Executive summary

Climate Change has adversely affected food crop production and this has negatively affected food security in the Tamale Metropolitan area. Drought resistant and climate-compliant local crops that provide good nutrition have been relegated to the background whilst habits are forming around the consumption of imported foods of uncertain nutritive value. In-depth consultation with a representative sample of the people of Tamale established the need to encourage the production and consumption of nutritious local foods. These include fonio, dawadawa, millet, sorghum, and sesame. The local authorities in and around the Tamale Metropolis should provide people with the needed technology, facilities and training, and organize periodic food fairs to showcase local foods. Above all, they should use local foods for snacks, cocktails, lunches and dinners during official functions. Promoting the consumption of local foods is a morally nutritious policy.

Context and problem statement

Tamale, the capital of Northern Region, is the fastest growing city in West Africa. The majority of its over half a million people are engaged in agriculture and food processing. People in such fast urbanizing settings, such as the Tamale Metropolis, face several challenges, such as: overdependence on rain-fed agriculture; small farm sizes; low technology; inadequate start-up capital; and the non-existence of value addition tend to increase vulnerability to food insecurity. A good variety of Indigenous food crops are produced and processed for local markets and for consumption in the Tamale area. There is, however, little or no regard for these food crops because of their subsistence nature and their nutritious value is yet to be fully exploited and popularized. Production of these crops has dropped significantly over the years. Also, as a result of the rapid population increase, the remaining agricultural lands in the urban and pre-urban areas...
of the city have been converted for residential purposes. Thus making land for farming increasingly scarce.

The people are caught between, as it were, a rock and a hard place – agricultural lands are limited and alternative livelihood choices are also woefully inadequate. Jobs are scarce; over half of the population in Tamale (52.6%) is unemployed (PHC, 2000).

The situation is compounded by inadequate knowledge of how to prepare nutritious recipes from traditionally known and locally available foodstuffs. Lack of direct access to buyers, poor smallholder cohesion, lack of inputs, and poor marketing discourage production and this negatively affects the farmer’s income.

In recent times, the taste for foreign food has become commonplace among the Ghanaian populace and majority of the people no longer “eat what they grow” nor “grow what they eat”. The craving for ‘fast foods’ has eaten into the nutrition habits of the ordinary Tamale city dweller. This trend is attributed to a number of factors that include: 1) low cost of imported products; 2) “Quality” associated with imported products; 3) Fashion - the craze to belong to a certain social class; 4) diversity of products to choose from; 5) aggressive marketing by foreign companies.

Admittedly, since the early 1980s, policy reforms initiated in many countries have been biased in favour of greater market orientation and a more open economy. Such reforms have had a substantial impact on food consumers, by directly and indirectly affecting the factors that determine food demand, as well as on food producers because of changes in agricultural policies.

Fonio plant, a climate-compliant crop

Nevertheless, foods importation has its adverse effects on the local foods. Aside from impeding the growth of the local/indigenous foods industry, food imported from abroad often is old stock that is being offloaded to make way for a new crop harvest. The food also travels a long distance and sits in distribution centers for a long time before it gets to the retail store before reaching the consumer. Thus the quality of the food is compromised and food safety concerns that affect the health of the people are a constant worry for the individual, the household and the nation. But what is the evidence that anyone is thinking about these issues? If people had the choice, what would they really opt to eat?

Using the Deliberative Polling® (DP) method, the West Africa Resilience Innovation lab at the University for Development Studies convened a random sample of 243 residents in the Tamale metropolitan area to discuss these issues and make concrete proposals
for action. The two-day face-to-face Deliberative Poll was conducted in Tamale in January 2015. Deliberative Polling is a citizen-based data generation method developed by Jim Fishkin, a professor of Communication at Stanford University in the United States of America, that seeks to contribute to the process of developing interventions that respond to the felt needs of the people. The Deliberative Polling® concept is thus described as the gold standard for consulting the people on development issues. The DP process samples peoples’ opinion before and after they have had the opportunity to thoroughly discuss the pros and cons of various policy options in order to prioritize issues for generating transformative solutions for community development challenges. Briefing materials were developed around Water, Sanitation and Hygiene (WASH), and Livelihood and Food Security provided deliberators with accurate and comprehensive information to guide the discussions. A video version of the briefing materials was developed to enable those who could not read and write to participate.

