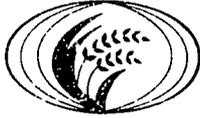


PN-AAV-262

45744

**PURDUE UNIVERSITY**  
International Programs in Agriculture

**IPIA**



**SEMI-ARID FOOD GRAIN RESEARCH AND  
DEVELOPMENT PROGRAM**

**FARMING SYSTEMS**

**RESEARCH UNIT**

**(USAID Contract AFR C-1472)**

**"AGRICULTURAL PRODUCTION AND MARKETING ACTIVITIES  
OF WOMEN IN BURKINA-FASO"**

**By:  
Mahlon G. Lang**

**February 1985**

"AGRICULTURAL PRODUCTION AND MARKETING ACTIVITIES  
OF WOMEN IN BURKINA-FASO"

by

Mahlon G. Lang

February 1985

No. 85-2

- 1

"AGRICULTURAL PRODUCTION AND MARKETING ACTIVITIES  
OF WOMEN IN BURKINA-FASO"

Much interest has been expressed in the roles of women in West African Agriculture. It is well known that women gather wood, haul water, cook, and care for children in addition to their work in the fields. While this is clear to those familiar with the region, relatively few reports provide measures of the importance of women in agricultural production or in marketing agricultural products.

The objective of this report is to present data which demonstrate the importance of women relative to men in agricultural production activities and to indicate the degree of control exercised by women in marketing activities. While nothing is reported with respect to non-agricultural activities, the data reported here place a lower bound on the importance of women in production and marketing.

The data used in this report were collected from 1982 through 1984 by the Purdue University Farming Systems Unit (FSU). During 1982, FSU focused on crop production activities in the villages of Bangasse, Diapangou and Nedogo. Bangasse and Nedogo are on the densely-populated Central Plateau. Bangasse is the poorest of the villages studied. It is situated in a low rainfall (400-500mm) zone. There, only 7 of 60 farmers in the sample used animal traction. Nedogo receives more rainfall (700-800mm) and about half of the farmers use donkey traction. Diapangou is in a relatively fertile zone of shifting cultivation where more than half of the farmers use donkey or ox traction. Diapangou receives about the same annual rainfall as does Nedogo.

During 1983-84, FSU worked in two additional villages. These are Dissankuy, a relatively fertile, land-abundant zone which receives about 800-900 mm of rainfall per year, and Poedogo, with comparable rainfall, but located on the southern part of the Central Plateau. During 1983-84, research focused in part on crop and livestock marketing activities. The locations of all five villages are identified in Figure 1.

#### Production Activities of Women

In 1982, the greatest research investment by FSU was in interviews to monitor the hours of labor by household member, by crop, by field, and by agricultural activity for 30 randomly-selected farms in Bangasse, 60 in Diapangou, and for 60 in Nedogo. Two weekly interviews on labor use were conducted with each farmer in the sample. Initially, however, a sample census was taken to measure the labor force in each household. The findings reported below are based upon data gathered with these two research instruments.

The size and composition of the labor force in each village was determined through the census of households in the sample. Active workers were defined as persons who participate in at least two agricultural activities during the cropping season. They are classified as men (15 years or older), women (15 years or old) and children (under 15). The number of persons per household in each category is presented by village in Table 1.

The percentage of active males per household is relatively constant. It ranges from 30.7 percent in Diapangou to 35.6 percent in Nedogo. The percentage of active women and children is more varied. Women account for 41.9 percent of the labor force in Nedogo and 51.6 percent in Bangasse. Children account for as little as 13.1 percent of the workers in Bangasse and 27.4 percent in Diapangou.

