

Report
on
Waterboxx Demo Installation & Field Trials

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1. Visit objectives

- Demonstration of proper installation of Groasis waterboxx.
- Discussing the guidelines for undertaking field trials of waterboxxes at various locations.

2. Demo installation

A demo installation of waterboxx was scheduled at the Nanodara farm, Gujarat on 21st February 2013 to illustrate the procedure for correctly installing the waterboxx. It was decided that subsequent to this demonstration, field trials of waterboxxes could be undertaken at Barmer, Kutch, Chaswad, Lakkihalli, CRS-Urulikanchan and Wagholi besides Nanodara. Additionally, field trials have also been proposed at Champawat in Uttarakhand to study the performance of the device in hill terrains.

The following representatives from locations earmarked for field trials attended the demo installation:

Nanodara - Mr.T.V. Solanki & Mr.Sagar Gomkale

Barmer - Mr.H. Varma

Kutch - Mr.P.M. Wahanka

Chaswad - Mr.Lalit Patil

CRS & Wagholi - Mr.Waman Kulkarni

The input support for demo installation and field trials has been provided by Dr.S.S. Roy (BAIF Pune).

The overall co-ordination for waterboxx demo and trials is done by Mr.Waman Kulkarni (BAIF Pune).

Mr.H.R. Mishra (ACPC-GRISERV) & Dr.Raghavendra Dubey (TPE-GRISERV) participated in the demonstration to co-ordinate the installation & field trials.

Mr.Rakesh Warriar (BAIF Pune) was present to co-ordinate the installation and explore innovative technology.

Planting manuals, installation guides and videos obtained from Aquapro (manufacturer of waterboxx) were earlier sent to the field trial locations so that the concerned can be fairly conversant with the technology, working and setup of waterboxx prior to the installation demonstration.

The demonstration began with discussions on technology and working of the product. Based on the reference videos and manuals, the correct installation procedure was explained to the participants. The probable site for planting was then shown by the farm personals and was decided upon after a preliminary survey. The planting hole was dug up according to specifications and left to set for around two hours after adding compost and water. In this particular setup, it was decided to plant pomegranate (sapling) and water melon (seeds). After the setting time, the soil in the planting hole was loosened up. Thereafter, the demo planting was carried in accordance with the planting instructions. A detailed step by step account of demo installation is given by the photographs in figures 1 to 13.

Thereafter, the site for installation of remaining waterboxxes at Nanodara was finalised.



Fig.1 Preparation of planting hole (60cm dia. x 20cm deep)



Fig.2 Addition of compost and water



Fig.3 Loosening the soil after setting time



Fig.4 Hole marking along E-W direction



Fig.5 Cutting horizontal primary root, secondary roots & leaves





Fig.6 Planting the sapling & seeds



Fig.7 Setting up the waterboxx



Fig.8 Mud covering up to overflow level



Fig.9 Adding water to prevent floating



Fig.10 Adding 4 litres water to the middle



Fig.11 Adding 16 litres water in the box



Fig.12 Weed removal around the box



Fig.13 Installed waterboxx

3. Field trials

Detailed discussions and guidelines on conducting field trials at the above mentioned locations were also undertaken. The participants were also advised to ensure appropriateness of site and spacing between boxes for trials. A total of 40 waterboxxes are available for field

trials. The trials are scheduled to begin by 15th March 2013 in all the locations. The field trial plan is as follows:

| S.No | Location | No of Units of Waterboxx |
|-------------|-----------------------------|---------------------------------|
| 1 | Nanodara-Gujarat | 3+5(existing)= 8 |
| 2 | Kutch-Gujarat | 5 |
| 3 | Chaswad-Gujarat | 10 |
| 4 | Lakkihalli-Karnataka | 8 |
| 5 | Barmer-Rajasthan | 5(existing) |
| 6 | Wagholi-Maharashtra | 1 |
| 7 | CRS Urlikanchan-Maharashtra | 1 |
| 8 | Champawat-Uttarakhand | 2 |

The following combinations of plants have been finalised for the trials:

Nanodara

Ber

Pomegranate

Ber + Water melon

Ber + Brinjal

Pomegranate + Water melon (2 units)

Pomegranate + Brinjal

Water melon + Musk melon

Kutch

Guggal - 3 units

Pomegranate - 2 units

Chaswad

Mango - 5 units

Lemon - 5 units

Lakkihalli

Mango - 4 units

Amla - 4 units

Barmer

Khejri + Water melon (5 units)

Champawat

Apple

Peach



Fig.14 Site for trials at Nanodara

4. Monitoring guidelines & data recording

Following are the guidelines for monitoring the performance parameters of the waterboxxes:

Routine Climate: (Daily)

- i) Temperature: Min and Max Temp. at the Research Stn.
- ii) Rainfall
- iii) Relative Humidity

Waterboxx: (15 Days Interval)

Water Level at storage/reserve box at 15 days interval after the initial filling of the Box.(This may be done with a steel scale)

Plant Growth: (15 Days Interval)

- i) Mortality
- ii) Height in cm
- iii) No of Branches

Documentation

Photographs of all operations including installation of Waterboxx and plant growth may be taken at every stage (15/30 days).