Broken Sidewalk Farm: Open Source Farming, built upon Open Source Techniques & Technology

BrokenSidewalkFarm.com

- MS1
  - Sewage Treatment
    - Humanure Composting Bin
    - Urine collection
  - Power Production
    - Honda Generator (holding pattern for Steam Engine)
    - Open Source Ecology's Steam Engine
    - Solar
      - 2- SHARP 130W Panels
  - Global Positioning System (GPS) / Lat-Lon Coordinates
    - Google Earth
      - Layout of CAD designs
    - Photography (Geo-Tagging)
    - Team Assignments (e.g. zones that need hay dumps for soil enrichment)
  - Cooling/Heating
    - "MASSIVE" Insulation (e.g. tires packed with dirt; floors with water underneath them)
    - Direction of Sunlight
    - Direction of Wind
    - ARTI Reactor (Stove)
    - Solar Heater
      - Oven
      - Water
  - Refrigeration
    - Sundanzer ~90 watt freezer (Proprietary)
    - Mt Best (Open Source)
  - Water Collection/Reclamation
    - Ponds
      - HDPE Bins (Rainwater collection off of roofs)
      - Seasonal Creeks
      - Multi-stage using reeds for filtration
    - Ebb & Flow Systems
    - Gravity/Screen Harvesting
      - Layered watering (suspend plants beneath other plants to catch excess water)
      - Schmutzdecke slow sand filter w/ ARTI effluent (T.H. Culhane's "BRILLIANT" idea)
      - "PASSIVE" Well(s) to catch run-off
        - AVOID A DRILLED WELL AT ALL COSTS!!!
  - Washing Machine
    - MAKE Magazine: Volume 18
  - Waste Disposal/Reclamation
    - Ecology Action
      - Glass
        - Brown
        - Clear
        - Green
      - Plastic
        - #1
        - #2
        - #3-7
        - Bags
      - Styrofoam
      - Steel/Tin
      - Aluminum/Foil
      - Corrugated Cardboard
    - Best Buy
      - CD/DVD
      - Electronic
    - BSF
      - Paper
      - Compost
      - Dairy/Meat
      - Sewage
    - Speciality
      - Battery
      - Hazardous
      - Oil
  - LifeTrac
    - Attachments
      - Backhoe
      - Bucket
      - Compressed Earth Brick (CEB) Press
      - Truly limitless possibilities
    - Conversion Plates for 3rd party attachments
      - Mahindra
      - Kubota
      - John Deere
      - Bobcat
  - Fertilizer Production / Soil Enrichment
    - Carbon
      - Drop chunks of hay on portions of the land which are bare, which will rot and start restoring carbon levels
      - Use sheer force of cattle's bodyweight to tear up the soil for increasing deposits
    - Black Soldier Larvae
    - Nitrogen
    - Nitrogen Concentrate
    - Phosphorous
  - Production/Replication
    - Torch Table
      - Print another Torch Table
    - RepRap 3-D Printer
      - Print another RepRap
      - 3-D Scanner (D.A.V.I.D. System looks to be one of the best)
  - Structures
    - Cob Greenhouse/Chicken-coop Combination
      - Windows
      - Water Storage
    - Barn/Lab Combination
      - Chemistry Lab
      - Electronics Lab
      - Machine Shop
      - Library
    - Open Source Ecology's Solar Cubicles
  - Food/Bio-Fuel Production
    - Aquaponics
    - Square Foot Gardens
      - Far higher yield in smaller space
      - Timed/Back-to-Back Harvests
    - Row Planting (mostly for Bio-Fuels/Pyrolysis)
      - Hemp (only available for BSF replicants where sane law enforcement officers preside ~~~ WHICH IS DIMINISHING ON A WORLDWIDE LEVEL AS RATIONAL PEOPLE ARE REPLACED WITH UNTHINKING CLODS)
      - Canola
      - Rapeseed
      - Open Source Ecology's idea of Bio-Mass Pellets
    - Bees
      - Honeybees
        - Honey
        - Beeswax
      - Field Pollination (directly responsible for doubling-tripling of the food supply!)
      - Bumblebees (need more info. on this type)
    - Bats
      - Kill predatory insects
      - Guano
    - Livestock
      - Chickens
        - Layer
          - Eggs
        - Bantam (?)