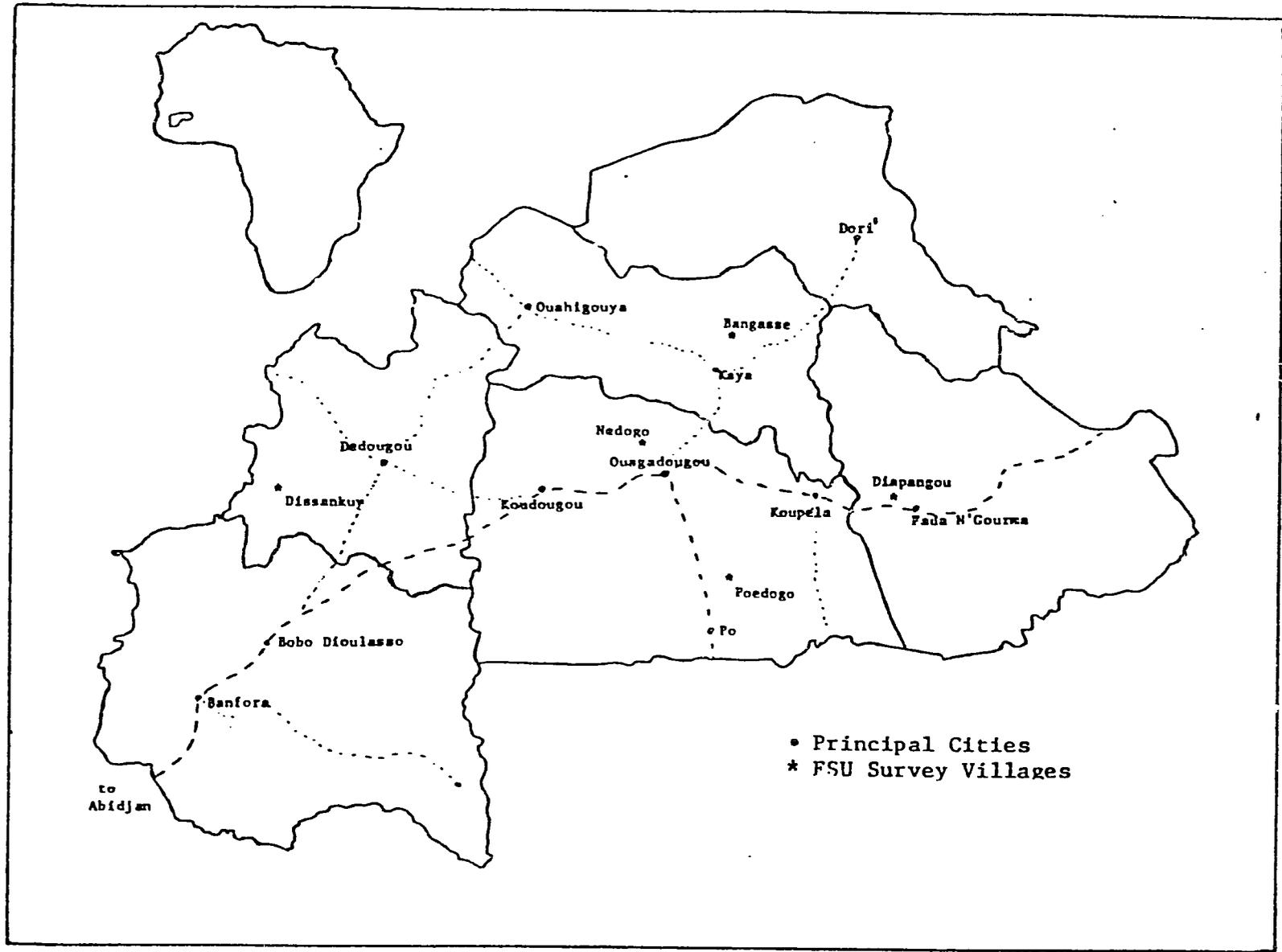


Figure 1: Map of Burkina Faso

Table 1. Number of Active Workers Per Household, by Village, 1982.

