Fighting AIDS with traditional foods and organic practices

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Since the fall of apartheid in 1994, when restrictions on population flow were relaxed, the Msunduzi district in KwaZulu-Natal, South Africa, has experienced rapid expansion and population growth. The area has agricultural potential, but the landscape is rapidly being transformed, with consequences for local small-scale farming. The land tenure system is complex, household plots are very small or unfenced, and the majority of households in peri-urban areas do not have productive home gardens. Most of the productive agricultural activity is located around tribal or municipally run communal gardens, managed by community co-operatives. However, access to these gardens is usually limited by inadequate community interest, and a poor transport system. Recent municipal surveys show that the majority of households depend on purchased foods. Households spend up to 40 percent of their income buying bulky, low nutrient staples such as maize meal, pulses and cabbage in the neighbouring towns, and a further 8 percent on transport getting there and back.

But population pressures and transforming land practices are not the only threats to productivity. The Msunduzi area has one of the highest HIV prevalence rates in the world. HIV/AIDS poses a threat to agricultural systems unlike any other. Unlike other diseases, AIDS targets the productive household members who are usually contributing most actively to the household's wellbeing. Moreover, AIDS is understood to be a "long wave" shock. This means that unlike other agricultural upsets, such as drought, labour shortages or sudden economic or political shock, AIDS slowly but steadily erodes at the resilience of rural livelihoods over many decades.

Photo: Kathy Arbuckle

Anacletta Zondi is happy to include traditional leaves, grown at the Mafakathini Clinic demonstration site, in her diet.

How can agricultural extension officers tackle these issues? This was the question faced by the Children In Distress Network (CINDI), a network of organisations who have worked for over 10 years with AIDS afflicted groups in the region. CINDI recognised that if AIDS is indeed affecting food security in a unique way, then novel agricultural practices are required to help rural communities cope.

Going back to our African Roots

"African Roots" was the initiative proposed by CINDI for coping with the unique flavour that AIDS has lent to food security problems in the Msunduzi district. The project was born out of the recognition that good nutrition and food security is the foundation for good health, particularly for people affected by HIV and AIDS, but that in this context, our food security approach needs to be redefined. The project promoted food gardens, and particularly the use of traditional crops (indigenous and non-indigenous "wild" vegetables) coupled with organic farming techniques, as a way of saving labour, promoting enterprise, optimising nutrition, and encouraging self-sufficiency.

The two-year African Roots Pilot Project began in October 2003, funded by the Rockefeller Brothers Fund. Co-operation between existing government and non-government projects was emphasised: the project was implemented by the Institute of Natural Resources (INR), in partnership with the CINDI Network and the Msunduzi Municipality. At the outset, an advisory committee was established, with representatives of all partners. Local projects that were involved in the propagation and promotion of indigenous and traditional plants were contacted, and a list of all known traditional plants and their botanical attributes, as well as cultivation techniques, was compiled.

As the area most prone to food insecurity, population expansion and HIV/AIDS, the peri-urban sections of the Msunduzi district were primarily targeted. These peri-urban settlements cover an area of 100 km^2. Existing community gardens were visited, and meetings were held with the key players in these projects. The municipal ward and/or tribal community leaders were then contacted. Such local contacts were invaluable in introducing the project in each zone, and in helping to organise meetings with participants and community gardeners. A situation analysis was conducted at each site. This used a structured interview format to record current techniques and knowledge about cultivation, plants being grown, local infrastructure and technical support, and the degree of community involvement – including the extent to which gardening was currently supporting people afflicted by HIV/AIDS.

Using all this information, the project coordinator identified farmers to be trained in each zone. A training course outline was developed, based on the needs assessments conducted at the site visits. The situational analysis showed that most of the existing community garden efforts were supported by the government agricultural extension officers. The major problem with the existing agricultural support was that techniques taught were

generally labour and resource intensive, promoting pest and disease control through chemical insecticides and fungicides. Trainings regarding organic fertilizer methods were often inadequate or not fully realised in a hands-on manner. As a result, farmers in Msunduzi generally focused on expensive chemical products, mainly purchased from local garden centres at great expense.