The Tamale Deliberative Poll, the first of its kind in West Africa, enabled residents to debate and prioritize policy options for addressing the daunting challenges of a rapidly urbanizing city. From January 10-11, 2015, deliberators gathered at the Dungu campus of the University for Development Studies, where they discussed and prioritized policy options. Out of 39 policy options tabled for discussion, 28 recorded major changes in opinion between before-deliberation and after-deliberation. Among others, the deliberators opted for the cultivation, marketing and consumption of local foods because the crops are climate compliant and have a high nutritive value. Deliberators particularly prioritized diversified livelihoods through improved agriculture and backyard poultry and vegetable farming using appropriate technology and efficient water management systems. A report that reflects the voices of the people is available online at www.warilab.org.

Results

Out of the 39 specific policy proposals considered in the Deliberative Poll, 12 dealt specifically with food security and aspects of local production and storage. All 12 were thought to be very important after deliberation, and 9 of the 12 changed significantly, increasing their level of support. All the policy proposals were rated by the participants before and after deliberation on a scale ranging from 0 (extremely unimportant) to 10 (extremely important). Table I lists all twelve proposals, with the level of importance before deliberation in the first column, the level of importance after deliberation in the second column. The asterisks in the last column indicate the degree of statistical significance for the change—one, two or three asterisks. Nine (9) out of 12 proposals changed with the strongest level of statistical significance. From the scientific standpoint these are impressive changes in the direction of increasing importance.
Table I: Results on Local Foods

<table>
<thead>
<tr>
<th>Proposal</th>
<th>T1</th>
<th>T2</th>
<th>T2-T1</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Promote training for households and community groups to set up backyard poultry farms</td>
<td>8.11</td>
<td>8.93</td>
<td>0.82</td>
<td>0.000***</td>
</tr>
<tr>
<td>2. Promote training for households and community groups to set up backyard gardens</td>
<td>7.14</td>
<td>8.34</td>
<td>1.20</td>
<td>0.000***</td>
</tr>
<tr>
<td>4. Promote the setting up of village savings and loans associations</td>
<td>7.80</td>
<td>7.99</td>
<td>0.19</td>
<td>0.392</td>
</tr>
<tr>
<td>6. Promote access to credit for urban farmers through the Common Fund</td>
<td>7.89</td>
<td>8.46</td>
<td>0.57</td>
<td>0.005***</td>
</tr>
<tr>
<td>7. Provide timely weather forecasting information for farming</td>
<td>8.55</td>
<td>8.79</td>
<td>0.24</td>
<td>0.114</td>
</tr>
<tr>
<td>8. Provide timely extension services for farming</td>
<td>8.82</td>
<td>9.04</td>
<td>0.22</td>
<td>0.094</td>
</tr>
<tr>
<td>9. Provide appropriate storage facilities for farming</td>
<td>8.71</td>
<td>9.20</td>
<td>0.49</td>
<td>0.000***</td>
</tr>
<tr>
<td>10. Provide technology training for food storage</td>
<td>8.64</td>
<td>9.25</td>
<td>0.61</td>
<td>0.000***</td>
</tr>
<tr>
<td>11. Promote maximum use of local foods</td>
<td>8.82</td>
<td>9.33</td>
<td>0.51</td>
<td>0.000***</td>
</tr>
<tr>
<td>12. Train people to prepare nutritious foods using local food items (millet, groundnuts)</td>
<td>8.61</td>
<td>9.10</td>
<td>0.49</td>
<td>0.000***</td>
</tr>
<tr>
<td>13. Promote the cultivation of fonio and other neglected nutritious local crops</td>
<td>8.05</td>
<td>9.02</td>
<td>0.97</td>
<td>0.000***</td>
</tr>
<tr>
<td>14. Promote food fairs to encourage the consumption of local foods</td>
<td>8.08</td>
<td>8.65</td>
<td>0.57</td>
<td>0.001***</td>
</tr>
</tbody>
</table>

Note: The survey results presented are means from pre deliberation and post deliberation, with the different between the post and pre deliberation mean and statistical significance. All questions are on a 0 to 10 scale, where 0 is extremely unimportant and 10 is extremely important. Significance below 0.01 is indicated with “***”, below .05 with “**” and below .10 with “*”.

