

Ag for Nutrition: AnBejigi 2006-2016



Nutrition field school preparing the Tô
Photo Credit: Alina and Jerome Bossuet

Evaluative research: what and how child feeding practices changed

2015: An **evaluation** of the use of whole sorghum grain by women using a survey (n=120) revealed the following:

- **Adoption** by 50-70% of the women who received the training and participated in the project.
- 72% of the children below 5 years **consume** whole-grain sorghum products.
- Whole grains are **prepared** during large meetings or celebrations, in the hungry period, when strength is needed, during the collective cooking sessions, and for children.
- 97% of the trained women **shared their learnings** with other women (47% within the family, 35% with neighbors and 15% with the association) – but poor communication between grandmother and daughter-in-law.
- The biggest **obstacle** to using whole grains is the cost of milling (**36%**)

Integrated M&E



Promotion of post-harvest technologies

Communication plan developed to promote use of non-decorticated sorghum grain including:

- A **radio spot** of a dialogue between a woman, her mother-in-law and husband on the **health benefits** of cooking with non-decorticated grains.
- A **video testimony** of local stakeholders on the benefits and **tastiness** of non-decorticated grains.
- 6 different **counseling cards** and two **posters** on the **methods** of use of non-decorticated grains. Until late October 2014, the spots and micro-program had been broadcast by the four community radio stations a total of **1,015 times**.



Initial success in utilization

2013: The number of households **using wholegrains** in their daily feeding/ food preparation practices increased from 7 (baseline study) to 96.

Training and sharing of information among rural families and communities in nutrition and feeding practices

Generate movement

At Dioila (Mali), all communities started **collective cooking sessions**, and the message of using non-decorticated grain in food preparation starts **spreading** as co-ops themselves held 10 more collective cooking sessions, using the recipe introduced by the project team in the first session.



Women and girls often pound the sorghum grains until they are decorticated to remove the outer seed coat (bran), which contains about half of the grain's micronutrients.
Photo Credit: Alina and Jerome Bossuet

Integrate farmer knowledge into the research

West Africa Community of Practice



Understanding local contexts and knowledge around feeding practices and food availability

Collective cooking sessions, also know as Nutrition Food Schools, in **6 villages** with more than **150 women focused on cooking** improved porridge for young children, using flour from whole grain sorghum, with other additions. The women appreciated the advantages of using flour from whole grains, and thus started using it for other dishes cooked with sorghum like to, or degue. They also started on their own to make whole grain flour from other cereals, like pearl millet and maize.

However, through informal discussions with older women in the community, it was learned that whole grain couscous "**tastes better**" than decorticated grain and requires **less cooking oil** compared to decorticated grain couscous.

The use of whole grain in a family's diet is a **sign of extreme poverty** in rural areas, which creates a significant **cultural deterrent**.



Research of post-harvest technologies

The wholegrain flours of the sorghum varieties Doua-G and Tieblé had the **highest iron and zinc contents:** (around 5 ppm). The refined flours of both sorghum varieties had lower iron contents (around 3 ppm.) To **produce whole grain** sorghum flour the grains **need** to be **soaked overnight**, then dried and milled by machine (or grinding stones) so the seed coat, which is unpalatable, can be broken down.

The whole **grain flour has 3 main advantages** over white flour:

- 1) **Higher Fe content**
- 2) Approximately 20% **less waste** because the seed coat is not discarded
- 3) **Less labor** because it does not have to be pounded, although this implies an **extra cost** for milling, but it is compensated by higher volume, and increasingly mills are distributed by the association for women's coops/ **rural enterprises** see Food Processing mini case.

Include multi-dimensional outcomes

Respect for indigenous culture & knowledge

Gender

Identifying an opening for change

An initial finding was that grain **decortication of sorghum** causes **major losses of both Fe and Zn**, with only 40-60% of the original whole grain micronutrient contents retained after traditional manual decortication. Moreover, a 24-hour food recall study showed that **children get** approximately 80% of their **iron from cereals**.

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