supplier.

2. The push truck

Cash Price: C350,000

Credit (one year):430,000 i.e. 36,000 per month

Credit (two years):504,000 i.e. 21,000 per month



The 4-wheel platform push truck was purchased at Kumasi magazine by project staff. It cost 350,000 there. Like the trucks generally on sale there it is made entirely from scrap. The design appears to be wholly local. The truck is widely used in urban areas of Ghana but is much less commonly found in rural areas such as the study districts. Starkey (2000:22) describes the spread of this IMT in Ghana.

3. The hand cart

Cash Price: C350,000

Credit (one year): 430,000 i.e. 36,000 per month

Credit (two years): 504,000 i.e. 21,000 per month



The cart on display was the prototype model we had had constructed by GRATIS, Tema, and which had been undergoing tests in Abora (see project interim reports). This is a light hand cart, much lighter and more manoeuvrable than the Kumasi push truck, and fitted with strengthened bicycle wheels.

At the first workshop (Lome) we advertised this cart at its cost price, 800,000 cedis, but it was clear from comments made there that given the much lower price of the Kumasi push truck, no one would pay such a high price. Given GRATIS suggestions that they should be able to reduce the price if a quantity were ordered we decided, following advice from Dr Kaumbutho who has experience of IMT production in Kenya, to reduce the cost to that of the local push truck and see whether this raised interest in the cart. At all four remaining workshops the price was advertised as 350,000 cedis.

4. The wheelbarrow

Cash Price: 200,000

Credit (one year):250,000 i.e. 21,000 per month



The wheelbarrow on display had been purchased by project staff at Kumasi magazine. It is of a type commonly used in urban areas and in some villages for construction purposes. One woman had suggested that we include the wheelbarrow among our IMTs during an interview with Kathrin Blaufuss (though the wheelbarrow was not rated highly in village assessments of IMTs through photographs in R7149).

5. Men and women's bicycles

Cash Price: C400,000

Credit (one year):490,000 i.e. 41,000 per month

Credit (two years):576,000 i.e. 24,000 per month



The bicycles on display at the workshop were the ones being used by the two research staff in the field: both had been purchased second hand in Kumasi. However, it was made clear to villagers that the price we were quoting was for new Phoenix bicycles and that this is what we intended to supply.

V THE INDIVIDUAL WORKSHOPS

This section covers individual issues raised by villagers at specific workshops. The general pattern of workshop activities has been outlined in section III above.

Some of the comments and discussion which ensued at the workshops are presented below. It was not possible to record all comments, but the following gives some indication of the nature and flavour of the discussions.

A The workshop at GOMOA LOME, Friday 27 October

This workshop was the first and most difficult to run because of the heavy rain which necessitated holding activities indoors in a church and the size of the audience (this is the largest village in the research set). The seating arrangement (benches in lines) made the interactive sessions difficult to operate: consequently, nothing of significance emerged. We met with Mr Akoto (MOFA Agricultural Engineering) and SelfHelp staff following this workshop and made a decision to reduce the time spent on formal presentations and to expand the interactive sessions. We spent more time in later workshops on discussing each IMT and its potential with villagers.

B The workshop at GOMOA ADABRA, Sunday 29 October

This workshop was much more successful, in part because the village is smaller and participants were consequently fewer.

1. What women thought of the IMTs at Adabra:

The wheelbarrow:

'It would help me carry my loads, but there is still a problem carrying loads over long distances'.

'It's better than headloading, but there's the problem of long distances, so really it's still better to headload'.

'This is good if I want to carry things from the field; if there is no one to help you can do it alone...or if I buy two sacks of cassava...I can put two sacks of cassava inside.'

'Sometimes there's a lot of waste when you're making gari so you could quickly take it to the dump.'

'If I chose the truck the men may not be around... but this one you can do yourself'.

The push truck:

'When you harvest cassava from a long distance you can use it. It would be very useful for cassava and large amounts of maize'.

[What about pushing it?]'If you ... harvest the cassava you can get the kids to push it.'

'We mainly farm cassava and maize here - so we can get the kids to help bring it home.'

An older woman: 'I like it but I'm not strong enough to push it and none of my kids are around'.

The handcart:

'It's light and good for long-distance load [carrying] better than headloading.'
'You can put as much load in as you wish and push it home.'
'You can use it for cassava.'

An older woman: 'It's too heavy.' [We put a basket of heavy stones and finally persuaded her to try pushing it. She was amazed how easily the cart moved.]

We then asked a group of 10 women which of the 3 IMTs above was best for their work: 7 voted for the hand cart, one for the push truck. All 3 were considered good, but the wheelbarrow was least preferred.

Bicycles:

'It is good, but I can't ride it so I don't like it'.
[Ewe woman who knows how to cycle]: 'If no one is around you can take it wherever you like... when you haven't got money to go and sell [goods] you can just take the bicycle.'
There were comments from some women that the seat was too high, but others pointed out that it could be adjusted.

We asked if they preferred the man's or the women's bicycle:

'It's difficult to mount with a cross-bar, this women's bicycle is good because you just lift your leg..'

They see a young girl trying out the bicycle, so they agree that it is possible to learn to ride.

'If I had the strength [usually meaning financial strength] to acquire one, I would like it'.
'I'd take it to grind corn.... I would take a basket and I'd tie it on the back'.