The specific proposals range from training for backyard poultry farms and gardens to credit opportunities, food storage and the cultivation of fonio and other local nutritious crops. All of them rate near the top of the scale in the importance the public attributes to them.
Policy options

In order to take the Tamale DP voices forward, experts at an Innovation Strategy Workshop (ISW) studied the policy options and identified three intervention pathways for interventions inter alia: Water, Sanitation and Hygiene (WASH); Agricultural Practices and Marketing; Livelihood Diversification and Financial Inclusion. Afterwards, a multi-sectoral team of experts, using the Collaborative Resilience Innovation Design (CRID) approach, critically examined the intervention pathways. They concluded that, in designing resilience innovations with potential transformational impact, priority should be placed on projects that address challenges across the three pathways. It was also agreed that food security was a serious challenge due to rapid urbanization of the city and the experts recommended interventions that support the processing (value addition) and marketing of indigenous foods that have high nutritive values and strong health benefits. They called for a business model that enables Metropolitan, Municipal and District Assemblies to enter into partnership agreements with the private sector to develop businesses around Water, Sanitation, Hygiene and Health; improved Agriculture and Markets; and Livelihood Opportunities.

The status quo

Several roadside vendors and small-scale businesspersons have ventured into the processing and sale of local foods; these include but not limited to: fonio porridge and jollof, dawadawa oil and dawadawa rice, sesame cake, soybean khebab and soya drinks. There are several varieties of millet/sorghum and many dishes are made from it including millet cake, koko (porridge), and the famed tuo zafi (TZ). As a matter of fact, small millets are an often-overlooked staple food for millions living in the harshest, food-insecure regions of the developing world. They are rich in micronutrients - far more so than most millets are rich in micronutrients – far more so than most rice, maize and wheat varieties – and account for about 10% of global millet production. They are extremely resilient in the face of drought.

Other companies produce soft drinks made from baobab, tamarind, and guava that are a delicacy. Marketing of these products is however limited to only a few health conscious clients. The agricultural, health, environment and local authorities are not directly involved in the vigorous promotion of these healthy local foods. Smallholder farmers thus have little motivation to increase production and less control over marketing of the produce.

Production, processing, marketing and consumption of locally produced foods is good for many reasons including the following:

- Local food is tastier and has a higher nutritional value that promotes good health
• Local food production uses appropriate technology which is good for the environment
• Consumption of local food is good for the local economy. The money that is spent on local farmers and growers stays close to home and is reinvested into businesses and services in your community.
• Production and consumption of local foods encourages sustainable agriculture, and facilitates tracking the supply chain back to the point of origin to evaluate ecological practices.
• Production and consumption of local foods promotes food sovereignty – you grow what you love to eat and eat what you love to grow. Growers can tell you how the food was grown. You can ask what practices they use to raise and harvest the crops. When you know where your food comes from and who grew it, you know a lot more about what you are eating and have control over what you are eating.

The proposal

This brief seeks practical ways to support the cultivation, processing, marketing and consumption of locally available nutritious foods. Metropolitan, Municipal and District Assemblies can empower smallholder farmers to have more control over efficient agricultural production and marketing processes by:

1. Using available local foods for snacks, cocktails, lunches, dinners in all official functions
2. Providing credit support to smallholder farmers interested in cultivating local crops
3. Guaranteeing market for such local food crops
4. Organizing regular (biannual, annual) food fairs to showcase local foods and encourage their consumption. Advantages:
   a. Enable local and foreign consumers to have access to local nutritious dishes
   b. Ensures good nutrition especially among children
   c. Promotes tourism
5. Making accessible small-scale processing technology that is user friendly and adds value to indigenous locally produced crops, e.g., millet, fonio, sesame.
Action

Metropolitan, Municipal and District Assemblies should:

A. Start using local foods at official functions and encourage all decentralized agencies to do the same.

B. Encourage the development of new recipes around millet, fonio, sesame, dawadawa and other locally available foods.

Sources

1. Tamale DP Briefing Materials
3. RAN Collaborative Resilience Innovation Design (CRID) – Report: A powerful alternative approach to developing system level innovations aligned to RILab Intervention Pathways March 26-27, 2015, West Africa Resilience Innovation Lab (WA RILab), Tamale, Ghana

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Dawadawa:

| a. The full blossom! | b. The ripe fruit | c. The aromatic spice |