          - Meat
      - Cattle
        - Milk
      - Goats
        - Milk
      - Ducks
      - Fish
      - Quayle / Chucker / Pheasant
        - Quayle Egg Shooters!!! WOO!!! :-)
      - Venison (Deer)
    - Kosher no-no: Utilitarian Purposes
      - Swine (fertilizer, fuel, and pond creation)
      - Rabbits (fertilizer and fuel creation)
    - Pastured Poultry / Rotational Grazing Techniques
      - Eggmobiles
      - Electric Fencing/Netting
    - Grass/Straw/Hay
    - Potato Cages
      - Vertical Growth
      - Higher Yield than row planting
      - Timed harvest (starting from the bottom first)
    - Apply the BitTorrent Protocol to the Food Supply
      - Suburbs (think Victory Gardens and Potato Cages)
      - Apartments (think Window Farms)
      - Public Street Corners (think Guerrilla Farms)
      - Reclaim unused land (Victory Gardens, Potato Cages, and/or Guerrilla Farms)
    - Food Forrest
      - Perennials
  - Homeopathic Uses
    - Multiple Sclerosis
      - Bee stings mapped to Acupuncture points help rejuvenate Myelin sheaths
    - Pain Management
      - Cannabis (only available for BSF replicants where sane law enforcement officers preside ~~~ WHICH IS DIMINISHING ON A WORLDWIDE LEVEL AS RATIONAL PEOPLE ARE REPLACED WITH UNTHINKING CLODS)
        - AIDS
        - Arthritis
        - Cancer
        - Fibromyalgia
        - etc.
- MS2
  - Arduino/Propeller (Microcontrollers for systems such as Cardunos ~ MAKE Magazine: Volume 18)
    - Sensors
    - Servos
    - Energy Management
    - etc.
  - RONJA (Long distance Data Transfer)
  - Tomato/DD-WRT (Data Routing)
  - the Red Queen (Snow Leopard Server at DataCenter running on a Mac-Mini)
    - Preeminent Decisions
      - Water Management
      - Power Management
      - Interacting with the physical environment
    - Offer Advice (e.g. treat powdery mildew with raw milk)
    - Access Control Lists
      - RFID
      - Smart Device Interaction (e.g. guests being able to use their iPod, iPhone, iPad, or Android phone to authenticate with various objects around the farm, ala the gate)
      - Service Management
  - Nagios/Geektool/GKrellM (System Analysis/ Monitoring)
    - Entire technology array (I previously used this to monitor most of the technology at my prior job, ranging from the status of Printers to the status of each employee's VoIP Phone and remote SIP/ IAX2 authentications, including writing modules for deeper analysis and troubleshooting)
    - Environmental Conditions
      - Water Levels
      - Temperature
      - Ground Saturation
      - pH (this is a pipedream until I can research the possibility further)
  - Asterisk (Automated interaction between Redqueen and people via VoIP/SMS-MMS/etc. communications)
  - I-Ax10/Logitech Net Cameras (let Redqueen actually scan zones (e.g. pan/zoom/tilt) automatically with these cameras)
    - Computer Vision
      - Light
      - Movement
      - Speed
      - Distance
    - Biometrics
      - Plant Diseases
      - Animal Diseases
      - Facial Recognition
      - Full/Micro QR Codes
    - Security
    - Webcasts
      - Podcast
      - Live Streams
  - iPhone/iPod/Android (Remote Control, Status Monitoring, and Geo-Tagged Photos)
    - Integrate Android-equipped phones with Arduino Microcontrollers using the Amarino Toolkit (amarino-toolkit.net)
  - Betabrite (Heads up displays)
  - Website
    - Remote Control
      - Scheduling People
      - Telescope aimed at the sky
      - Camera tracking the sun/moon
      - Cameras tuned for live galaxy shots as well as spacial analysis
      - Watch sunsets
      - Monitor various aspects of the farm (e.g. observe migratory paths in real time)
  - Washing Machine
    - Open Source Washing Machine Project (O2Wash.org)
    - Remya Jose's Mini Washing Machine
  - Power Production
    - Assam School Children devise Urine Battery in India
    - Japanese Urine-powered AA/AAA batteries
    - Wind Turbines for "LOW-POWER" consuming devices (Wind is basically the most inefficient way to generate electricity, and is generally more trouble than it's worth for high-power systems)
    - Plastic to Petroleum (BrokenSidewalkFarm.com/blog/plastic-to-petrol)
  - Sewage Treatment
    - Botanical Cells
    - Methane Harvesting
  - Production/Replication
    - Slag Socials
      - MAKE Magazine: Volume 23
      - Open Source Ecology
        - Extraction of Aluminum from Soils/Clays
    - Paper
    - Tractors and other machines for sale at local farmer's markets
  - Refrigeration
    - Einstein-Szilard Design
  - Advanced Waste Disposal/Reclamation (attempt to cut Ecology Action, Best Buy, and Speciality Shops out of the loop)
- MS3
  - Barn/Lab Combination
    - Chemistry Lab Enhancements
  - Production
    - Open Source Medicine
      - Dentistry
        - Night Guard
        - Tools
      - Insulin
  - Computer Vision
    - Remote Control (e.g. G.R.L. Software; XBox Kinect)
  - Open Source Labs / Workshops (think Eyebeam Labs or Barefoot College) open to the public to directly challenge the educational stranglehold that colleges impose on American society (M.I.T. is one of the few colleges that I actually have respect for, in part due to their Open CourseWare initiatives)
  - Power Production
    - Sterling Engine
  - Replicate BSF concepts to other areas that "DESPERATELY" need assistance
    - India
    - Mexico
    - Gaza
    - Iraq
    - Afghanistan