The power tiller:

'It would be useful for carting produce'.
'If I had someone who can drive to take it to the farm it could go however far [and to market?] I could go to market at Kasoa or Bamjiase'.
[A debate then ensued among the women about how suitable it would be for Kasoa because of the traffic, though they thought it would be fine to travel to Bawjiase.]
[What about women learning to drive?]
'If you are brave, a woman can learn to drive it. If you don't have anyone to drive it you can't take it anywhere. But if you have someone to drive, this can help more than all the others [IMTs]. You can take as big a load as you want.'

2. The men present were then asked to vote on their preferred IMT.

They voted as follows:

Kumasi push-truck: 5

Men's bicycle: 8

Wheelbarrow: 0

Hand cart: 2 (the comment being made that it wouldn't take much strength to push along)

Power tiller: 3

When the villagers sat down for the formal session they numbered 16 women and 20 men.

3. Villagers made the following questions/comments during this session. Although we asked for women's questions and comments first, it took some time before women were ready to come forward and almost all questions came from men, though the women listened carefully. Towards the end many of the women drifted away: they clearly had more important business to attend to.

[Man] 'The emphasis is on women getting the IMTs. Men may like them, and women may not. So can men get them?'

[Response: it's women who carry the heavy loads, which is why we are emphasising women. etc]

[Man] If carrying a load gives women problems, won't the truck also give them problems.?

[Response re easy manoeuvrability of handcart].

[Middle-aged woman] you're emphasising equipment for women but men are stronger [richer] so men can buy for women to use'.

[Man, teacher] There are other villages around - it would be good to involve them too.

[We explain the study is limited to this village].

[Woman] If the woman's interested in a bicycle and her husband wants a push truck, can she get her bicycle?]

[Man]: If she (the wife) is interested in a truck and takes it to the farm and asks the husband to help and he says he hasn't told her to get a truck [and so doesn't help her] what will happen?

[Response from Frank Owusu: 'Money comes to the same room' [a saying]. In farming the man helps and the woman helps in transporting and selling. So if the woman acquires a truck and can't push it and the husband refuses to help, it's a loss to the family.]

[Man, same teacher as before]: If you are interested in more than one IMT can you buy if you have the money?

[Response, for cash yes, but not on credit as we have limited funds.]

[Woman]: If someone needs two can they buy the first then the second?

[Man, milling machine operator]: About the wheels on the cart - can they support a large load?

[An important point, we are having problems with punctures on the prototype and are thus due to start testing an alternative with motorbike tyres - we explain this. Much discussion ensues about the cart and motorbike versus strengthened bicycle wheels]

[Man, same teacher again]: The cart and truck are good. If you decide on a cart, is there any possibility of putting a breaking system on it?

[Response: possible but extra cost.]

[Man]: Carrying loads on the head causes ill-health, but because we do not go to the hospital we do not know whether pushing the cart can also cause health problems.

[Man]: If one person in one family has a truck, would another member also get an IMT?

[Chief]: If you need two IMTs and can get both, it's best to take one first. My farm is 2 and a half kilometres away and I'm too old to push, so what can you do to help?

[Suggest bicycle]

[Young man]: If someone is a salaried worker, can the repayments be deducted from their salaries [at source]?

[Response: our priority is women and people who farm in the village.]

[Man - pointing to women's bicycle] If it's for women, can't men ride it?

[Man]: Will we only get women's bicycles? And which make?

[Response: according to choice. Phoenix.]

[Man, teacher]: The bicycle carrier; some have it on the front some on the back - which is best?'

[Man, teacher, about the power tiller]: I like it but the problem is that business is seasonal. [Response from Mr Amoak that because of currency inflation it will cost more in the future.]

[Man]: If they are formed in a group, is the repayment period still one year? What about the accessories for the power tiller, are they included?

[Man, milling machine operator]: Is there a warranty on it [the power tiller] if you buy it? [Response: there is a guarantee period].

[Discussion continued. There was some concern among the villagers that they would have difficulty coming to a rapid decision about the power tiller.]

Most of the women who asked questions at this workshop were Ewe (this village is approximately 50:50 Ewe:Fante).

C The workshop at ASSIN AWORABO, Tuesday 31 October

1. Women's views on the IMTs:

The Wheelbarrow:

'Instead of headloading I could use it to cart produce from my farm ... about 3 kilometres away.'

'It saves energy.'

[No one apparently has one in the village. The women assessed that it could carry three baskets of cocoa or slightly more.]

'It can also be used for on-farm assembling of cocoa pods and carting cassava to the road side.'

The hand cart:

'It's also convenient for farm produce- you can even line the inside [the body is made of mesh]

with a polythene sack and put cocoa beans in it.'

'It can be used to assemble the harvested cocoa pods at the farm, because of its small, light and manoeuvrability characteristics.'

The Push Truck

'You can use it even for fuel wood and water. When I stayed in the Sukum area there used to be people who used it to cart water in barrels. [probe] The men own them there. No one owns a truck here.'

The women were asked which of the three above they preferred:

8 preferred the hand cart

6 preferred the push truck

1 preferred the wheelbarrow

The bicycles

'This tyre [on the women's bicycle] looks stronger than the men's. I saw women [taking] the bicycle to cart produce in the pictures - we could do it too.'

[An older woman]: I have a lot of cocoa. The bicycle can't carry all of it [she prefers the truck].

[When asked which they prefer, the women indicate the man's bicycle - this is apparently because of the basket carrier on it, - they then say the cross-bar is not good. Overall, they prefer the truck.]

