DARJEELING TEA RESEARCH AND DEVELOPMENT CENTRE

Department of Commerce
Ministry of Commerce & Industry
Govt. of India

Kurseong, Darjeeling
West Bengal India

H.O. 14 B.T.M. Sarani, Kolkata - 700 001

Darjeeling Tea Research and Development Centre was established in 1977 at Kurseong with an experimental farm of 21.6 hectares.

The Centre, which is a recognized R & D Institute of the DST, Govt. of India, besides catering to the advisory requirement of Darjeeling tea gardens has developed technical know-how on various aspects of tea cultivation. The four main Divisions of research are Farm Management (Botany & Agronomy), Soil Science, Bio-chemistry and Plant Protection. The Centre has inter alia a Library, Miniature Manufacturing Unit, a green house and an Agrometeorological Observatory.
Important Findings:

1. The performance of eight popular clones out of thirty Darjeeling clones has been evaluated among which B15 has been found to be superior than others.

2. Minimum tillage replanting methodology developed for inorganic cultivation of tea.

3. Experiment with binodal cuttings have shown their superiority in terms of better growth over single nodal cuttings.

4. Standardised the frequency of plucking in respect of yield and quality.

5. A soil-fertility status viz., NPK map of Darjeeling tea growing soils published.


7. The positive effect of foliar spray of Zinc on yield has been established.

8. Efficacy of pure salt of Zinc, Magnesium and Boron established in the increase of yield as compared to the commercial products.

9. Effect of six different sources of sulphur fertilizer has been examined and their efficacy in rectifying the deficiency of this mineral has also been established.
X-ray diffraction studies of the soils of quality and non-quality sections of Darjeeling tea gardens have been made. The genesis of the soils of this area has also been outlined on the basis of detailed morphological, physico-chemical and mineralogical analysis.

Bioefficacy of different neem products in controlling certain pests of tea has been tested.

Darjeeling black tea evaluated as per ISO/PFA specification.

Blending compatibility of various clones released for Darjeeling hills established.

β-D-glucosidase, a flavour releasing enzyme extracted and characterized.

**Services offered:**

1. Soil, Plant, Manures/Fertilisers, water and biochemical parameters tested and recommendations offered.

2. Visiting gardens on specific problem and request.
Thrust Areas of Research:

1. Correlating the organoleptic evaluation with Biochemical/VFC analysis.
2. Impact of various organic and inorganic inputs on the yield and quality of Darjeeling Tea.
4. Experiments to reduce winter dormancy.
5. Evolving good quality low cost concentrated organic manures.
7. Finding suitable local botanical herbs with high pesticidal and nutritive properties.
8. Pesticide Residue and heavy metal analysis.

Collaborative Research:

1. Collaboration with Karlu Ruhe Institute of Technology, Germany, CDAC, Kolkata and Jadavpur University, Kolkata for development of electric nose.
2. Collaboration with IIT, Kharagpur on physico-chemical properties of soil, environment and production of teas.
4. The Centre is also recognized by Kalyani University and North Bengal University for carrying out doctoral research.

Centre of Excellence:

A multi-crore rupees plan has been sanctioned for upgrading the present infrastructure of this Centre into a unique “Centre of Excellence” which would be the first of its kind for Tea Research in the Country.
List of Publications


12. Bisen, J. S., Saha, R. and Bera, B., Use of neem products and garlic extract in controlling certain pests of tea (Camellia sinensis L.) with special reference to organic tea in Darjeeling. Accepted in world Neem Conference will be held at Coimbatore from 21st to 24th November, 2007.


15. Technical Bulletin No. 1: Evaluation of Herbicides for weed control in Darjeeling tea. Published by Tea Board of India, 1989, PP1-6


20. Technical Bulletin No. 6: Training of young tea in Darjeeling, Published by Tea Board of India 1991, PP 1-5


26. Ghosh Hajra N. and Kumar R, 2004 Influence of environmental variables on gas exchange and productivity of tea; Proceedings of the international conference on O-CHA (tea) Culture and Science NOV, 4-6, Shizuoka, Japan, PP 181-184


