

Playing with labour

Understanding patterns of labour investment, as well as the changes caused by the introduction of a new technology, are crucial for a better understanding of farmers' reasons to adopt, adapt or reject such a technology. In complex production systems these patterns are often difficult to unravel. The DIAR project in Colombia developed a simple but reliable method to register labour allocation patterns of small-scale producer families. It is a self-registration system, specifically developed for the illiterate target farmers of the project. This system enabled the project to obtain quite precise information from 17 target families over a period of six months. It enabled the families concerned to reflect on their own production strategies, and they said it was fun to play this 'registration game'.

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The DIAR project (Desarrollo Integral Agrícola Rural), initiated by the Colombian and Dutch Governments, and realized by the CODECHO (Corporación para el Desarrollo del Choco), tried to generate and work with a flexible model for integrated rural development in a rainforest area of Colombia. The

Choco is backward according to poverty standards. The region is dominated by its river systems and rain forest ecology. The climate varies between the very humid and super humid tropics. The population settles along the rivers, where their main sources of livelihood are fishing, agriculture and small domestic animals, and mining (gold, platinum). The principal objective of production is to guarantee the continuation of the household system. Making profit is important, but not the driving force of productive decision making.

Division of work

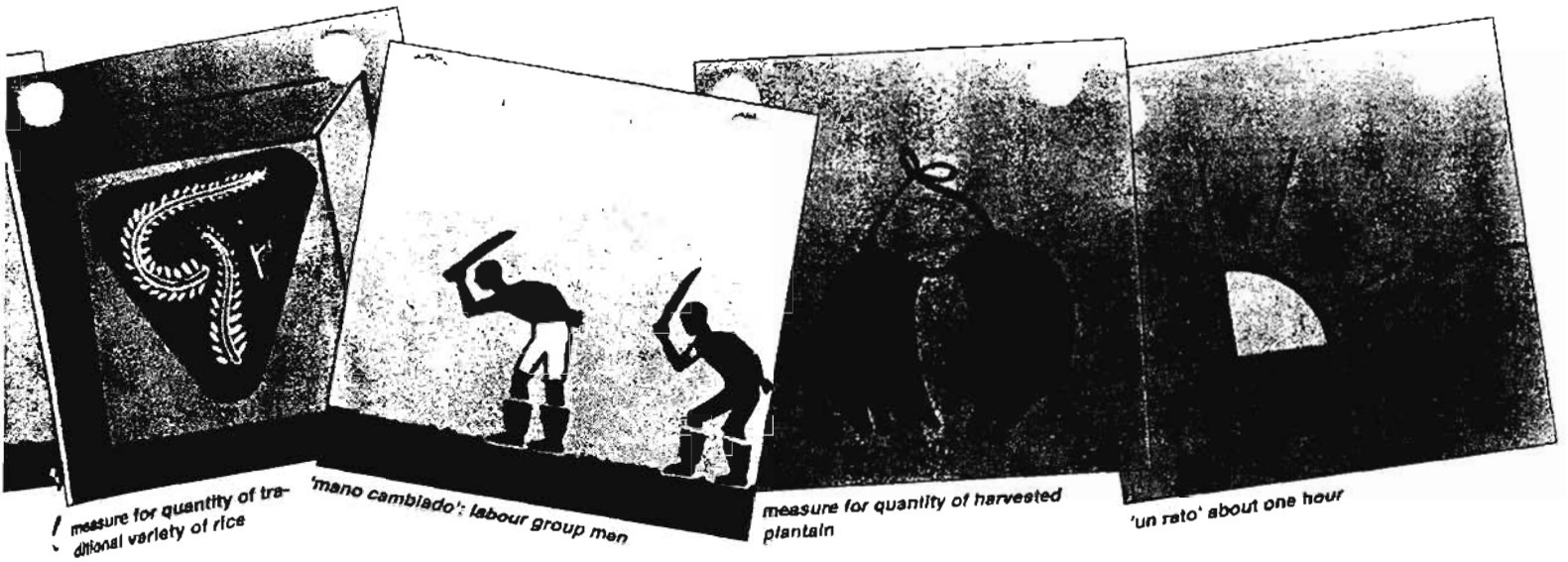
Family labour is used to exploit all the richness of the environment in terms of fishing, hunting, agriculture and animal production, collection of forest produce and mining. The main agricultural season is from March to October, during which the annual crops are grown (rice, maize). From November on, the level of the river declines and fishing, mining, hunting and cutting wood and palms become more important. Plantain cultivation is a continuous activity, but is less important during the period when annual crops demand major time investment (Leesberg 1987). There is little specialisation of work from farm to farm. However, there is a sexual division of labour in different activities at the farm level. Specialised female jobs are production and processing of sugar cane, domestic activities, daily fishing. Specialized male jobs are cutting trees and palms, hunting at night, construction work, preparation of the soil for agricultural purposes. Women perform 45% of the agricultural labour, men 55%. Fishing,

