

# Malian Thick Porridges and Satiety



Porridge thickness preference study.

**Figure 1. Survey of Frequency of Porridge Consumption**

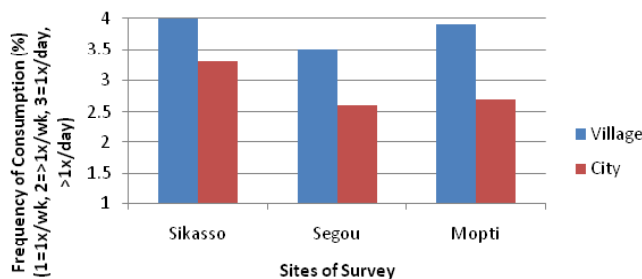


Figure 1 – Shows that thick porridges from sorghum/millet are consumed at higher frequency in villages than cities (Bamako likely is even lower in frequency).

**Figure 2. Survey of Preference of Porridge Thickness**

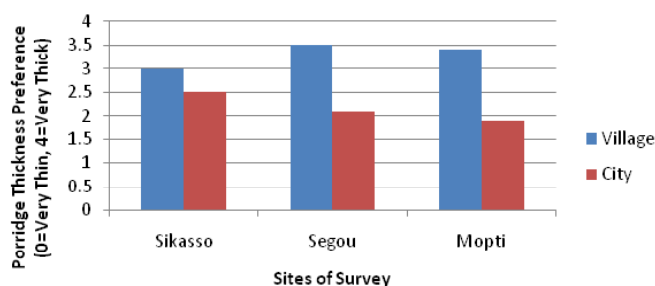


Figure 2 – Villagers eat thicker tô than city dwellers, perhaps related to its satiating effect and extended energy property.

A study was recently conducted through INTSORMIL (Purdue Hamaker Project) to examine thick sorghum millet consumption related to preference and satiation in the Sikasso, Segou and Mopti regions of Mali. This is part of a larger study to understand the effect of thick porridges, and delayed glucose delivery to the body, on satiety and overall food consumption.

The conclusions from the following data is that porridges (tô) are generally eaten more frequently and are consumed in a thicker consistency in the villages (Figures 1 and 2), and are very satiating (Figure 3 thicker porridges correlated with lower hunger scores at 2 and 4 hours post-consumption). This research should be used in a promotional campaign to encourage urban populations to consume more sorghum and millet tô. Possible campaign slogans could be something similar to “eat sorghum and millet, they are healthy satiating foods.”

Particularly in this time of high prices for grain imports, this could be helpful. (a little calculation – if one million families ate one more meal a week of sorghum/millet tô (using about 1 kg of flour for the meal), that is about 50,000 metric tonnes of grain a year, which is more than the total wheat imports into Mali in 2008).

This work will soon be submitted to International Journal of Food Sciences and Nutrition.



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### Figure 3. Hunger Scores 2 and 4 Hours After Porridge Consumption

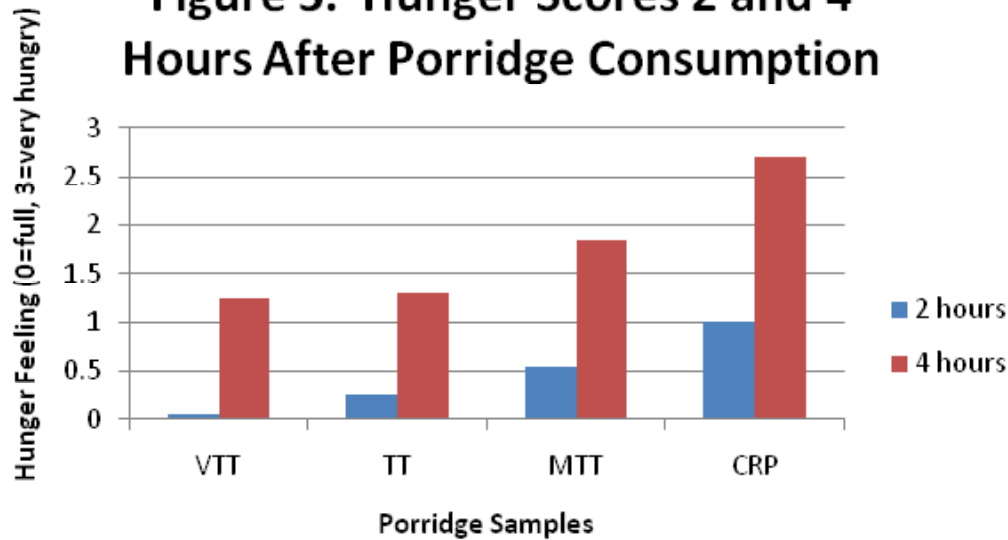


Figure 3 – Satiety study participants revealed large differences in hunger feeling 2 and 4 hours after consumption of porridges of different thicknesses. Notably, participants still felt full 2 hours after eating very thick and thick tô, and after 4 hours only felt slightly hungry. After consuming the control rice porridge, at 4 hours participants felt very hungry. The satiety study was designed so that participants consumed as much tô as they wanted until

they felt “full”. Participants were asked at 2 and 4 hours after consumption to judge their feeling of hunger (0=full, 1=slightly hungry, 2=hungry, 3=very hungry). VTT=very thick tô, TT=thick tô, MTT=medium thick tô, CRP=control rice porridge.

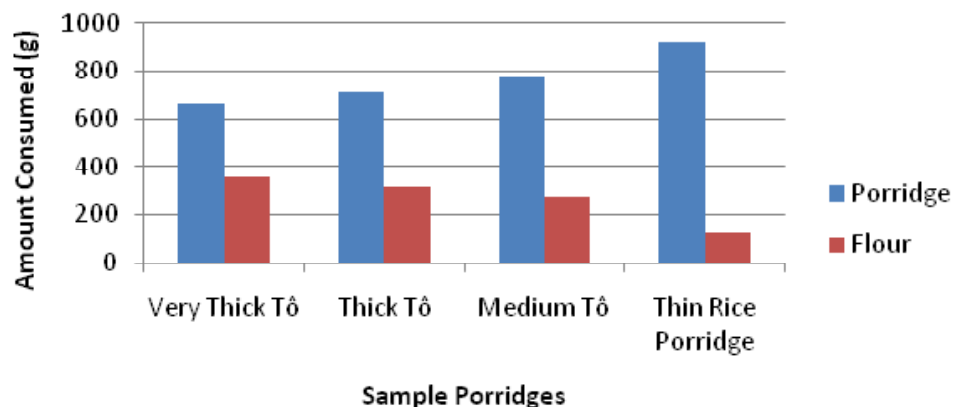


Satiety study participants



Figure 4 – Shows that while less volume of very thick porridge was required for participants to feel full (at time of consumption), they consumed more sorghum/millet flour.

### Figure 4. Amounts of Porridge/Dry Flour Consumed



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