The power tiller

'It's very good, you take it to the farm and get all the cocoa to the assembly point and after fermentation you can use it to cart all the beans. And you can take it for firewood and for harvesting cassava'.

'I've seen one to polish rice too. It will help all the community here.'

[Are power tillers ever used here?] 'Occasionally someone brings one from Oda for rice.'

2. Men's first preference among the IMTs when asked to vote:

Handcart 1

Pushtruck 6

Bicycle 16

Power tiller 7

3. Questions in the formal session

[Older woman] 'Items may be available on credit but farming work is [seasonal], so how will repayment be organised.'

[Response: repayment times can be linked to harvesting of various crops]

[Man] 'When the money comes at harvest who do we pay to? And if at the end of the year there is C50,000 left to pay [on the sum borrowed] would this lead to additional interest being due?

[Man] 'Is one year January to December or do we start now?

[Response: no payment required till equipment received by them, then first instalment must be paid]

[Man] 'If you default for two months, will the IMT be taken back? I'm a rice producer, I harvest after 7 months, then at 12 months...'

[Middle-aged woman] If I make half the payment at the beginning, can I pay the last instalment at the end [of the 12 months].

[Woman] If you make a half payment do you pay the full interest?

[Response: pay only two-thirds of interest then.]

[Man] 'I need a power tiller but I thought the price would be lower. None in the village can afford that price. I'd want the repayment period extended. The power tiller is best because of the hills here'. The operation of the push-truck is difficult here.

[Response: cost high because of exchange rate. People could form groups to buy.]

[Man]: Will the same or different bicycles be supplied?

[Response: strongest Phoenix we can get, ladies and men's]

[Man]: What about the equipment shown on the pictures. What happens if you want some of them, as they are not presented here at the workshop.

[Response Frank]: We can arrange to get them, if you have something particular in mind and if it is available.

[Woman] If someone comes to get a power tiller will somebody come and train them to use it?

[Response from SelfHelp: yes, not only tillers, but all IMTs re driving/maintenance.]

[Man] Is the training free of charge?

[Response from SelfHelp: Yes, otherwise they couldn't use the equipment. Frank Owusu: we will tell them where they can obtain spare parts too.]

4. SelfHelp session on attributes of IMTs.

Bicycle:

[Women] You can convey people to hospital, and to the farm. You can rent it out. You can even bring firewood with it.

[Man] It doesn't need fuel.

[Man] The old people can ride on it.

Push-truck:

[Man]: You can convey farm products and building blocks on it.

[Woman]: When you harvest cassava, you can put them in a basket and load it on the truck and then you can push it home.

[Woman]: If somebody gets hurt at the farm, you can put the person on the truck and push home.

Hand cart:

[Woman] You can convey cassava from the farm to the house. You can line the inside with polythene and use it for carting cocoa beans.

[Man] A disabled person who can't get to the farm could go in it to the farm.

[Woman] It would be very profitable if you harvest cassava - you can convey it in this.

[Woman] If you get injured at the farm someone could bring you to the house in it.

[Woman] you could take it to the farm so there would be no need to carry things on the head.

[Man] You can use it for firewood.

[Woman]: You can use it as a cot and put a rug inside and lay the baby on it while you are the farm.

[Man]: If there is somebody in the house who cannot walk, but if this person wants to see what is happening at the farm, you can use the handcart to bring that person to the farm. You can bring the elderly to the farm

Wheelbarrow:

[Man]: It is used by masons in building and construction work.

[Woman]: If your farm is at the roadside you can use it to cart the produce to the village.

[Man]: If there is a log in your way, how do you get the wheelbarrow across?

The villagers at Aworabo used the opportunity of the district officials presence to ask more general questions too, notably:

[Man] The last extension officer left here two years ago and we haven't seen one yet - where is he?

[Deputy agric officer response: limited staff, recently assigned one to this area but his motorbike has broken down, they are working on it now.]

[Chief] Serious problems of getting to the road from here - of getting someone sick to hospital. Because no lorry comes here and my car has become the ambulance of the village.

[DCE response: hence this project. Difficulties re size of district and shortage of money; they have only received one quarter of the Common Fund although they are 10 months into the programme.]

D The workshop at GOMOA ABORA, Thursday 2 November

1 Women's view on the IMTs displayed:

The hand cart:

[n.b. the prototype cart designed by GRATIS had been under trial in this village for around two months. This village had been selected for the trial in part because the village is small,

a woman who would organise the trial and look after the cart was present, and the villagers seemed substantially poorer than in the other villages and in particular need of assistance.]

'It's good, convenient to push'

'Compared to headloading, it's better... When you put the goods in here, it feels comfortable.'

'I didn't use the cart to the junction, because of the charge of 1000 cedis for using it. I was also afraid it might puncture.'

'The cart is easy to operate and will be useful if you get good tyres.'

[But the problem of punctures is a major issue.]

The wheelbarrow:

[Women say they can't push this; that the handcart is easier. Apparently one woman has owned a wheelbarrow for about a year but it is heavy and used mainly for construction purposes. The children- young boys- reportedly use it for carrying water.]

'You have to suspend it on your chest.. I can't do that.'

'It's difficult to balance'

[Asked if they could use the wheelbarrow to go to the farm]: 'The farms are on a hill so it's difficult to push up hill'.

[Woman]: When using the wheelbarrow, it affects your chest.

[Woman]: When you put a lot in it, it will affect you.