hunting, mining, livestock production etc. are activities that involve both male and female labour. The average female working day is about twice as long as the average male working day (Leesberg and Valencia, 1987).

How to register labour

To better understand these complex production systems, the project researchers carried out a study which focused on labour allocation: how do members of the families divide their time over the various productive and domestic activities, during different seasons? Obtaining such information would help the project to get a better idea of the possibilities and constraints farmers faced with regard to the new rice technology the project was introducing. It was decided to concentrate on the major agricultural season, since the project's activities coincided with the productive activities in this period of the year. A registration method had to be developed which would be attractive to the target population, so that they would be motivated to continue registering during several months.

The idea came up to develop a 'registration game' which people could operate themselves. Three things had to be measured: male, female and child labour, type of labour used (family labour, exchange labour or paid labour), and quantities of produce used and obtained (sowing and harvesting). Investigations were initiated to find out what could be used as the unit of time, what kind of logic the local games used, and how people interpreted drawings. The project artist went along to



measure for quantity of traditional variety of rice

'mano cambiado': labour group men

measure for quantity of harvested plantain

'un rato' about one hour

show drawings and to ask what people saw, and reversely, to ask people to draw figures so that he would understand the perceptions of the target group.

How the game worked out

Seventeen families participated in the six months registration exercise. The game players were enthusiastic: they immediately recognized the images and they liked the colours. They also liked to see their activities shown on the board. Once a week they were visited by a research assistant of the project. These assistants copied the data registered on the board on forms, designed to introduce the data into the computer.

Cross-checking with other methods of labour data collection (observation and interviews) showed that this method was highly reliable, and that it was particularly suited for obtaining data on repeating activities, like perennial cultures, fishing and domestic activities. These activities are not remembered in great detail and therefore more difficult to register with other methods, like for instance interviewing.

Better insights

When they evaluated the game, the participants explained that after a while men had given up playing, leaving their wives and children with the registration job, which added to their daily obligations. Men remarked however that they had never realized the amount of work women had to do. Only now that the cards were fixed on the board they had learned the enormous efforts that women had to perform each day. Children tended to increase their acti-

