
East Africa's Drought: Q and A

World Vision (WV) Australia is involved in both agricultural development and relief work in East Africa. We asked folks there to answer a few questions regarding the current drought and famine.

In what ways have you been involved with addressing the drought and famine in the Horn of Africa?

Ms. Andrea Swinburne-Jones sent a link with details on work WV has been doing (www.worldvision.com.au/Issues/Emergencies/Current_... (http://www.worldvision.com.au/Issues/Emergencies/Current_Emergencies/HornOfAfricaDrought2011.aspx)). WV has provided food, water, and relief items, has helped rehabilitate wells and boreholes, and has provided seeds for planting prior to the upcoming rains. Current WV emergency response includes food distributions; supplementary feeding for malnourished children and lactating women; medical support (disease control, and immunization of children and mothers); provision of water; livestock vaccinations; and provision of seeds for planting prior to the upcoming rains.

Could you give us your assessment of the severity of the drought there? Perhaps compare it to previous droughts in that part of Africa.

Ms. Swinburne-Jones commented that this is the worst drought in 60 years, and that the number of drought cycles has increased so that droughts are happening more frequently.

Tony Rinaudo is not directly involved in famine relief, but has had long-term involvement in developing and promoting long term solutions and preventative measures. He also responded to several questions.

In your experience, what have been the most successful approaches or farming systems in coping with drought?

Tony Rinaudo (TR): "1. Agroforestry farming systems including Farmer Managed Natural Regeneration (FMNR), which come under the umbrella of 'Evergreen agriculture.' Measurements in West Africa indicate that crops grown in the presence of trees produce double or more the yield compared to crops in the open; fodder availability for livestock increases; wild foods return and alternative income streams (through sale of wood and non-timber forest products) becomes possible. So through forestry and agroforestry, communities become much more resilient to the vagaries of the weather. Even when the annual crops fail, trees provide ongoing income and food streams for people to access. In many marginal years when crops would have failed, the presence of trees [moderates] the weather conditions and enhances soil fertility enough for the crops to 'produce something.'

Click to watch a short video about Evergreen Agriculture (<http://edn.link/yy2jqp>)

"2. Soil and water conservation measures. In the Tigray region of Ethiopia, communities have restored barren hills through creating enclosure areas for natural regeneration of trees, and they have dug kilometers of contour ditches and blocked erosion gullies with mini dams. This has resulted in less flooding when it does rain, and in dry periods people don't have to worry because water tables in the lowlands have risen—now many farmers have motor pumps and can produce two to three dry-season cash crops per year.

"3. Conservation agriculture. The work of Foundations for Farming and other groups promoting such practices (sowing seeds in fertilized pits, mulching, minimum till, etc.) have resulted in great increases in yield without reliance/dependence on inaccessible or expensive inputs." [See EDN 98-

1 (<http://edn.link/xk34dd>.)]

Are there specific crops or tree-crop (agroforestry) combinations that have proven to be resilient in light of reduced rainfall?

TR: "FMNR remains my first recommendation, because it is cheap, rapid and does not rely on external resources. Anybody can do it and the impacts can be felt with increasing effect from the first year on. In particular, *Faidherbia albida* could be one of the great untapped resources of our time, if its effect on crops and livestock were appreciated. See "Turning Back the Desert" in chapter 3 of www.wri.org/publication/world-resources-2008-roots...

(<http://www.wri.org/publication/world-resources-2008-roots-of-resilience>) See

also www.agriculturesnetwork.org/magazines/global/secur...

(<http://www.agriculturesnetwork.org/magazines/global/securing-seed-supply/the-development-of-farmer-managed-natural>)

"In my experience moringa is also greatly underutilized, even in many parts of Ethiopia where it is indigenous.

"I also remind readers of the ECHO article Paul Woods and I submitted some years ago—"The Green Famine" [In EDN 77-1 (<http://edn.link/edn77>)]. Sorghum, millet, cassava, sweet potato, pigeon pea, lablab bean and many others remain excellent drought-resistant food crops. However, they have low status in many societies. I don't advocate for the complete replacement of maize with these other crops, but any agricultural system that is dependent on a single, annual crop such as maize in a highly variable climate is risky to say the least. In such climates, maximization of biodiversity is critical to food security. Biodiversity [almost] guarantees that in any year there will be something that can be harvested, either to sell or to consume directly.

"WVA and SIM, and now other organizations, continue to research, develop and promote edible-seeded acacias. There is still much to be done, but we know enough for certain environments to promote these drought-hardy species and their nutritious seeds."

See: www.worldvision.com.au/Libraries/AnnualProgramReview09CaseStudies/WattleWeEatfor_Dinner.sflb.ashx

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What other advice would you give to development workers serving farmers in famine-affected areas? This could be specific, in terms of farming techniques, or a few key principles that our readers should be aware of.

TR: "1. Start with and build on what people already know. If they are growing and prefer maize, it is nearly always possible to increase yields through simple steps like mulching, zai holes, micro-dosing with NPK (see EDN 84-3 (<http://edn.link/edn84>)), improved seed, and timeliness of planting.

"2. There is nearly always an individual or group in-country who have introduced or devised a successful approach: permaculturalists; organic farming groups (e.g. Kenya Institute of Organic Farming in Kenya); IFAD; etc. Facilitate learning and exchange visits, and get your farmers talking and planning what they want to do to confront their problems.

"3. Get a copy of the film 'The Man who stopped the desert.' It is an inspirational story about Yacouba Sawadogo. Along the lines of point number 1 above, Yacouba simply improved on the traditional planting pit. While his neighbors' crops failed, he was able to feed his family. For a trailer, see: www.youtube.com/watch?v=Dzah_5y65AU (http://www.youtube.com/watch?v=Dzah_5y65AU)

"4. A message to agencies involved in long-term agricultural programs: redouble your efforts to introduce sustainable farming techniques. Too many development agencies confronted with slow onset disasters, as in the case of drought-induced famine, get so caught up with relief that they put development activities on hold. While the services that relief agencies provide in times of such extreme crisis are essential, this is the very time when efforts to introduce sustainable and appropriate methods should be increased.

“During the severe famine of 1984 in West Africa, our team ran a ‘food for work’ program which introduced FMNR on a district-wide scale. Nearly 20 years later, we have discovered that this action directly contributed to the fact that Niger is the only African nation experiencing net afforestation [establishment of forest where there was no forest previously], with some 5 million hectares of farmland now having tree cover. As a result, Chris Reij, Gray Tappan and Melinda Smale wrote about this in chapter 7 of Millions Fed: Proven successes in agricultural development: ‘Re-Greening the Sahel: Farmer-led innovation in Burkina Faso and Niger’ (www.ifpri.org/publication/millions-fed). (<http://www.ifpri.org/publication/millions-fed>).

“Many villages now have 10 to 20 times more trees than 20 years ago. In the area where the project took place, 88 percent of farmers practiced FMNR in their fields, adding an estimated 1.25 million trees each year.

“Because of FMNR, farmers in Niger are producing an estimated additional 500,000 tons of cereals a year. This additional production covers the requirements of 2.5 million people out of a total population of about 15 million in 2009. FMNR also has an indirect impact on food security through tree crop products, which farmers can harvest and sell in local markets. Moreover, despite a near-doubling of the population since 1980, Niger has been able to maintain per capita production of millet and sorghum, which make up more than 90 percent of the typical villager’s diet. Per capita production remained at approximately 285 kilograms between 1980 and 2006.”

Any other comments or thoughts you would like to share.

TR: “I believe that East Africa could be a food bowl if simple, foundational principles were understood and applied.”

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