The Push-truck:

'We just have footpaths to the farm, so you can't push it to the farm.' [prompt re proposed VIP work on track to Apam]. When the tracks are improved we could take it to the farm. [They discuss the question of clearing more farm tracks and suggest that they could clear along the main tracks to the point where they start to branch to various farms.]

'You can put two loads of firewood on it.'

'The push-truck can take more goods than the handcart.'

'You have to tie the goods on it with a rope. If you use container for water, you need to put something behind them on the truck and tie them.'

'The push-truck is relatively flat and as it moves some of the loaded items fall off.'

Women were asked to select their preference among the three IMTs. The results were as follows:

Wheelbarrow 0

Handcart 15 (if the puncture problem is resolved successfully)

Push truck 1, but it seemed to come only marginally behind the cart in preference terms.

[but see subsequent applications to purchase].

One woman recounted how, before the road was graded, she hired a Pushtruck to bring her goods from Apam Junction. Her children helped, but the truck swerved and her konkonte was lost in the bush.

Bicycles:

'I don't know how to ride'.

'If I could take one home I'd take the man's bicycle because you can put things at the back [on the carrier]. [prompt] Even if the women's bicycle had a carrier I'd prefer the men's bicycle.'

[Woman]: I will fall off unless you tie me to it with a rope. The bicycles are too high.

[Girl] I learned to ride on a man's bicycle so I prefer it.

[Girl] I had problems mounting the women's bicycle [she had just tried it out] and wanted to get down. I sit on the bar of the men's bicycle to get down and can get down comfortably.

[Woman]: I am too old to ride.

[Woman] I have a daughter who knows how to ride. I'd pick this [man's bicycle] for my daughter

Power tiller:

[There is general laughter among the women when asked for their views on the tiller]
'None of the equipment can go to the farm because of the tracks.'

'It's good. I'll load all my things, sit comfortably in it and be driven home.. I just need someone to operate it. There would have to be a man to drive it.'

[We comment, what about women learning to drive?]: 'No, we [women] can't drive'.

Kathrin Blaufuss was sitting amongst workshop participants and was able to record some of the informal conversations and discussion on the power tiller.

[Woman]: It is very good

[Woman]: We cannot take it to the farm

[Woman]: If there are goods loaded on it, you can take it to Ankamu. You can put all goods on it and then start the tractor and take it to the junction.

[Woman]: The men would ride the power tiller.

[Woman]: If they [at this point it is unclear whether she is referring to men or women] can learn how to ride it, it is like a car.

[Woman]: You have to spark the machine before you can take it along. You can separate the trailer from the front.

[Woman]: If the repayment period is for two years, how can they pay that amount. It is too high.

[Woman]: If we get the power tiller, we won't hire a car again.

[Woman]: When you come back from the market, you can use it from the junction to the village.

[Woman]: You can use the machine to clear land.

[Woman]: If you have tomatoes, cassava and everything, you can put them on the back in the trailer.

[Woman]: When people are coming from Brofoyedur and when they reach Abora, they can continue the trip using the power tiller.

[Woman]: They will have walked already from Brofoyedur to Abora, do you think they will stop and change to use transport for the rest of the journey?

[Woman]: If you sit on it, it is like sitting in a car.

[Woman]: The road is bad, but it can be maintained to the point where it is in good condition and you can then use the power tiller on it all along.

[Woman]: But the road is not good

[Woman]: You can take it to Ankamu and then to Apam

[Woman]: If people in Brofoyedur know that we have a power tiller here, they will bring their goods here to be taken to the market with the power tiller.

2. Men's views on the IMTs:

'The push truck would be good for us. Some people come from the junction to buy fuelwood and maize- they wouldn't need to bring a truck in. Also we can use it to fetch water and it takes more of a load than the handcart.'

Result of a vote on the most useful IMT:

Power tiller -unanimous choice.

'On the tiller you can take a lot of loads and don't have to use your strength to push'.

'We shouldn't be scared of the price, we could pay for it.'

'You can put a lot of water in it.'

'You can build a wooden structure [on the trailer] to make it higher to get more in'.

3. The formal session:

About 30 women and 20 men were present at the formal session. Mr Larbi (MOFA VIP Cape Coast) gave a brief talk at Abora about VIP's intention to improve the track at Abora to Apam, if people decide to take the IMTs. He pointed to the way people at Kasoa use the push trucks to carry water. The pushtruck can take up to 10 bags of charcoal. Even if individuals cannot afford to buy they can form associations.

Questions arising in the formal session:

[Man] If I want a power tiller but can't drive it, will I be taught.

[Response, yes, re all IMTs]

[Woman] When you buy are the tyres included?

[Yes]

[Man] The power tiller can help with farm operations, but if the machine has to remain in the village, how will we pay for the equipment.

[Explain that the tiller has to be based in the village, for monitoring purposes, and to assist village work but can be taken outside for specific jobs.]

[Man] I may need a bicycle, but for travelling, not for conveying things all the time. Can I buy it for that?

[Yes, but we showed the pictures of bicycles with loads because we wanted people to see how useful the bicycle can be for transporting goods, not just for personal mobility.]

[Older woman] I'd like a power tiller very much because of the problems with my waist - I can't push a cart or anything. Even if I can't drive it, someone else can.'

[Woman] 'You said the tiller can have some accessories, what are they?

[Man] Mr Larbi said he'd help upgrade the farm tracks - tell us more, please.

[Mr Larbi explains that the village will not have to pay, but just assist in clearing vegetation and maintaining them afterwards.]

