

Bangladesh Tea Research Institute
Srimanghal-3210, Moulvibazar

List of experiments conducted during 2014-2015

Name of the Division: **Soil Science Division**

Name of the programme: **Improvement of soil properties for sustainable production**

SI No.	Title of the experiment	Objectives (short)	Location
1	Studies on performance of organic matter status on different level in reducing chemical fertilizer use in tea.	To reduce the chemical fertilizer use and to improve the soil health by using organic matter.	BTRI main farm, Srimangal
2	Necessity of rehabilitation of old tea soil before replanting and its effect on growth and yield of soil (collaborative with Agronomy division).	To observe the growth and development of tea plants in the rehabilitated and non-rehabilitated soil.	BTRI main farm, Srimangal
3	Effect of vermicompost on soil properties vis-à-vis the growth and yield of young tea	To evaluate the efficiency of vermicompost on tea production	BTRI main farm, Srimangal
4	Studies on physical and biological properties and the yield of tea using chemical fertilizer, organic compost & vermicompost.	To improve physical & biological properties of tea soil	BTRI main farm, Srimangal
5	Studies on upgrading the present fertilizer recommendation.	To find out the optimum dose of NPKS and micronutrients for maximizing yield.	BTRI main farm, Srimangal
6	Effect of single fertilizer dose on the yield of mature tea	To estimate the effect of single fertilizer dose on the yield of mature tea	BTRI main farm, Srimangal

Name of the Division: **Botany Division**

Name of the programme: **Preliminary selection of vegetative clones**

SI No.	Title of the experiment	Objectives (short)	Location
7	Selection of Vegetative Clones at Shumshernuggar T.E. Sections-Main Division-9 & Doublecherra-13	To isolate desirable mother bushes from the existing variable seedling population.	Shumshernuggar T. E.
8	Selection of Vegetative Clones at Amo T.E., Section No.8		Amo T. E.
9	Selection of Vegetative Clones at Baraoorah T.E. Section No. 8		Baraoorah T. E.

Name of the programme: **Long term yield and quality trial of provisionally selected clones**

SI No.	Title of the experiment	Objectives (short)	Location
10	Yield and Quality Trial of Test Clones Selected from Shumshernuggar and Amo T.Es.; Test Clones Sh/D/11/313, A/8/8, A/17/7 and A/22/39 against Control BT1.	To select and identify promising test clones having desirable characteristics i.e. either yield or quality or both.	BTRI main farm, Srimangal
11	Yield and Quality Trial of Test Clones Selected from Amo T.E.; Test Clones A/8/1, A/17/22, A/22/27 and A/22/40 against Control BT1.		BTRI main farm, Srimangal
12	Yield and Quality Trial of Test Clones Selected from Chandpore, Shumshernuggar and Amo T.Es.;		BTRI main farm, Srimangal

	Test Clones C/J1/10, Sh/B/6/59, Sh/B/6/62 and A/8/24 against Control BT2.	
13	Yield and Quality Trial of Four Test Clones Selected from Shumshernugger T.E.; Test Clones Sh/B/6/36, Sh/B/6/38, Sh/B/6/55 and Sh/B/6/67 against Standard BT1.	BTRI main farm, Srimangal
14	Yield and Quality Trial of Six Test Clones–MZ/39, E/4, D/13, B2T1, BR2/97 and SDL/1 against Standard BT2.	BTRI main farm, Srimangal
15	Yield and Quality Trial of Four Test Clones Selected from Amo T.E.; Test Clones – A/8/37, A/8/55, A/8/62 and A/8/66 against Standard BT2.	BTRI main farm, Srimangal
16	Yield and Quality Trial of Four Test Clones Selected from Phulcherra, Amo and Shumshernugger T.Es.; Test Clones – A/17/16, Ph/9/1, Ph/9/9 and Sh/B/6/46 against Standard BT1.	BTRI main farm, Srimangal
17	Yield and Quality Trial of Four Test Clones Selected from Phulcherra and Hybrid Progeny; Test Clones – Ph/9/4, Ph/9/25, Ph/9/40 and BS/67 against Standard BT5.	BTRI main farm, Srimangal
18	Yield and Quality Trial of Four Test Clones Selected from Amo and Phulcherra T.Es.; Test Clones–A/8/B1, Ph/9/B1, Ph/9/11 and against Standard BT1.	BTRI main farm, Srimangal
19	Yield and Quality Trial of Three Test Clones Selected from Amo, Phulcherra and Shumshernugger T.Es.; Test Clones–A/8/61, Ph/9/68A, Sh/D/11/18 (retrial from Expt. B2-26) and One Introduce Clone SC/12/28 against Standard BT2.	BTRI main farm, Srimangal
20	Yield and Quality Trial of Four Test Clones Selected from BTRI Farm (Dulia Section); Test Clones–D1/8, D/6, D/10 and D/12 against Standard BT5.	BTRI main farm, Srimangal
21	Yield and Quality Trial of Four Test Clones Selected from Phulcherra T.E. and BTRI Germplasm Bank; Test Clones–Ph/9/92, BS/3, Ph/9/108 and G/68/8 against Standard BT15.	BTRI main farm, Srimangal
22	Yield and Quality Trial of Four Test Clones Selected from Shumshernugger and Amo T. Es. Test Clones–A/8/124, Sh/10/2, A/8/125 and A/11/38 against Standard BT16.	BTRI main farm, Srimangal