|           | Men  |      | Women |      | Children |      | Total |     |
|-----------|------|------|-------|------|----------|------|-------|-----|
|           | N    | %    | N     | %    | N        | %    | N     | %   |
| Bangasse  | 2.70 | 35.3 | 3.95  | 51.6 | 1.00     | 13.1 | 7.65  | 100 |
| Diapangou | 2.02 | 30.7 | 2.76  | 41.9 | 1.80     | 27.4 | 6.58  | 100 |
| Nedogo    | 2.09 | 35.6 | 2.71  | 46.2 | 1.07     | 18.2 | 5.87  | 100 |

The average proportion of agricultural labor activities performed by women is greater than their relative numbers in the labor force. Labor inputs were monitored for soil preparation, planting, replanting, first weeding and second weeding. Total labor inputs for major cereal fields in each of the villages are presented in Table 2.

Table 2. Total Labor Hours Per Hectare for Major Cereal Fields in Three Villages, 1982.

|           | Women in Force |       | Men     |       | Women   |       | Children |       | Total Fields |       |
|-----------|----------------|-------|---------|-------|---------|-------|----------|-------|--------------|-------|
|           | %              | Hours | %       | Hours | %       | Hours | %        | Hours | %            | Hours |
| Bangasse  | 51.6           | 115.8 | (29.3%) | 219.6 | (55.6%) | 59.7  | (15.1%)  | 395.1 | 77           |       |
| Diapangou | 41.9           | 91.5  | (19.0%) | 236.5 | (49.2%) | 152.6 | (31.8%)  | 480.6 | 52           |       |
| Nedogo    | 46.2           | 84.4  | (28.2%) | 174.3 | (58.3%) | 40.5  | (13.5%)  | 299.2 | 114          |       |

As these data indicate, in all three villages, the percentage of total hours per hectare devoted to agricultural activities by women exceeds their relative numbers in the labor force.

Planting, first weeding and second weeding activities account for 96.1 percent of total labor hours in Bangasse, 77.5 percent in Diapangou and 96.3 percent in Nedogo. In Diapangou, a zone of shifting cultivation, 20.7 percent of the labor inputs are devoted to soil preparation. The relative

contribution of women to all activities also exceeds their representation in the labor force. For individual activities however, the contributions of women vary considerably. Table 3 compares the percentage of women in the labor force to the percentage of total hours devoted to each of the major agricultural activities.

Table 3. Percentage of Total Hours Worked Per Hectare, by Women, by Major Agricultural Activity in Three Villages, 1982.

|           | Women in<br>Labor Force | Planting |       | First<br>Weeding |       | Second<br>Weeding |       |
|-----------|-------------------------|----------|-------|------------------|-------|-------------------|-------|
|           | %                       | Hours    | %     | Hours            | %     | Hours             | %     |
| Bangasse  | 51.6%                   | 28.4     | 55.8% | 116.8            | 59.6% | 67.6              | 50.9% |
| Diapangou | 41.9%                   | 50.3     | 69.4% | 78.0             | 42.7% | 70.8              | 60.3% |
| Nedogo    | 46.2%                   | 29.0     | 64.2% | 101.5            | 58.7% | 37.4              | 53.3% |

#### Marketing Activities of Women

During 1983-84, socio-economic research by FSU focused largely on the cereal and livestock marketing activities of farmers and their families. Thirty randomly-selected farmers and their families in each of five villages were asked monthly to provide details with respect to all cereal and livestock transactions they had conducted during the preceeding month. Specifically, they were asked for the type of cereal or livestock, type of transaction, the quantity involved, the price paid or received, the motive for the transaction (if a sale was involved), the sum paid for that motive and the quantity consumed. Both for cereals and livestock, each person was asked to indicate the quantity on hand at the time of the interview.

These data permit a comparison of the level of marketing activities by women to their relative numbers in the population. The numbers and relative importance of men, women and children in each of the five villages are presented in Table 4.