[Woman] If we don't buy the equipment, won't the road be upgraded?

[Mr Larbi: We want to reduce your burden, hence the equipment. If you need IMTs we will widen the path for them, but if you want to continue headloading, you won't need an improved track.... We even want to employ contractors who will employ the community which will help you get wealth.]

[Man] I'm not sure we can pay in one year, we may want two years. Do you have to pay extra for two years?

[Man] Will the handcart and things be local or imported?

[Response: we aim to use local equipment if available]

[Man] If you want to make the road and there are trees on it, what will you do?

[Mr Larbi: the track won't be a big one for commercial trucks, so we'll just use manual labour to build it, not bulldozers. It will just be for IMTs.]

[Woman} There's a stream, how will you take care of that?

[Response: the contractor will help to make culverts etc.]

4. SelfHelp session on attributes of IMTs

Bicycle:

[Woman]' You can hire it out'

[Woman] You can ride it to the Junction.

Wheelbarrow:

[Woman] You can use it to convey water and cement.

[Woman] You can use it to take farm produce to the house.

Handcart:

[Woman] I've used it to cart cassava and gari.

[Woman]: You can put gallon cans on it to convey water.

Push truck:

[Woman] I haven't used it so I don't know.

[Woman] You can use this for carrying firewood. The others [IMTs] can't take it unless it's chopped.

[Woman] If someone comes from the junction to buy foodstuffs, you can hire it out to them.

[Man] You can sit on it.

[Man] You can use it to bury the dead at the cemetery.

[Man]: Because it has four tyres, you can convey firewood and blocks with it. The tyres are strong.

[Woman]: You can take it to Ankamu in the morning and let the truck work there during the day. In the evening you bring it back to the village.

[Question: How many trucks could the village sustain and not be idle?] Answers:

[Woman]: just one

[Man]: Two - some could use the truck to go to other villages - probably one is enough here.

E The workshop at GOMOA SAMPA, Friday 3 November

The villagers here were relatively few in number, given the size of the village: about 20 men (9 of whom were elders) and about 35 women. The formal discussions took place in the covered market hall because of the sun.

1. Women's views on the IMTs on display:

Wheelbarrow:

[No one owns a wheelbarrow in Sampa]

'If we are able to buy, we could take it to the farm to convey produce.'

'We can use it to convey sand for building'.

[Why no one owns one?] There is no money to buy.

[Woman]: If you have a wheelbarrow, you won't carry goods on your head, if only the path is cleared to use the wheelbarrow.

Hand cart:

'You can use it to convey goods...[prompt] everything, cassava, orange, palmfruit.

'If there was too much weight, one person could not push. What I'm able to carry if I put it in the cart, I can carry easily.'

'If I doubled my head load could I push it?'

[demonstrate load carrying in cart]

[Woman]: If your husband is not well, you can push him to the junction.

[Woman]: I would need to practice how to use it.

Push truck:

'You can put any load on it and carry it easily'

'Even if we had 10 here we could use them because some of the farm tracks are very far.

'This is heavy when you've put the goods on it.'

'When you pack the maize or oranges in sacks you can push it'.

'You could take two or three bags of maize and pull'.

'If someone is in need, you can hire it out.'

'The cart is easier for loading - one person can handle it - but the truck can take more loads.

Bicycle:

[Woman]: If you know how to ride it, it is useful. You can use it to convey goods.

[Woman]: You can hire the bicycle out.

It became very hot and the women were beginning to move away, so we moved to the market hall and started the formal session.

Some comments were picked up, while the photographs with heavy loads on bicycles were passed around:

[Woman]: I didn't know that a bicycle can take so many loads. You can use the bicycle to convey so many goods.

[Woman]: Now I have seen that they load so many baskets on the back of a bicycle.

[Woman]: How do they arrange all those things at the back of the bicycle?

[Woman]: If the load is too much, I would not be able to push the bicycle anymore. But I would not be able to headload all these loads they put on a bicycle. I could put them on the truck and push it.

2. Questions and comments arising from the formal session

[Chief, a teacher in his 50s who lives at Winneba]: The river is here, irrigation pumping machines would help. That would be our priority.

[Mr Anang-Siaw MOFA VIP, he'll take that up with VIP which has money for pumps. The funds are channelled to the District Assembly, so they will have to apply there.]

[Man] If you give the prices in cedis, old people won't understand; I'd prefer you to give it in local pounds [50% of cedi price].

[Chief] On festive occasions women find money to hire brass bands for entertainment, so they should be able to find the money if it's on credit for one year. - and men can organise groups; the men should come together and acquire at least two for their activities.

[Chief] If the equipment is supplied to a group, and you have to take photographs [of everyone in it] who pays the cost?

[Response: we'll do it, so no charge]

[Chief] This town is divided into sections, if the various sections of the town came together to buy one or two items, they could organise into groups.

[Woman] We're very happy with what has been brought. Now we need some time to deliberate and plan which items to select.

[Woman] These things are right to help [us].

[Older woman] What is the name of your organisation and its objective.

[Response: explain we have been coming to Sampa for some time, focus on research etc.]

[Man] The main aim is to help farmers. If I buy a bicycle and have to repay in one year and I pay up to a certain limit and then can't find any more money, what will happen. Will you seize the bicycle?

[Need to explain specific circumstances to bank officer when he comes to collect money, so a grace period then allowed if reasonable]

[Chief] If you are able to pay in 6 months, is the interest cut?