23	Yield and Quality Trial of Four Test Clones Selected from Shumshernugger and Amo T. Es. Test Clones–A/8/128, Sh/D/13/4, Sh/10/5, BS/91/6, against Standard BT2.		BTRI main farm, Srimangal
Name of the programme: Breeding of tea			
24	Controlled Pollination between Selected Clones/ Agrotypes and Selection of Generative Clones for the Establishment of Clonal Seed Reserve.	To improve the quantity and quality of the end product (A combination of yield and quality should be the aim).	BTRI main farm, Srimangal
25	Establishment of a Biclinal Seedbarie with Clones TV18 and BT3		BTRI main farm, Srimangal
26	Comparative Yield and quality Trial of BTRI Released Biclinal Stock BTS1, Biclinal Stock T18B3, Allynugger Polyclonal Stock (ANPS), Phulbari General Seed Stock (PBS) and Clone BT1.		BTRI main farm, Srimangal
27	Comparative Trial of 4 Biclinal Seed Stocks (BTS1, BTS3, TV18×BT3 & TS463) and 3 Parental Clones (BT1, TV1 & TV19).		BTRI main farm, Srimangal
28	Survey and Conservation of Gene Resources of Tea in Bangladesh.		BTRI main farm, Srimangal

Name of the Division: **Agronomy Division**

Name of the programme: **Standardization of cultural practices**

SI No.	Title of the experiment	Objectives (short)	Location
29	Effects of different doses of fertilizers and manures in pit on growth and development of clonal tea	Standardization of fertilizers on growth, development and establishment of newly planted clonal tea	BTRI main farm, Srimangal
30	Effect of different time of pruning on the monthly crop distribution in a mature clonal tea	To observe the effect of different pruning time on growth and yield of tea.	BTRI main farm, Srimangal
31	Effect of a growth promoter (e.g. Biokad) on yield and yield components of tea	To know the effect of Biokad on yield parameters e.g. shoot extension rate, shoot weight and shoot density.	BTRI main farm, Srimangal
32	Effect of different intervals of irrigation on growth and development of young tea after its plantation	Standardization of amount and interval of irrigation on growth, development and establishment of newly planted clonal tea during the dry period of the year.	BTRI main farm, Srimangal
33	Effect of different pruning cycles on the yield of different mature clonal tea.	To find out appropriate pruning cycle for the specific clone.	BTRI main farm, Srimangal
34	Management of shade plant canopy for sustainable tea production in Bangladesh.	To find out suitable shade canopy management practices for higher yield of tea.	BTRI main farm, Srimangal
Name of the programme: Development of Soil Fertility			
35	Necessity of rehabilitation of old tea soil for replanting and its effect on the growth and yield of tea	To observe the growth and development of tea plants in the rehabilitated and non-rehabilitated soil.	BTRI main farm, Srimangal

