Studying Pastoral Women's Knowledge In Milk Processing And Marketing — For Whose Empowerment?*

Ann Waters-Bayer

Since 1989 Ann Waters-Bayer has been a consultant in rural sociology employed by ETC Foundation, PO Box 64, NL-3830 AB Leusden, Netherlands. She is also a staff member of the ETC-implemented project Information Centre for Low-External-Input and Sustainable Agriculture (ILEIA). Born in 1949 in Winnipeg, Canada, and now resident in Göttingen, Germany, she holds a doctorate in agriculture from the University of Hohenheim, Germany, following studies in rural development in Berlin and in agricultural economics in Armidale, Australia. This article is based on her work from 1981-85 as socioeconomist with the Subhumid Zone Programme of the International Livestock Centre for Africa (ILCA), based in Zonkwa, central Nigeria.

ABSTRACT Studies of local knowledge and farmer participatory research tend to focus on raising crops and livestock. Little attention is given to processing and marketing farm products, an important source of income for rural households, particularly women.

This article presents the case of an investigation into processing and marketing of milk products by agropastoral Fulani women, which revealed how the women understand local market forces and recognize important social and even local political functions of their marketing activities. However, it also revealed the limits of their knowledge about how the local economy interlinks with national and international economies.

Reasons are examined why the study did not lead to local technical and institutional development in dairying. Differentiation is made between two types of research: “extractive” research to provide information for development planners and academics; and participatory or “enriching” research, in which data collection, analysis, and reporting are done with rural people, to use in their own problem-solving. It is argued that “enriching” research should be aimed at increasing rural people’s present knowledge, so that they can better understand and cope with external influences on their activities. They could then better defend their own interests against the macroplanning State.

Finally, the ethics of documenting the research results are questioned. Documentation of conventional research is primarily for empowerment and enrichment of the extractive economic and academic systems. But there is also a danger that wider dissemination of results of participatory research and local knowledge will not benefit the rural participants but rather strengthen the information base of planners, so that they can better manipulate local economies.

Introduction¹

Discussions of indigenous knowledge (IK) and farmer participatory research (FPR) tend to focus on production, with the exception of some work on crop storage.² Little attention is given to the processing and marketing of farm products, activities from which most small-scale farming households derive a considerable part of their cash income. This is particularly important for rural women, who often have few other ways of generating income. Much of the food they grow is for home consumption, and they rely on “off-farm” activities to gain the cash they need to purchase other foods and household necessaries that they cannot produce themselves.

The methods that rural people have developed to process foods are based on their knowledge of the availability and potential uses of local resources. The foods they produce reflect their knowledge of local needs and preferences. Their strategies in marketing farm products reflect indigenous economic knowledge, knowledge of how the local marketing system functions and how customers behave. This is very often women’s
Why has so little attention been paid to IK in processing and marketing of farm products? It is not only because it is women's knowledge, which tends to be overlooked in still largely male-oriented agricultural research and extension. It is also because local markets for farm products appear so chaotic to the outsider as to defy analysis. Most people trained in Western agricultural sciences will have enough trouble identifying local crops. But at a local marketplace, the products—even from only one crop—are even more diverse and unfamiliar to someone who does not come from the area. Measurements are usually by volume or heap, rather than by weight or piece. Prices seem to be negotiated, yet there is often a mutual understanding about the appropriate price for the season or day. But what is most invisible is the value system underlying the negotiations—a value system that takes much more into account than merely the costs of raw materials, labor, transport etc., and the situation of supply and demand.

A case example is given here of a study into processing and marketing of milk products by agropastoral Fulani women. This shows how their dairy business reflects their knowledge of local conditions, values, and possibilities, and how it has changed over time. Attention is then given to the outcome of this study, which might have had important implications for local technical and institutional development in milk processing and marketing based on IK, but did not. The reasons for this can be found in the purpose and methodology of the study. Differentiation is made between two types of research into IK: extractive research to provide information for development planners and academics; and enriching research, in which data collection, analysis, and reporting are done by and for local people, who use the findings to help solve their problems.

Finally, the ethics of documenting both extractive and enriching research are questioned: for what purpose, in what form, and for whose benefit should it be done?

**Dairywomen's knowledge: a case study from Nigeria**

In recent years, increasing numbers of Fulani cattle-keepers have been moving southward from the semi-arid savanna of northern Nigeria and settling as agropastoralists in the subhumid zone. Macroeconomic planners, who consider this zone to have great potential for mixed farming and dairying, encourage this southward shift of the so-called "national herd" (Jahnke, 1982; Olaliuku & David-West, 1979). Throughout Nigeria's dairy development plans in recent decades (FAO, 1966; FAO, 1975; FLD, 1976; LRM, 1981; plans quoted in van Raay, 1975), the following aims were repeatedly mentioned:

- to increase the supply of animal protein in the Nigerian diet;
- to meet rising demand for dairy products, particularly in urban areas;
- to substitute for imports so as to increase self-sufficiency in dairy products; and
- to "modernize" dairying, to make it "more sophisticated" (thus making modernization an aim for its own sake).

In 1979 a livestock research program was set up to improve production in the subhumid zone by tackling the greatest constraint: poor animal nutrition in the dry season. Innovations were introduced to increase milk production: supplementary feeding with agroindustrial byproducts such as cottonseed cake, and dry-season grazing of improved legume-based pasture. It was thought that some of the earnings from the resulting increased sale of milk could be used by the Fulani men to pay for the additional inputs, as had often been proposed in dairy development plans (e.g., FAO, 1975; Davies, 1979).

However, the milk yield did not increase as expected. At this point, the research team realized that it needed to know more about the Fulani household economy, especially about the household economics of milk production and sales. This became one of my tasks as a socioeconomist within the interdisciplinary "Livestock Systems Research" team. Research methods included:

- participant observation in Fulani and non-Fulani households and on markets;
- unstructured and semi-structured interviews;
- oral historiography and study of archival records;
- case studies of decision-making within 8 Fulani households over 2 years;
- a quantitative study of milk production, processing, home consumption, and marketing of dairy products in 11 matrifocal units (household sub-units, each comprising a woman and her dependents) over 15 months, with measurements being carried out by the dairywomen or their children;
- a rapid survey of earnings and expenditures based on 12-month recall, conducted one year after the beginning of the quantitative study.

For more details about research methodology, see Waters-Bayer (1988b).

The study area was around the rural town of Zonkwa, in central Nigeria ca 180 km southeast of Kaduna. The annual rainfall of 1200-1300 mm is concentrated in 6 months. Human population density is about 70 people/km², of which Fulani cattle-keepers make up less than 10%. The main ethnic groups are Kaje and Kamantan, who rarely keep cattle themselves. The average Fulani household of 10 persons keeps 50-60 cattle. Live animals and processed dairy products are sold to both Fulani and non-Fulani traders.