[Response, can reduce]

[Mr Anang-Siaw] If you purchase a machine and it gets damaged is there insurance?
[Response: you would have to arrange your own insurance. SelfHelp: You have to handle the equipment with care.]

[Woman] Let's say I need a wheelbarrow, I must pay in one year, but another woman wants a power tiller for 24 million, the costs are so high.
[Explain women can borrow over 24 months if circumstances difficult, but additional interest.]

[Man] What happens after the completion of the project.
[Response: We have to leave, but results passed to other institutions etc.]

[Man] Can you supply farm equipment, cutlasses, hoes etc.?
[Response: not possible from us, but are other organisations so should contact District Assembly.]

[Man]: We have to farm first before we can use the IMT, hence, why are you not helping with the farming?

[Man]: How fast does the power tiller go? I have maize and want to sell it at Kyiren Nkwanta.

4. SelfHelp session on attributes of IMTs

Handcart:

[Woman] The cart is large but light and can contain more than the wheelbarrow.

[Woman] How can you use the cart with a stream in the way?

[Woman]: The handcart can only pass on the road and not on the paths.

Wheelbarrow:

[Woman] The wheelbarrow is stronger than the handcart.

[Old woman] The wheelbarrow can be used on footpaths, but the cart would need the footpaths widening.

Bicycles:

[Chief] If the women ride men's bicycles they will expose themselves!

Power tiller:

[Woman] It would be better in the savanna grasslands than here. There are many trees here.

[Man]: We are all farmers and the harvests are 6 months apart. How can we afford to pay a monthly rate?

APPENDIX 1: applications for IMTs: a listing and preliminary comment on choices made

At meetings after the workshops, the following IMT applications were received:

GOMOA ADABRA

12 push trucks [6 women, 6 men]

3 bicycles [1 woman, requiring a woman's bicycle, 2 men requiring men's bicycles]

Additionally, a number of people (principally men) were interested in making a group to purchase a power tiller, but were unable to find sufficient people in the limited time before our orders had to be placed.

ASSIN AWORABO

11 push trucks [4 women, 7 men]

1 hand cart [1 woman]

4 wheelbarrows [1 woman, 3 men]

12 bicycles [3 women, 9 men; all required men's bicycles]

GOMOA LOME

13 push trucks [8 women, 5 men]

1 bicycle [1 woman requires a man's bicycle]

GOMOA SAMPA

5 push trucks [2 women, 3 men]

3 wheelbarrows [2 community groups, 1 man]

GOMOA ABORA

3 push trucks [1 woman, 1 man, 1 group of 8 women and 1 man]

3 power tillers [1 man, 1 'group' comprising husband and wife, 1 'group' of 2 men]

The applications were not as the research team had anticipated, either from prior studies in the villages, or from the workshop discussions.

The widespread preference for the heavy local **push trucks**, including among women, was remarkable and may be attributed to the fact that this IMT is familiar to villagers from their visits to market centres, although only two villages have had access to push trucks: Lome where two very simple trucks had been made in the village with wooden wheels covered by a rubber strip (see Final Technical Report, R7149) and Adabra, where a man in a neighbouring village loaned out his truck. Women in Adabra expressed reservations about the trucks in terms of their weight and the difficulties of using them on their own, but nonetheless, have requested 6 trucks. It may be the case that some women have been encouraged/instructed by their husbands to apply for trucks. When Adabra women at the workshop were asked their preference between hand cart, push truck and wheelbarrow, 7 voted for the handcart, only one for the push truck. However, one of the questions raised by a man in the Adabra workshop was the strength of the pushcart. During the subsequent registration of applications at Adabra we were party to one argument between husband and wife - she wanted to select the handcart, but needed her husband to contribute to

repayments. He told her that if she wanted contributions from him, she must select the push truck! After much further discussion between the two, she applied for the push truck.

The widespread preference for **men's bicycles** (i.e. with a cross-bar) is also noteworthy. Women's bicycles are not uncommon in the two districts, because many second hand bicycles ridden by men are actually women's bicycles with no crossbar. Thus the preference for men's bicycles with a crossbar would seem to reflect a perception that these are stronger and if both men's and women's bicycles are offered at the same price, it is wiser to select a man's bicycle. The women may well be happy with this choice because if they do not, in any case, know how to ride, it is likely they envisage the bicycle being used principally by their children.

The research team had anticipated that few villagers would have the funds to contemplate purchase of a **power tiller**. Indeed, of all the villages, we envisaged Abora, ostensibly the poorest village, to be least likely to take any IMTs. It was thus totally surprising that Abora was the only village to make applications for [three] power tillers. A possible explanation is that many of Abora's inhabitants have richer relatives living outside in Accra and Tema, and that they had the time to contact such people and obtain external assistance for what is seen as potentially a major profitable intervention in the village.

We were disappointed with the lack of interest in the prototype light handcart, despite its potential value for older women, in particular, and the favourable comments initially received when women ranked photographs of IMTs including this cart (but excluding the local push truck) in R7149. In Abora the lack of applications for the cart could be attributed to puncture problems experienced during field testing of the prototype cart. Elsewhere, the lack of interest is probably more the consequence of greater familiarity with the local push truck.