Name of the Division: **Entomology Division**

Name of the programme: **Entomological research on clonal varieties of tea**

SI No.	Title of the experiment	Objectives (short)	Location
36	<i>In vitro</i> and <i>in vivo</i> screening of tea clones at nursery level during clonal selection stage for nematode susceptibility.	To identify resistance/susceptibility of a particular clone to nematode.	BTRI main farm, Srimangal
37	Susceptibility of red spider mite to different agro types and clones.	To identify resistance/susceptibility of a particular tea agro types/ clone to Red spider mite.	BTRI main farm, Srimangal
Name of the programme: Studies on indigenous plant extracts			
38	Evaluation of some indigenous plant extracts against <i>Helopeltis</i> , Red spider mites and Nematodes.	To determine toxic effect of tested plants against major tea pests.	BTRI main farm, Srimangal
Name of the programme: Pest infestation and quality of tea			
39	Studies on the biochemical changes in tea leaves and made tea due to pest infestation.	To observe the changes in the biochemical constituents of tea leave as well as made tea due to mite infestation.	BTRI main farm, Srimangal
Name of the programme: Bio-control of pests			
40	Searching and identification of bio-control agents for the control of pests of tea.	To find out the natural enemies in the tea ecosystem as biocontrol agents for the control of pests of tea.	BTRI main farm, Srimangal
41			
42	Bioefficacy of Entomopathogenic fungi against major pests of tea.	To evaluate the bio-efficacy of commercial formulation of some entomopathogenic fungi against the major pests of tea.	BTRI main farm, Srimangal
Name of the programme: Screening of pesticides			
43	Screening of pesticides against major pests of tea.	To find out a range of alternate and economical pesticides to avoid resistance, resurgence and secondary outbreak of pest.	BTRI main farm, Srimangal
44	Determination of judicious use of pesticides for a model tea estate.	To determine the judicious use of pesticides for a model tea estate.	BTRI main farm, Srimangal
Name of the programme: Pesticide residue analysis			
45	Determination of pesticide residue in made tea of different tea agro-types.	To determine the pesticide residue in made tea of different tea agro types.	BTRI main farm, Srimangal

Name of the Division: **Plant Pathology Division**

Name of the programme: **Disease Management**

SI No.	Title of the experiment	Objectives (short)	Location
46	Evaluation of antifungal activities of some plant extracts against different foliar diseases of Tea.	To evaluate and determine the effectiveness of different plant extracts against pathogens of different foliar diseases of tea.	BTRI main farm, Srimangal

47	Screening of new fungicides and herbicides against different diseases and weeds in tea.	To standardize new fungicides and herbicides supplied by different companies through PTASC against tea diseases and weeds by conducting trials both in field and laboratory.	BTRI main farm, Srimangal
48	Changes on quality of made tea due to growth of microbes on graded CTC black tea during storage.	To quantify the changes in quality due to growth of microbes on graded CTC black tea during storage period from the day of manufacturing to 360 days.	BTRI main farm, Srimangal
49	Studies on quality of tea due to different disease infestation in tea plantation.	To find out the changes in quality of made tea due to different disease infestation.	BTRI main farm, Srimangal
Name of the programme: Weed Management			
50	Determination of critical period of weed competition in young tea.	To assess the effect of weed competition for different durations in tea.	BTRI main farm, Srimangal
51	Weed management in tea with BecAno 500 SC.	To evaluate and determine the effectiveness of BecAno 500SC for economically weed control.	BTRI main farm, Srimangal
52	Allelopathic effect of <i>Mimosa invisa</i> on weeds control in tea.	To ascertain the allelopathic effect of <i>Mimosa invisa</i> on weeds control in tea.	BTRI main farm, Srimangal
Name of the programme: Arbuscular Mycorrhizal fungi in tea			
53	Inoculum Production of AM Fungi for Tea Plantation.	To produce mass inoculum for tea by using suitable host plants, which are produced a high number of AM propagules.	BTRI main farm, Srimangal

Name of the Division: **Biochemistry Division**

Name of the programme: **Tea quality**

SI No.	Title of the experiment	Objectives (short)	Location
54	Study on the changes of the biochemical components of black tea during storage.	To observe the effect of storage time & conditions on the biochemical parameters of tea.	BTRI main farm, Srimangal

Name of the Division: **Technology Division**

Name of the programme: **Tea processing**

SI No.	Title of the experiment	Objectives (short)	Location
55	Effect of heat in the withering trough on the quality of tea.	To compare the quality of made tea with and without use of heat in the withering trough.	BTRI main farm, Srimangal
56	Study the effect of different physical leaf composition on the tea quality and its grade percentage	Find out the quality of made tea according to plucking variation.	BTRI main farm, Srimangal
57	Determination of made Tea quality at different at different temperature of CTC Rollers.	Find out the quality of made tea according to temperature variation of CTC roller.	BTRI main farm, Srimangal