



### REMEDIAL MEASURES NEEDED FOR FLOOD AFFECTED TEA AREAS

The recent incessant rains in most of the parts of Assam have caused havoc with unprecedented floods due to the continuous rise of water level in all tributaries leading to the main river Brahmaputra. While most people in the state have been badly affected, the Small Tea Growers who have been sustaining their livelihood mainly on tea cultivation are noticed to be the worst sufferers, since hundreds of hectares of their cultivated areas have been inundated over a long period of time. Large tea areas in Middle and Lower Assam appear to have suffered more. It is now critically important to ensure proper remedial care and attention of these submerged tea areas, so that they can be brought back to a healthy status and ensure sustainability for the future.

The following measures may be considered as possible ways to safeguard the tea bushes at this hour of distress:

First let us know what happens when the tea bushes are submerged under water due to flooding. The roots of the tea bushes start decaying due to the prolonged effect of water saturation in soil. Feeder roots become incapable of supplying nutrients to the plants above and in the rotting process, production of growth hormones like Cytokinin and Gibberellic Acid are impeded, resulting in the formation of a poisonous gas called Ethylene which eventually causes defoliation of the tea bush.

When the feeder roots get totally decayed, toxic H<sub>2</sub>S (Hydrogen Sulphide) gas is formed, and this can result in the death of the entire tea bush.





**STEPS FOR PROTECTION OF FLOOD AFFECTED TEA BUSHES : -**

- The depth of field drains needs to be at least, or more than 105cm for bringing down the water table below the horizon of feeding roots.
- If tea bushes are noticed to be submerged completely for a long period of time, it becomes very hard to make them survive due to anaerobic conditions. One should accordingly think of the expedient / urgent measures of how best the excess water can be drained out to nearby watershed or lower catchment levels.
- Silt formation / sedimentation is often observed once the flood waters start receding. These silt / sandy formations need to be scraped / removed so that the collar regions of the bush are cleared and root zone aeration is facilitated. A light forking to a depth of 8-10cm needs to be done to soften the soil, compacted due to sedimentation.
- Bush foliage smeared / covered with mud due to the floods, need to be thoroughly washed, so that Photosynthesis (and food production) can resume.
- Plucking operations need to be stopped in areas affected by the floods – and resumed only when new shoots are seen to be sprouting. In such cases, light plucking to be conducted after leaving one or two leaves on the bush hamper.
- Where dead branches are seen on the bushes, these are to be carefully cut and the fresh marks to be indopasted against any possible fungal attack.
- Once the water recedes completely, foliar spraying with Urea, MOP and Zinc Sulphate (@ 1% each in 100litres water) to be conducted in the affected areas. Avoid spraying on hot sunny days.
- After about 4 weeks of the floods receding, and once the above remedial measures have been put in place, ground manuring with Urea @20-25kgs per bigha in mature tea areas and 10-15kgs per bigha in young tea areas to be applied over 2 to 3 split doses.
- There may be a possibility of Pest and Diseases infestation to the bushes weakened by the flood effect. Due palliative spray treatment with suitable and approved pesticides / fungicides may need to be resorted to, post plucking.
- The three main areas which need to be addressed after the flood waters recede – are soil erosion, depletion of soil nutrients and soil compaction. It will help if the corrective measures indicated above, are followed carefully.
- Where field drains are clogged and there does not be a possibility of removing this excess water to nearby outlets, this situation can render the bushes prone to possible infestation of various kinds of Pest and Diseases. It is therefore very important for farmers to accord due importance to subsidiary and main outlets drains in their farm holdings, so that water can be effectively taken out from their catchment areas.