The project offered an alternative approach that favoured more sustainable, organic agriculture. As part of the training at demonstration sites, hands-on instruction was given around bio-intensive gardening techniques, compost making, insect pest control, rainwater harvesting, and preparation of nutritional dishes. Different methods for improving the soil were demonstrated, using manure-based, legume-based, biomass-based and worm-based organic methods. Recycling of cans into garden drainage points and at the bottom of trenched plots was encouraged. Gardeners were also encouraged to recycle local refuse, through putting a layer of grass, leaves, paper, wood ash and kitchen scraps on the bottom of the trenches. Mixed cropping of exotic vegetables with many of the traditional plant varieties often considered "weeds" (see Table 1) was introduced, not only as a labour-saving method of cultivation useful for those weakened by HIV/AIDS, but also as a method for organic pest control. Diversification of crops and letting wild plants grow around farmland was encouraged, as a means of creating diverse micro-climatic conditions that attract pest predators. Wherever possible, attempts were made to make use of sustainable water-recycling ("grey water"), and project funds were often used to provide materials for doing this.

As seeds of many of the traditional plants are not available commercially, innovative attempts were made to get people to collect, save and exchange them, such as seed bank competitions with prizes of spades, compost and seeds. Wild seeds were collected for propagation in nurseries and distribution in community gardens.

Table 1. Some of the wild and traditional species promoted and used by African Roots

Scientific name	Common name
Amaranthus hybridus	Red amaranth
Amaranthus thunbergii	Common amaranth
Bidens pilosa	Black jack
Chenopodium album	Lambs quarters
Citrullus lanatus	Wild melon
Citrullus vulgaris	Bush melon
Colocasia esculenta	African potato
Momordica foetida	Bush tea
Solanum retroflexum	Nightshade
Sonchus asper	Thistle
Zantedeschia aethiopica	Arum lily
Brassica spp	Wild mustard
Galinsoga parviflora	Gallant soldier

There was at least one demonstration site per municipal zone. Initially, the project established eight demonstration sites, including clinics, crèches, schools and community gardens.

At these demonstration sites, community involvement was encouraged through approximately 50 short workshops and one-day demonstrations held over the course of the project. These activities proved popular, as facilitators invited community leaders and members, mass media, farmers and youth groups. Traditional food preparation demonstrations were held, and traditional dishes were served. One site even started selling traditional plants. At all times, attempts were made to reduce the stigma attached to traditional plants as "inferior" or "poor people's plants". This was mainly achieved through assisting with the compilation of a nutritional poster series. Amongst these, a wild food poster was created where local television and sports celebrities were depicted enthusiastically holding up and endorsing traditional vegetables. Lastly, four nurseries were also established at the project outset for seed and seedling supplies.

All these activities built project momentum, and demonstrators were steadily invited into other community gardens to share African Roots cultivation techniques. By November 2005, thirty-one sites had received training and established pilot gardens.

Lessons and limitations

The project met with many successes at a local level. It succeeded in raising awareness about local indigenous and traditional crops, and promoting skills in organic and food garden techniques. Many local food gardens were established, and community nutrition, skills and overall food security were strengthened. The project received some noteworthy attention in the local press, which succeeded in raising awareness of the benefits of "eating weeds". Members of the advisory committee were also instrumental in helping the community to set up a farmers' organisation and tap into new commercial markets. Among the results of this collaboration was the formation of a community-based farmers' organisation, and an improvement in the amount of food available to the community itself.

Due to the nature of local subsistence agricultural efforts in the area, most of the active work done in African Roots was at the level of community gardens. However, individual members participating in workshops were encouraged to take the ethos and methods home. As most home gardeners have limited labour and money, the African Roots approach clearly has many advantages for individual farmers.

The mainstreaming of traditional foods into existing agricultural projects was not, however, without its challenges. As a case study, African Roots provides useful insights into the challenges of working in food security in the context of HIV/AIDS. At the project outset it was hoped to be true to the idea of "African Roots", in that indigenous plants historically grown in the region by the indigenous peoples might be re-introduced, to complement other vegetables grown. However, these efforts to improve biodiversity and use less invasive, more traditional indigenous and medicinal foods met with only marginal success. Community seed banks were not always enthusiastically supported by some community members, who did not see the potential of more obscure traditional plants. These traditional plants were also difficult to source; initial seed stock was hard to find, seed collection and storage of mature specimens was difficult. Moreover, there was considerable stigma associated with the cultivation of traditional foods, which were seen as "poor people's foods" and for the most part "non-progressive". Many of the demonstration sites resisted using traditional seed preparations, and chose exotic vegetable varieties instead. As a result, the "traditional plants" referred to by African Roots were often non-indigenous species such as amaranthus varieties indigenous to West Africa, and invasive *Asteraceae* such as *Bidens pilosa*. Overall, these varieties were still considered "traditional", but were certainly not rare or indigenous species.