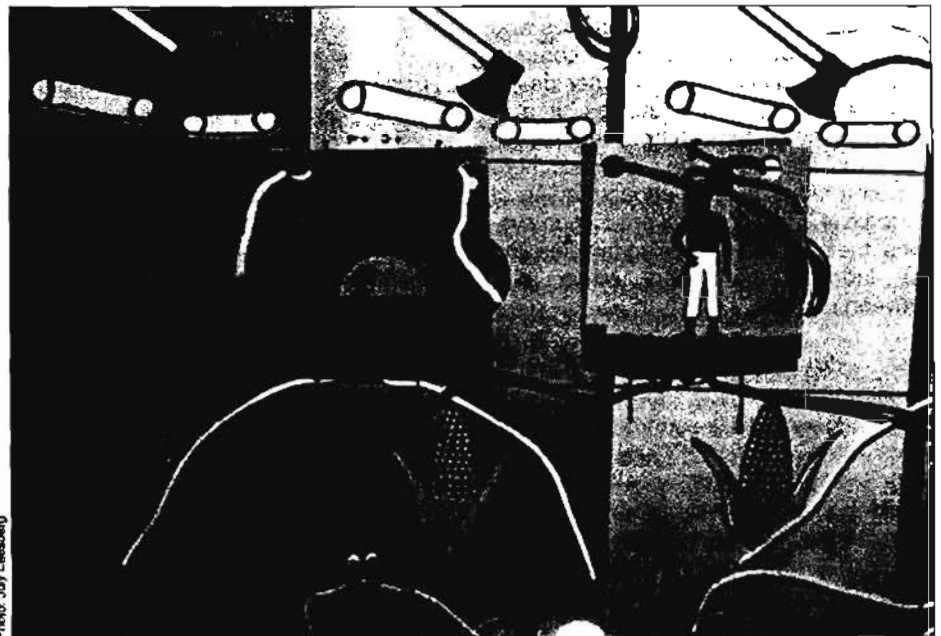
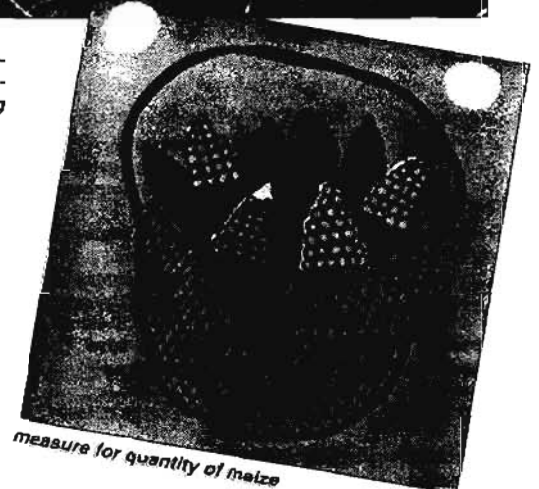
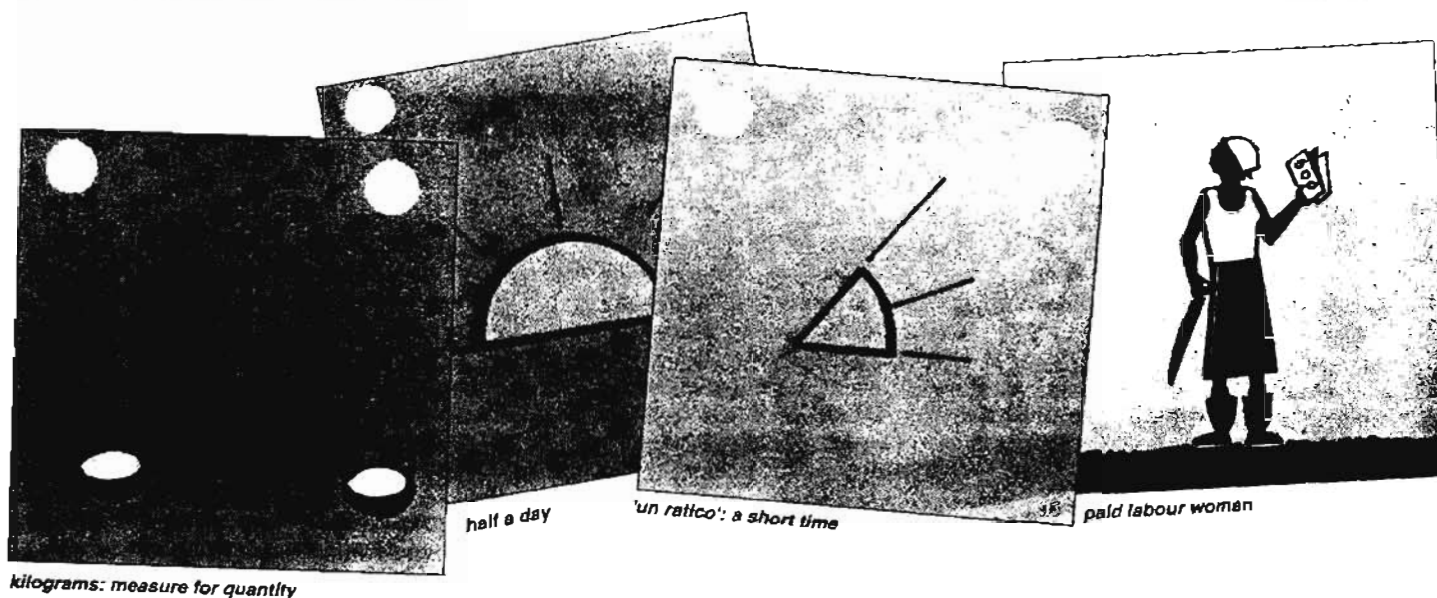