Table 4. Numbers and Percentages of Active Men Women and Children in Five Villages, Mean Per Household, 1983.

|           | Men  |      | Women |      | Children |      | Total |
|-----------|------|------|-------|------|----------|------|-------|
|           | N    | %    | N     | %    | N        | %    |       |
| Bangasse  | 2.13 | 37.0 | 2.17  | 37.6 | 1.47     | 25.4 | 5.77  |
| Diapangou | 2.10 | 28.9 | 2.63  | 36.2 | 2.53     | 34.9 | 7.27  |
| Dissankuy | 1.77 | 43.4 | 1.77  | 43.4 | 0.53     | 13.2 | 4.07  |
| Nedogo    | 2.03 | 38.6 | 2.80  | 53.2 | 0.43     | 8.2  | 5.27  |
| Poedogo   | 2.73 | 45.3 | 2.77  | 45.9 | 0.53     | 8.8  | 6.03  |

As the data show, the percentage of active women per household varies greatly by village. The extremes range from a low of 36.2 percent in Diapangou to a high of 53.2 percent in Nedogo.

The relative numbers of women per household is not matched by their control over marketing activities. Table 5 indicates the value of cereals marketed in each village along with the relative shares marketed by men.

Table 5. Value in F CFA of Cereals Sold in Five Villages During the Period from April 1, 1983 to February 29, 1984.

|                                 | Bangasse | Diapangou | Dissankuy | Nedogo    | Poedogo   |
|---------------------------------|----------|-----------|-----------|-----------|-----------|
| Male Head of Household          | 142,900  | 1,262,900 | 661,750   | 820,945   | 954,390   |
| Women                           | 7,400    | 541,900   | 60,150    | 197,695   | 104,910   |
| Other Males                     |          | 62,325    | 133,550   | 256,086   | 140,660   |
| TOTAL                           | 150,300  | 1,867,125 | 855,450   | 1,274,726 | 1,199,960 |
| Percent Marketed by Women       | 4.9%     | 29%       | 7.1%      | 15.4%     | 8.7%      |
| Percent of Active Women Workers | 337.6    | 36.2      | 43.4      | 53.2      | 45.9      |

Women have a comparable level of control over the marketing of livestock. Their share of control is again low relative to their numbers in the sample population. As the data on Table 6 show, womens' sales of their own livestock ranged from 2.6 to 28.4 percent of the livestock and poultry sold during the period.

Table 6. Value in F CFA of Livestock and Poultry Sold in Five Villages During the Period from April 1, 1983 to February 29, 1984.

|                                 | Bangasse  | Diapangou | Dissankuy | Nedogo  | Poedogo |
|---------------------------------|-----------|-----------|-----------|---------|---------|
| Male Head of Household          | 840,775   | 1,511,100 | 561,125   | 510,450 | 299,555 |
| Women                           | 154,500   | 89,475    | 15,150    | 29,325  | 122,130 |
| Other Males                     | 9,200     | 7,950     | 6,000     | 3,550   | 8,225   |
| TOTAL                           | 1,032,475 | 1,608,525 | 582,275   | 543,325 | 429,910 |
| Percent Marketed by Women       | 14.9%     | 5.5%      | 2.6%      | 5.3%    | 28.4%   |
| Percent of Active Women Workers | 37.6      | 36.2      | 43.4      | 53.2    | 45.9    |

When cattle and traction animals are excluded from livestock and poultry sales, womens' share of sales of their own livestock and poultry increases slightly. As Table 7 indicates, womens' shares of sales rise from 4.3 to 33.9 percent of the total when selected livestock and poultry are considered.

#### Conclusions:

Of the total hours devoted to agricultural production activities, the percentage worked by women exceeds their representation in the labor force. This is true in all three villages studied.