"*Imifino* – food for the people!"

At Mafakathini Clinic in Vulindlela, a rural part of the KwaZulu-Natal midlands region in Msunduzi district, a demonstration plot overflows with a variety of edible greens. In February 2005, despite great scepticism from participants, clinic staff and the surrounding community in general, African Roots co-ordinator B.J. Njokwe assisted a group of women from the clinic to plant seeds of amaranthus and wild mustard. When they were able to start harvesting leaves three weeks later, the proud women became enthusiastic champions of the African Roots project. The women expressed great delight that, unlike a cabbage, which is picked only once, these plants keep on giving. Apart from incorporating these plants into their daily diet at home, the women sell bunches of mixed leaves for 2,50 rand (appr. US$ 0.30) a bunch. African Roots facilitators emphasised the importance of eating a variety of leaves from different plants, in order to include a wide range of micronutrients in the diet. The self-sown gallant soldier plants which sprang up among the amaranthus and wild mustard were allowed to remain – for their nutritional value, but also to covering the ground, preventing water evaporation from the soil by directing soil moisture to leaves and carrying nutrients through the plants instead. Sister V.T. Ndlovu is thankful they had the demonstration plots at the clinic, as she is now able to show clients that conventional vegetables are not the only source of nutrients, and that *imifino* (wild edible plants) are easy to grow. Equally inspired by the success of the demonstration plot, traditional leader Induna Mayisela pledged to make a much larger space available for *imifino* to be grown as crops.

Combining exotic vegetable crops conventionally grown within the region –mainly maize, cabbage, Swiss chard, carrot, beetroot, onion, kale, tomato, potato, green pepper, chillies, peas, green beans and turnip– with these so called " traditional plants" was not always an easy and smooth partnership. Trenched plots used both traditional and exotic crops, and there was at times a conflict between traditional and exotic crop preparations and timing. The project co-ordinators found that sowing traditional seeds in trays did not have good germination rates, but relying on self-seeding was too erratic for most farmers.

Due to the restrictions HIV/AIDS puts on household labour, African Roots was originally conceived as a low-input agricultural project. Traditional plants are hardy, locally acclimatised, non-demanding crops. They can be cultivated using low-labour intercropping techniques. With hindsight, however, perhaps more could have been done to capitalise on the natural appeal a low-input agricultural project should hold to those constrained by HIV/AIDS. Organisations such as FAO, for example, have recommended the use of "labour saving devices" for those afflicted by HIV/AIDS. No attempt was made to incorporate these practices or investigate them further. Additionally, all emphasis was on traditional crops, and no attempt was made to influence the choice of exotic vegetables cultivated. Promoting a switch to crop varieties requiring lower labour, but yielding higher nutrients, would have been a strategic move – such as switching from potato to orange-fleshed sweet potato. Although these types of crop improvements are implicit in many of the nutritional programmes of the partner NGOs in the region, the benefits of such improvements to people living with HIV/AIDS was not always made explicit in the African Roots demonstration sites.

Despite the problems faced, what the African Roots project did show is that people were enthused and liberated by the idea of "going back to their roots" as a way of dealing with HIV and AIDS. Amongst many of the rural community members, there was the perception that AIDS is rampant in the community due to a breakdown of traditional norms and values. This makes agricultural approaches that emphasise traditional practices and knowledge a welcome idea that resonates appropriately with the cultural context. African Roots' strength comes from its recognition that disease and food security are not just bio-physical phenomena. Community health requires a culture-building approach, to combat a disease that is extremely culture-eroding.

Due to these important features, the African Roots project has recently been taken to another level with new funding from the National Development Association and the Lima Rural Development Foundation, which is building capacity in 10 CINDI members with good food gardening practices incorporating wild edible plants. The project continues to develop its unique approach to using agriculture to approach a health problem like AIDS. ■

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