Photo: July Leebberg

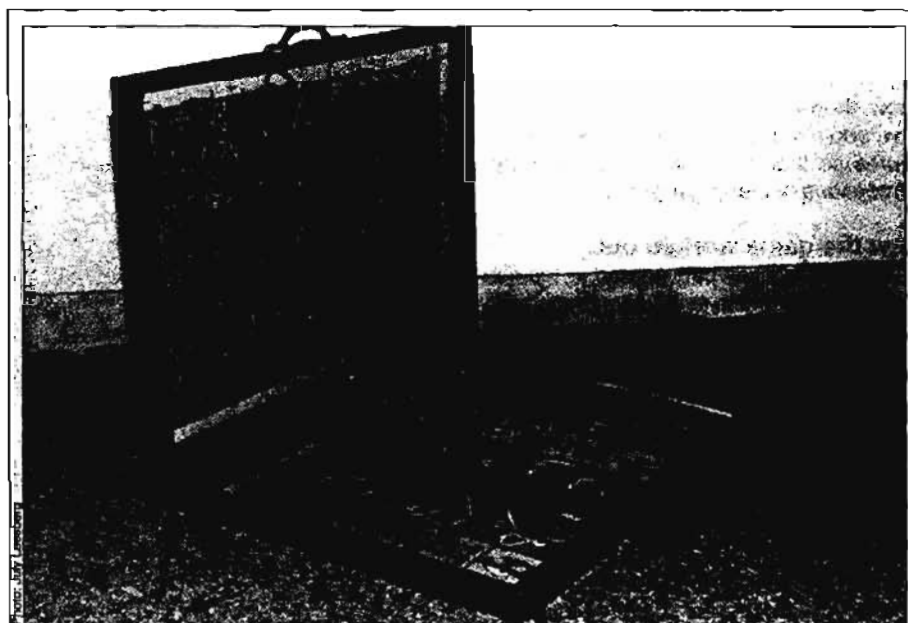
How to use the board game. First put a card representing time investment on the wires of the concerning activity. Then add a card representing sex/age/type of labour. Close the wires.



measure for quantity of maize



vities like fetching water, because they were eager to see themselves represented on the board. The game did generate a lot of discussion among the families who played it and other people in their communities. It helped them to get a better idea of their own production strategies. It also improved the discussion between the farmers and the researchers. Researchers gained a more detailed understanding of the logic of these complex production systems, the priorities of farming families and the labour organisation within and between families.



The labour registration game

The game is composed of a portable case with handgrip, containing a colourful plastified board game inside. On the board, images of the prevailing activities in the domestic and agricultural spheres are drawn, each one in a box. The activities are placed in vertical lines underneath each other, repeated seven times, but in different colours. Each vertical colour line represents a day of the week. Each box on the board is provided with a wire, on which playing cards can be fixed. This prevents the playing cards from getting mixed up during travelling.

There are three sets of playing cards. Blue cards for time investment, yellow cards for types of labour, and orange cards for quantities of sowing material/product. Each card is plastified, and contains two holes for fixing it on the wires of the board.

The rules of the game

- Time investment has to be registered at the end of the day, by each member of the family separately.
- Registration is done by combining one card representing time span, one for sex/age/type of labour, and if necessary, one for quantity.
- This set of cards has to be fixed to the corresponding activity at the corresponding day of the week on the board.
- Once each member of the family has registered his or her activities, the wires are closed, and the game can be put away until the next day.

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