4 CLIMATE AND AGRICULTURE

MESSAGE OF HOPE

- Crop yields of contact farmers in eleven villages in Pune district increased by 20% by following the Agromet Advisory Bulletin containing weather forecast for next 4 days and by accepting advise for field operations to be carried out by them.

4.1 Due to decrease in rainfall during the South west monsoon season and increase in rainfall in post monsoon season on average, sowing dates of kharif crops in Konkan and Madhya Maharashtra should be redefined according to the changed onset of rainfall. This may require one or two protective irrigations to cereals, pulses and oil seeds.

4.2 Crop planning in Maharashtra needs to be done as per the agro-climatic zones of different regions. To achieve this, research should be directed for developing better genotypes for corresponding rainfed conditions. Development agencies should extend the use of seeds of drought tolerant crops varieties to the farmers matching local agro climatic conditions.

4.3 Strategies for drought and excess rainfall years should be further refined. To fight drought situation, each village should have village pond, for which necessary technical support should be provided. This can be an important programme under E.G.S and the Sampoorna Gramin Rozgar Yojana.

4.4 Forecast of rainfall should be made available to the farmers through out the state for which necessary infrastructure should be developed. Hybrid models based on computer simulation, remote sensing and astro-meteorology should be developed by the existing institutions in the state for a more accurate short range forecasts.

4.5 Further research should be directed to develop weather based forewarning systems for important crop pest and diseases in various agro-climatic conditions in the state. Contingency plants for various moisture availability scenarios should be prepared and popularised.

4.6 Genetic coefficients of all important cereals, pulses and oilseeds popular in Maharashtra should be determined so that crop models can be operationally used. To achieve this, research should be directed to forecast yield of important crops in Maharashtra State based on various available models.

4.7 Research should be directed to evaluate the impacts of climate change on agricultural production to meet the growing need of preparing the state for any contingency.
4.8 State should take up plantation of Sahyadri to green the hilly terrain and sloping regions of the state exposed to soil degradation to favourably modify the regional climate of scarcity zone and central plateau zone. Greening may not be useful unless control on grazing is also ensured. While greening of Sahyadri, emphasis should be on bio-diversity restoration.

4.9 To have better weather forecast, data collection system should be automated, interlinked and modernized throughout the research system in State Agricultural Universities. A suitable institutional system should be established to improve the human resource to coordinate the development efforts of climate based agriculture in the state.

4.10 METSAT satellite data should be used effectively by the proposed Virtual University on Agrarian Prosperity to provide weather forecast and climate information at the grass root level.

4.11 In areas where evapotranspiration exceeds precipitation during most months of the year, low cost green house, horticulture / seed production, should be introduced along with drip irrigation and fertigation techniques. The aim should be to cultivate under protected conditions high value but low water requiring crops. Maharashtra should lead the country in the low cost green house farming revolution.

4.12 Anticipatory research to meet potential threats to the state’s agriculture from global climate changes should be stepped up. State should have a firm data based assessment of the direct and indirect consequences of global climatic changes on different crops contributing to the state’s agriculture.