Wheelbarrows were rather more popular than we had anticipated. This may be partly due to their relatively low cost (they were the cheapest IMT being offered). However, although wheelbarrows were ranked low in IMT preference ranking exercises carried out with women in R7149 in Abora and Lome, they ranked highest of all IMTs in the initial work with photographs at Aworabo, where they were seen as useful for transporting cocoa. (Somewhat contradictorily, during the workshop at Aworabo, when we asked women to select between the handcart, wheelbarrow and push cart, only one preferred the wheelbarrow). In Sampa, where wheelbarrows have been ordered by groups, it is possible that they will be used for general community purposes, rather than specifically for transport of agricultural produce.

Follow-up interviews with applicants to review their reasons for the selections made will be in the next field work phase.

The research team reviewed the applications and made a decision to go ahead with purchases for all the equipment requested, since this is within the equipment budget of the project. We considered whether to proceed only with applications from women, but rejected this approach for two main reasons:

1. We do not wish to antagonise men in the villages.

2. Starkey (2000) and others now strongly argue for a critical mass in IMT schemes, in order to encourage establishment of local repair services and to ensure high visibility of equipment which will encourage further widespread adoption.

Consequently, orders have been placed for the IMTs, in order to obtain receipt of equipment by January/early February, when monitoring of their use in the villages will commence.

APPENDIX 2: a copy of the IMT application form

APPENDIX 2: a copy of the IMT application form

DURHAM UNIVERSITY IMT PROJECT

THE MANAGER,
AKYEMPIM COMMUNITY BANK LTD.,
DEWURAMPONG

APPLICATION FOR IMT UNDER THE AKYEMPIM COMMUNITY BANK LIMITED REVOLVING IMT CREDIT SCHEME/DURHAM UNIVERSITY IMT PROJECT

1. NAME OF APPLICANT
2. RESIDENTIAL ADDRESS (HOUSE NUMBER & VILLAGE NAME).....
3. ARE YOU PERMANENTLY RESIDENT IN THIS VILLAGE?.....
4. IF NOT, WHERE IS YOUR PERMANENT RESIDENCE?.....
5. HOW LONG HAVE YOU BEEN RESIDENT IN THE VILLAGE?.....
6. AGE:.....
7. SEX:.....
8. OCCUPATION(S):.....
9. NUMBER OF PEOPLE IN HOUSEHOLD:.....
10. TOTAL SIZE OF FOOD FARM:.....
11. TOTAL SIZE OF CASH CROP FARM:.....
12. TYPE OF IMT REQUESTED

13. COST OF IMT REQUESTED:
14. PROPOSED DURATION OF LOAN (1 YEAR OR 2 YEARS):
15. NAME OF GUARANTOR(S) [2 FOR POWER TILLER, 1 FOR OTHERS]
16. BANKERS, IF ANY:
17. DO YOU HAVE ANY OTHER LOANS?
- IF SO, DETAILS:
18. DO YOU OWN ANY MEANS OF TRANSPORT (wheelbarrow, bicycles, push-truck, motorbike, private car, taxi, lorry):
- IF YES, INDICATE TYPE:
- HOW LONG HAVE YOU OWNED IT?
19. I CONFIRM THAT THE INFORMATION PROVIDED IS TRUE AND UP TO DATE. I AM AWARE THAT ANY FALSE DECLARATION NULLIFIES THE APPLICATION. I CONFIRM THAT I WILL COOPERATE IN MONITORING USE OF THE IMT AND RELATED ACTIVITIES OF THE PROJECT TEAM.

SIGNATURE OF APPLICANT

DATE

.....

.....

GUARANTOR 1

SIGNATURE:

NAME:

BUSINESS/POSTAL ADDRESS:
.....

RESIDENTIAL ADDRESS:
.....

GUARANTOR 1

SIGNATURE:

NAME:

BUSINESS/POSTAL ADDRESS:
.....

RESIDENTIAL ADDRESS:
.....

