NICRA
National Initiative on Climate Resilient Agriculture

In situ Assessment of Drought like situations prevailed during the Monsoon season of 2013 in Garo Hills districts of Meghalaya

A team of scientists from CRIDA, Hyderabad, Assam Agril. University, ICAR Research Complex for NEH Region and KVK, Tura visited West Garo Hills and South West Garo Hills districts on **3 & 4 September 2013**. These two districts were reported to face severe drought like situations during June and July months of 2013 and that caused a good numbers of farmers either to postpone kharif rice transplanting or abandon the crop in this season. The team was accompanied by officials from Dept. of Agriculture, Govt. of Meghalaya.

On its tour the team visited Damalgre, Balagre, Muktangra and Garabandha of West Garo Hills district and Baispara, Lutubari, Betasing, Basbari and Ampati in South West Garo Hills district. All these locations falls under major rice producing area of Meghalaya and faced with problem of severe drought like situations in this season. Detailed discussions were made with local farmers on each spot and the team suggested measures to cope up with the prevailing situation.

Observations

1. Both West Garo Hills and South West Garo Hills have vast plain belts and rice is grown extensively (approx. rice area in both the district is 9000 ha).
2. Farmers use to grow local rice cultivars (eg. *Sampali*) in large extent due to their preference to it over HYVs. These cultivars are usually of long duration (December harvested), photo-sensitive, low tillering and low in yield potential (1.0 to 1.5 t/ha).
3. The summer rice (*Ahu* rice) could escape water stress and at present it is in maturity and harvesting stage. How ever, area under *Ahu* was less compared to normal *kharif* rice. Demonstration with ICAR RC NEH developed upland rice cultivar *Bhalum-1* has shown promising results and expected to fetch 3.0-3.5 t/ha yield. Farmers were looked convinced with this cultivar.
4. Normal transplanting of *kharif* rice is done during June-July.

5. The monsoon rains started on time this year and that prompted farmers to raise nursery beds. In many places transplanting was completed in time.
6. Sowing in *Jhum* areas completed by May-June itself. Here mixed cropping is followed and little impact of water stress on crops was observed.
7. An unusual monsoon break started during the mid June and extended up to late August. The crops which were on their establishment stage suffered from serious water stress.


Mixed cropping in *Jhum lands*

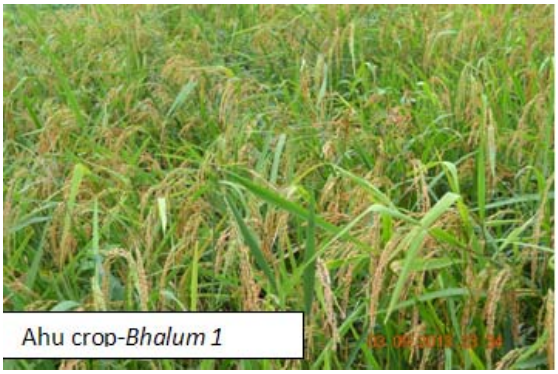
8. The region is rich with natural river systems (eg. Ganol river in Damalgre and Balagre). But, little effort has been made to lift river water to provide at least life saving irrigations.
9. Rice transplanting was continued in many places with highly over matured seedlings (1.5 to 2 months old). The yield from such planting likely to be reduced by at least half (0.5 to 0.75 t/ha).
10. As assessed by state Govt. officials and KVK-Tura, an estimated 44% (4000 ha) rice area of average 9000 ha has not been transplanted this season in West Garo Hills district (including South West Garo Hills).
11. The region has good potential for fish cultivation as alternate source of income generation. But, organized fish cultivation is yet to come up here.


Farmers transplanting rice on 3-9-2013

12. In *Lutubari* of South West Garo Hills, Markhapara Minor Irrigation project (Covers 600 ha command area) is functioning very well and farmers could grow three rice crop every year using HYVs (eg. *Ranjit, Pankaj, MTU*). The *Basbari* minor irrigation project needs to be revamped, which will enable irrigation in minimum 500 ha area.

At the end of the visit a meeting was held in the Office of District Agril. Officer of South West Garo Hills district located at Ampati. **The experts recommended that**:

a. There is a need to establish rain gauge stations in each developmental block of the districts. The data generated from such rain gauges will help the managers to cope up with contingent situations effectively.
b. Staggered planting, System of Rice Intensification (SRI) etc. are to be adopted to tackle with drought like situations in future.
c. There is a need to enhance coordination and cooperation between KVK and District Agril. Department in technology demonstration and dissemination.


Ahu crop-*Bhalum 1*

d. Technology demonstration must be large enough to convince the farmers and state govt. should deploy their work force effectively to reach each and every corner of their respective districts.

e. Collaboration with Assam Agril University is very much required in managing drought. *Gitesh* and *Prafulla* are the two late sown and short duration rice cultivars found very successful in Assam under late sowing condition. hence, KVK-Tura may take up necessary measures for validation and demonstration of those cultivars in Garo Hills condition and subsequently hand them over to state department.

f. Participatory certified seed production may be taken up to meet the demand of seeds under emergency condition.

g. Go for early rabi vegetables, toria cultivation so that residual soil moisture can be utilized effectively and farmers can get back some amount of return where rice cultivation could not be taken up at all.

h. Capacity building of state govt. extension functionaries to be taken up in a serious manner to meet contingent situations.

i. Ample scope to use the rivers/rivulets for irrigation should be thoroughly reviewed at competent level and necessary measures should be taken up at the earliest.