

Improved Cookstoves Decrease Wood Gathering and Increase Savings Rates

DOUGOUNIKORO is one of 39 small villages in Tiby, the Millennium Village cluster in Mali. Here the majority of households subsist on agriculture, many growing rice and millet and others rearing cows. Men are largely responsible for building homes and growing staple crops, such as rice and millet, and women are charged with the remaining complimentary foods for daily meals and with childrearing. Most women in the cluster plant vegetables, which require less land and labor, while their husbands own rice and millet farms. Fuelwood for cooking is one of the largest expenses in a typical household in the cluster. Families generally own fields about 1-2 hours from their homes and during the harvest seasons, women and children accompany the men to the fields as additional labor, and on their return walk from these fields, collect firewood to store. In the 1-2 hour walk, women are generally able to collect enough firewood to last the family 3 months. When this supply runs out, they purchase firewood by the donkey-cart load. One donkey-cart full costs 1250CFA (about \$2.60), and women ration their small household budget to purchase this fuel – often at the expense of buying fish or other nutrient-rich foods.



Cooking over a three-stone fire in Tiby



Nafacaman Improved Cookstove

In October 2009, the Tiby site team launched a program to introduce and sell locally manufactured cookstoves to households in the cluster. These stoves are all variations on the rocket design stove, a type of stove characterized by simple building materials, and an elongated chimney, allowing more airflow to improve combustion. The *Lakika* stoves (meaning “original” in Bambara) are promoted by the Malian government and GTZ, the German government’s aid agency, and come in three models: the *Sewa*, which burns charcoal; the *Teliman*, which burns wood; and the *Nafacaman*, which is dual use. In order to integrate these efforts into work in Tiby, the Millennium Village Project (MVP) partnered with Social Action Movement for Education and Training (MASEF) to identify and train stove manufacturers to perform stove demonstrations in the Segou region.

Between October 2009 and January 2010, MASEF performed cooking demonstrations in villages throughout the cluster to market and sell all three types of *Lakika* stoves. It was during one of such demonstrations that

Madame Aminata Coulibaly, the women body president, purchased a *Nafacaman* stove for 1500CFA (about \$3.15).

In December 2010, a year after her purchase, MVP visited Madame Aminata Coulibaly's home and found that the improved cookstove was still in use. Madame Aminata told us:

"Before getting this stove, I spent 1250CFA (US\$2.60) per week on a donkey cart load of wood. We have a large family and this wood would be gone in a week. During the rainy season, all domestic expenses come out of the women's pockets. We buy the condiments for food. When the children are sick, it falls to us to buy their medicine. The men usually have money during and after the harvest season but sometimes, a husband's harvest is poor and there's nothing he can do about it. It then falls to the wives to provide for the family. With the *Nafacaman*, the wood I used in one week now lasts two weeks. This leaves more money for buying food and taking care of the children. "

BABOUGOUKORONI, another village in the MVP cluster, has also benefited from the cookstove intervention. Most women in the town purchased cookstoves at the end of 2009, and during conversations in December, 2010, women agreed that the cookstoves have reduced the fuelwood burden: their wood lasts twice as long using an improved stove than it did when they used a 3-stone fire. More than 500 stoves were sold in the villages of BabougouKoroni and nearby Gabakourou. Women from these towns explained that because the stove was portable, they could even take it with them to the farm where they made lunch for the family during planting and harvest seasons.

Kadia Tereta is one of several women farmers in BabougouKoroni that plant onions, carrots, cucumbers and lettuce for household consumption and income generation from regional sales. Because of her improved cookstove, she now spends less of her income on buying firewood, and instead she is able to feed her children a more nutritious diet, buy them school supplies, and build her family's savings for treating illness or other emergencies.

To date, MVP has sold 1,135 stoves in Tiby, impacting roughly 15,663 people, or 18% of the total cluster population. Another 4,374 households have expressed interest and expect to have a stove in early 2011.



"With the Nafacaman, the wood I used in one week now lasts two"



Women in Babougoukoroni talk about the portability of



KadiaTereta talks about her family's improved nutrition