APPENDIX 3: pictures of the workshops



Abora village participants



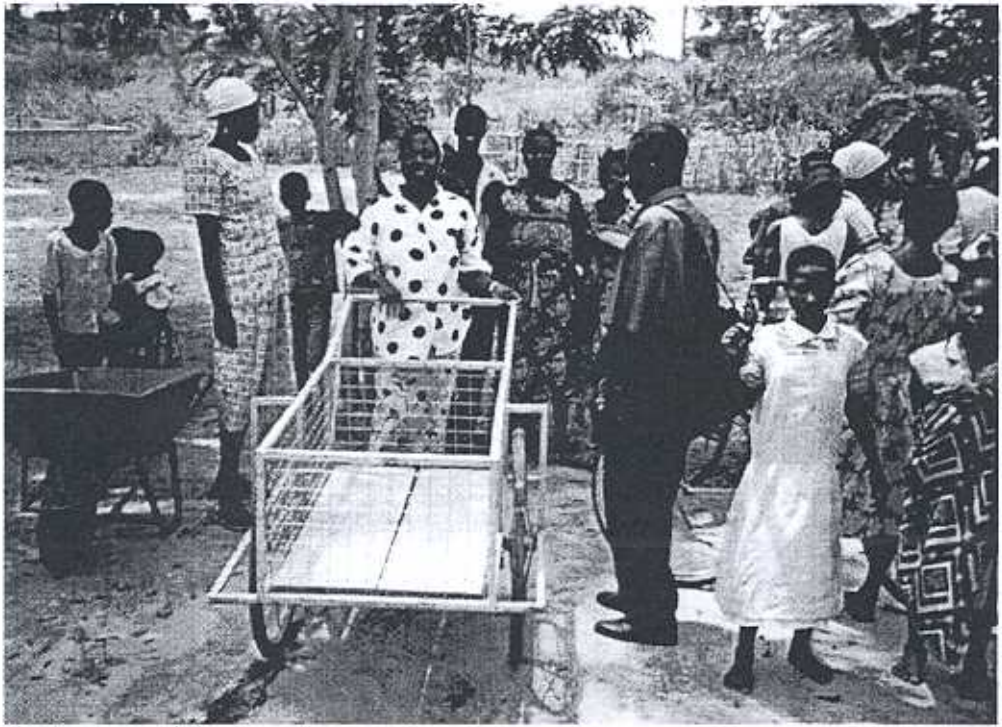
Aworabo village participants



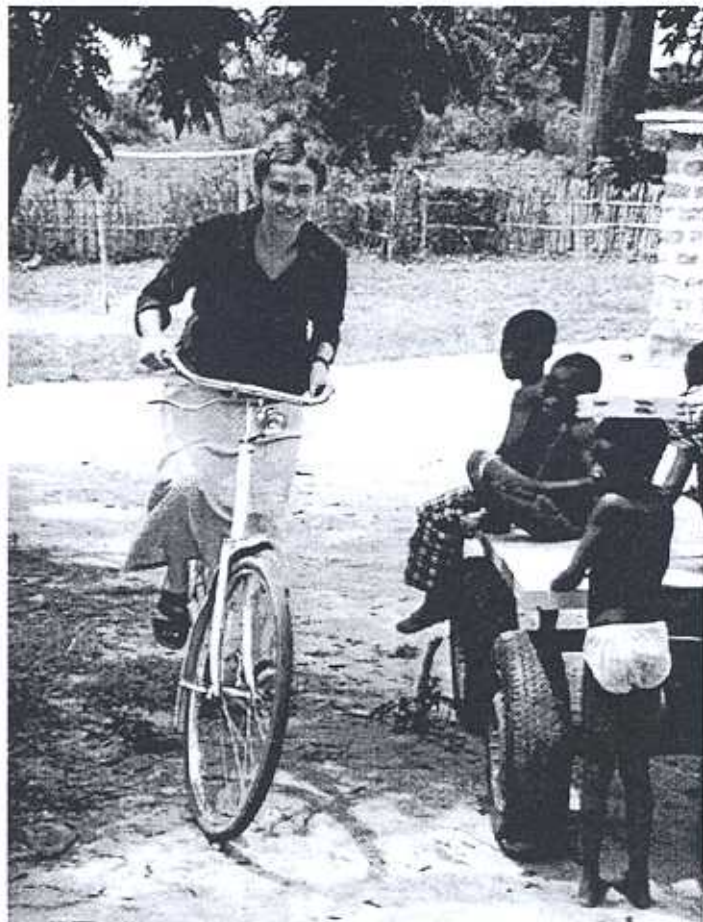
Aworabo village participants



Equipment trials



Equipment trials



Bicycle demonstration



Discussion on the photographs



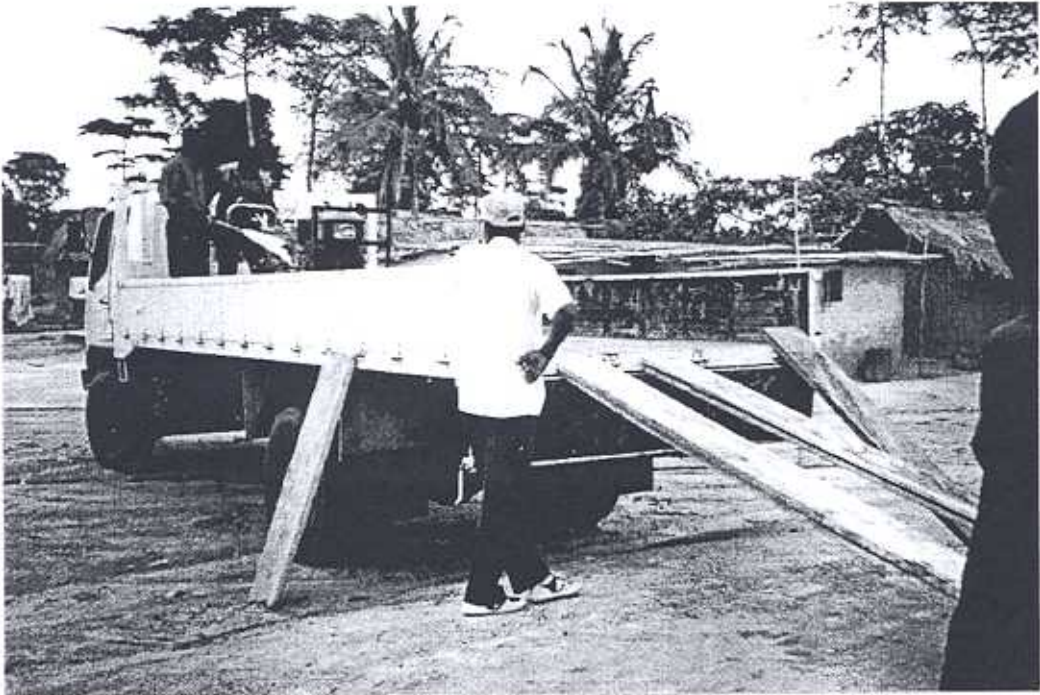
Frank Owusu Acheampong presenting



Questions in the formal session



Mr Amoak presenting his power tiller



Loading / un-loading of the equipment in the villages



Signing the IMT application form