Resources to Help with Haiti Disaster Response

ECHO Inc.

ECHO has considered how our resources can be most helpful in light of the recent devastating earthquake near Port Au Prince, Haiti. Our main strength is in the area of agricultural information relevant to development workers, project volunteers and church leaders working on behalf of those in need. Although ECHO does not specialize in relief, we anticipate that our resources will play a significant role in dealing with long-term recovery efforts. The content below highlights information placed on our website to direct readers' attention to specific articles and links that are especially relevant to those serving in Haiti in light of the recent earthquake.

Urban and Above-Ground Gardening: It is possible to grow food on flat sections of rubble, cement slabs, tin roofs or other areas where fertile topsoil is scarce. Since 1982, ECHO has experimented with ways to garden under these conditions. Dr. Martin Price has written a 40-page booklet and narrated a PowerPoint presentation describing principles and techniques for rooftop and urban gardening. Portable container gardens can be constructed from old tires. They can be moved if the gardener relocates and can be placed even on a pile of rubble. If elevated there can be less risk of loss to animals as well.

Water filtration. One of the best methods for water filtration is the Bio sand filter. The ECHO Technical Note on that subject is on the web or can be mailed.

Moringa seeds can be used to clarify muddy water. Crush Moringa oleifera seed kernels (left after outer seed coat is removed), mix with dirty water, wait while impurities bind to seed particles and settle to the bottom, and then pour off clarified water. A pdf publication with more detail is available. This works best in combination with SODIS.

SODIS (solar disinfection) (EDN 90 (https://c.ymcdn.com/sites/echocommunity.site-ym.com/resource/collection/9EE3A8EE-FF5C-45A6-9BA9-0AB3A3E7652E/edn90.pdf)) is a simple technique for purifying water using clear plastic bottles and sunlight. If water is not quite clear, first clarify it with moringa seed powder.

Food Preparation/Cooking. Loss of infrastructure can make electricity or propane unavailable, leading to more demand for fuel wood in a country already short on trees for this purpose. Certain fast-growing nitrogen-fixing tree species can be grown in small woodlots to supply firewood. *Leucaena leucocephala*, for instance, grows quickly and can be coppiced (it will quickly regrow after being cut back). This

species has a reputation for being weedy, but the varieties ECHO carries produce fewer seeds than the "common leucaena." See the following article ("Coppicing Woodlots") for information on small woodlots.

ECHO Technical Note #25 Agroforestry Principles (https://www.echocommunity.org/resources/06c870a1-3fbb-47ec-9951-e8c0cb134582) explains how to utilize trees in farming systems.

Other innovations related to cooking include sawdust cookstoves (https://www.echocommunity.org/resources/fa987488-0f90-405a-aa34-d9b463b44eff); rocket stoves (with external links to information: Build a Stove and CCAT Rocket Stove (http://www.appropedia.org/CCAT_rocket_stove)); and biogas digesters (https://www.echocommunity.org/resources/470fede5-a022-498b-aad7-f5fbc38480ce)

What crops grow well in Haiti? Staple crops in Haiti include maize, "pitimi" (Creole for sorghum) and "pwa kongo" (Creole for pigeon pea). A variety of local cowpea and dry bean varieties also exist. Seeds can often be found in local markets, especially in rural areas. As rural communities cope with large influxes of relatives and refugees from Port Au Prince, there could well be pressure to use seed stocks for food. In efforts to provide grain, consider growing out the best local varieties for the purpose of seed multiplication and preservation. In some situations, it may even make sense to contract with local farmers to grow seeds, thus utilizing local knowledge and labor while providing farmers a guaranteed financial benefit for their efforts.

Vegetatively propagated crops commonly seen in Haiti include banana, sweet potato Haitian basket vine (liane panye) and cassava. Again, farmers in rural areas are often willing to sell starts/cuttings of these. Look for local varieties, but realize that farmers in one area may not have the same varieties as those even five or ten miles away. Agristarts in Florida is a good source of tissue cultured bananas

Perennial vegetables well-suited to Haiti include moringa ("Doliv" or "Benzoliv" in Creole), chaya and Haitian basket vine (also known as "hoop vine").

Other vegetables that grow well include eggplant, okra, Roma tomatoes (beefsteak types often fail, because high temperatures inhibit pollination; even Roma varieties should be planted in cooler times of the year such as early October), kale, amaranth, and pok-choi. A number of multi-purpose agroforestry species are also present in Haiti. As mentioned in EDN 106 (https://c.ymcdn.com/sites/echocommunity.site-ym.com/resource/collection/62026577-227A-4FB0-8B25-B0838484CED7/Issue106.pdf), the entire 418-page book of Bwa Yo: Important Trees of Haiti (http://pdf.usaid.gov/pdf_docs/PNACA072.pdf) is available from the USAID Development Experience Clearinghouse (DEC)

Farming practices, techniques and systems: The 100th issue of ECHO Development Notes (EDN 100 (https://c.ymcdn.com/sites/echocommunity.site-ym.com/resource/collection/62026577-227A-4FB0-8B25-B0838484CED7/Issue100resized.pdf)) included brief summaries of a number of the most successful innovations covered in the first 99 issues.

Material Available in Creole includes:

- A pdf document by Road to Life Yard (project led by Mark Hare) on making moringa leaf powder
- A web page showing plant names in Creole (http://www.potomitan.info/bibliographie/vedrine/plant.html)
- Material by Wayne Niles on Rabbit Production; Chicken Production; and Making a PVC Pump

If you are working in Haiti and have found ECHO's services/resources helpful, please let us know as you are able. This is a work in progress, so please send us suggestions or write in the comment box below.

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