FALL 2013 – EDSGN 100 – SECTION 003 – TEAM 2

A NEW & IMPROVED…
DRIP IRRIGATION SYSTEM

The problem: Cameroon does not currently have an affordable drip irrigation system. The materials needed are not currently available because people there are not informed of the concept of drip irrigation.

After much collaboration, our team has formulated a solution that involves low cost, flexible materials, easy maintenance, and durability.

THE SOLUTION: POLYETHYLENE TUBING

We will use polyethylene tubing, connectors and caps for the main line and for the sub-main lines of the drip irrigation system.

Polyethylene:

-Durable yet flexible
-Can easily have holes poked into it with a sharp tool
-Can be easily cleaned out by running water through it
-Can be buried or left out in the sun
-And the best part: it is affordable

Materials:

200 ft. ½' polyethylene tubing for about 25 ft of main line and 8 sub mainlines at 18 ft each - **$15**
7 polyethylene T - fittings to connect main line to sub mainlines – 7 x $0.99 = **$7**
1 polyethylene L – fitting to connect the main line to the last sub mainline - **$0.63**
8 polyethylene end caps for the ends of the sub mainlines – 8 x $1.48 = **$11.84**
TOTAL COST**: $34.47**, which is only 70% of our total budget

We considered PVC pipe, which was too expensive, and latex rubber tubing, which was too weak and flimsy. Using polyethylene for the entire system allows farmers to position the main line and sub mainlines any way they want. The connectors simply twist onto the tubing, so this system is very easy to manufacture and use.

http://www.lowes.com/cd_Drip+Irrigation+System+Buying+Guide_1302790260