Table 7. Value in F CFA of Selected Livestock\* and Poultry Sold in Five Villages During the Period from April 1, 1983 to February 29, 1984.

|                                 | Bangasse | Diapangou | Dissankuy | Nedogo  | Poedogo |
|---------------------------------|----------|-----------|-----------|---------|---------|
| Male Head of Household          | 284,025  | 502,900   | 323,625   | 322,550 | 157,555 |
| Women                           | 149,500  | 37,975    | 15,150    | 29,325  | 74,630  |
| Other Males                     | 9,200    | 7,950     | 6,000     | 3,550   | 8,225   |
| TOTAL                           | 442,725  | 548,825   | 344,775   | 355,435 | 240,410 |
| Percent Marketed by Women       | 33.9%    | 6.9%      | 4.3%      | 8.1%    | 30.8%   |
| Percent of Active Women Workers | 37.6%    | 35.2% 6   | 43.4%     | 53.2%   | 45.9%   |

There is evidence that the relative importance of female labor varies by major agricultural activity. Nevertheless, womens' agricultural labor hours are, with one exception, proportionately greater than those of men or children in all three major activities in all three villages.

These observations, combined with the fact that women are held responsible for cooking, child care, hauling wood, hauling water and marketing some agricultural products owned by men, strongly indicate that women in the villages studied bear a disproportionate share of all physical labor.

Further, the data on marketing activities indicate that womens' shares of cereal and livestock marketings are significantly lower than their representation in the labor force. Sales of grain by women ranged from 4.9 (Bangasse) to 29 percent (Diapangou) of total cereal marketings during the period under study. The shares of women in the labor force ranged from 36.2 to 53.2 percent in the same villages.

Livestock and poultry sales data also indicate that women have disproportionately low control over marketing. They sold from 2.6 (Dissankuy) to 28.4 percent (Poedogo) of the livestock and poultry during the 1983-1984 period. Sales by women account for slightly greater shares of livestock and poultry sales when cattle and traction animals are excluded. In this case the percentages sold by women range from 4.3 (Dissankuy) to 33.9 (in Bangasse).

The percentage of sales of selected livestock by women are highest in Bangasse. This is a village which suffered a crop failure in 1983 and in which farmers were liquidating relatively large volumes of livestock and poultry in order to buy cereals. The fact that womens' sales were greatest in this village suggests a hypothesis that women liquidate their assets most heavily during a stress period.

#### Implications and Needed Research

Women provide a disproportionate share of production labor inputs but receive few direct, discretionary benefits from the production process. While women clearly benefit from food security generated by family field production, supersubsistence benefits are provided largely at the discretion of the male head.

Whether the benefits receive by women are in proportion to their contributions depends upon the relative value products of men and women. These are difficult to measure. While the marginal value product of men and women in production can be calculated (Jaeger), little research has been done in Burkina-Faso on the labor inputs of women in household and other non-agricultural activities. Much less research has been conducted to measure the marginal value products of women in those activities.

Other needed information includes the non-agricultural activities of men and the marginal value product of managerial inputs by men in the production process. Without this information, one cannot look at labor inputs of women and conclude that the burden of labor is, by any criterion, unjustly distributed between men and women. Other needed research includes examination of the effects of new technology such as animal traction on the distribution of the labor burden, the allocation of land and the distribution of the marketing surplus.

#### Alternative Futures for Women in Burkina-Faso

The future of women in Burkina-Faso is inextricably tied to the capacity of farm families to increase per capita food production. In the absence of changes in the birth rate or massive social reorganization forcing male household heads to assume a greater share of the agricultural labor and household burdens, increased per capita productivity, permitting investment in labor-saving capital is the only means by which the lot of women will be enhanced. Continued investment in research to identify new technologies by which production may be increased is needed to achieve this goal. Equally important, however is research on land tenure and agricultural credit policies which affect farmers' decisions to invest in intensive agriculture (FSU Annual Report, 1983).

BIBLIOGRAPHY

Jaeger, William K., "Agricultural Mechanization: The Economics of Animal Traction in Burkina-Faso," Ph.D. Dissertation, Food Research Institute, Stanford University, Palo Alto, California, 1984.

1982 Annual Report of the Purdue University Farming Systems Unit, International Programs in Agriculture, Purdue University, West Lafayette, Indiana, May, 1983.

1983 Annual Report of the Purdue University Farming Systems Unit, International Programs in Agriculture, Purdue University, West Lafayette, Indiana July 1984.