

The Pruning Season Are We in Control?



Come September, and the entire northeast and North Bengal starts gearing up to prune tea bushes so that they can bear more and better leaves. Pruning is the most difficult part of the tea cultivation because as it has a heavy bearing on the entire production for the next year. It requires a high level of technical understanding. In the tea fraternity, small tea growers are the first-generation nonconventional growers, so in most cases they do not possess the necessary skills required for pruning. This season being underproductive also puts tremendous pressure on the financial condition of the growers. In addition, this makes it difficult to hire help from outside. To understand the situation better, we spoke to a few growers.

Ranjit Karmakar, President, Jaygir Fakir Para Small Tea Growers Society, Jalpaigudi, shared, "To prune our field we are basically dependent on labourers from the outside estate gardens and their advice. Another problem is that we do not understand the variety of cuts like MS, DS, LP, or Hawaii. Mostly, STGs are inclined towards Hawaii because they believe that if we cut less the crop will come fast, and since the price remains on the higher side in the

early season, they hope to make more money out of it. Tea Board of India also provides training programmes to improve our skills, but I think we will need more time. Then, there is the problem of money because there is no production during the pruning period. After forming the society we have been running a savings scheme by saving one rupee per kg of leaf supplied to the society. However, this savings is not enough because cost of irrigation is on the higher side and without irrigation the production cannot be restored at the early season, and so we end up lending money. Institutional lending sources are very less in the region. Although we have banks operating in the area, lending terms are very difficult. They look for mortgages. On the other hand, non-institutional sources do not ask for any document and there is also no timeline for payment. Only thing that they need is the supply of green tea leaves. Though it is a trap, people have developed the habit of taking money from them without bothering about the consequences. Sometimes they take money from two or three suppliers."

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Maximum Residue Levels in Tea Brew

A meeting of the FAO's intergovernmental group (ICG) on tea held on 17-18 September 2012, Washington, DC, USA discussed the issue of maximum residue levels (MRL) in tea brew based on reports of Codex Committee on Pesticide Residues (CCPR) and the need for finalizing the priority list of compounds in different countries and remove anomalies and duplication of work.

The pesticide residue problem remains important in the consumption and trade of tea in the world. There are more than 1100 pesticide MRLs in tea in EU and more than 800 in Japan.

On the issue of residue levels, the FAO's ICG on Tea constituted a working group on MRLs in 2003 to raise the profile of tea as an internationally traded crop, which requires MRLs to be set globally.

India and China, in ICG, argued that according to the investigation conducted by them, it was clearly demonstrated that the transfer rate of pesticide from dry tea to tea infusion during the brewing process was closely correlated to the water solubility of pesticides. It was also clearly indicated that the pesticide residues in tea brew is the real and most important figure that should be considered in the risk assessment of pesticide residue for tea drinkers.

Concept & Design by
The Information and Feature Trust
Laxmi (Kayyadam)
Thondayad, Chevarambalam P.O.
Calicut - 673017
M: 9526577902 / 09868182420
E: edit@labourfile.org
W: www.labourfile.org

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National Workshop on Small Tea Growers

Confederation of Indian Small Tea Growers' Associations (CISTA) organised a national workshop on small tea growers with the help of All-Assam Small Tea Growers' Association in Dibrugarh, Assam, on September 29, 2012. Nearly 300 small tea growers attended the workshop. Tea Board India Chairman Mr MGVK Bhanu was the chief guest.

While addressing the workshop, Mr Bhanu said that a directorate for small tea growers was important for their protection, development and expansion. He said the directorate would commence very soon. "Issuing of licenses to SHGs for opening tea factories will not be delayed anymore," he told tea growers. The Chairman said that the Tea Board was prepared to give a 40 per cent subsidy to small tea growers' SHGs for establishment of tea factories. Advisory boards and Chai call centres in regional languages would also be set up, as demanded by CISTA.

Mr Bhanu also informed that the Tea Board had sent a proposal for allocation of around Rs 300 crore during the 12th Plan for development and welfare

of small tea growers. He also informed the audience that the Board had sent proposals to the Government for amendment of Sections 12 and 14 of the Tea Act so that small tea growers could easily avail of the benefits from the Government and Tea board.

On the occasion, the Tea Board Chairman handed over the first factory license in Assam to members of KAFEUCHA, a self-help group formed by small tea growers of Tingkhong area in Dibrugarh District.

Mr Bhanu released a book, My Struggle My Life, written by Gangadhar Saikia, one of the pioneers in starting small tea plantations in Assam. Mr Bhanu then went on to inaugurate the launch of www.cista-india.net, the official website of CISTA.

Mr Bijoy Gopal Chakraborty, President of CISTA, Mr G Boriah, Director of Tea Development, Tea Board India, and Rakesh Saini, Executive Director, Tea Board India, NE Region, shared their thoughts on strengthening of self-help groups.



(L) Aswini Baruah, AASTGA; Dinesh Kumar Sarmah, Vice-Chairman, TBI; MGVK Bhanu, Chairman, TBI; Bijoy Gopal Chakraborty, President, CISTA; G. Boriah, Director, Tea Development, TBI

Tea News

Saplings Distribution by Government of Tripura for STGs

With about 60 tea estates and over 7,000 small tea growers cultivating nearly 10,000 hectares of land, producing about 9 million kilograms of tea every year, Tripura is ranked as the fifth largest tea-producing state in India. Fertility of soil and good rainfall have enabled tea cultivation to flourish. The tea currently produced in Tripura is recognised for its good blending qualities. Government support to tea cultivation has also helped in the growth and regeneration of the tea industry.

From 1995-96 there has been a concerted effort by the Tripura government towards improving the living standards of scheduled tribes, scheduled castes, religious minorities and other backward classes in particular. One of the ways this has been done is through encouraging the cultivation of plantation crops, particularly tea. Tea cultivation has been encouraged and facilitated in North, Dhalai and West Tripura through providing land, saplings, inputs and also technical guidance. A number of families resettled under various schemes from 1986-87 to 2004-05, and out of these, 795 were growing tea. The number of farmers growing tea is increasing consistently.

Last year (2011-12), the Tripura government was growing 1.25 crore tea saplings through MGNREGA for small tea growers in Gournagar RD Block, Unakoti, Tripura. The government was distributing these saplings to small tea growers. In North, Dhalai and West Tripura together, about one crore saplings were distributed. In North Tripura each grower received between 3,000 and 10,000 tea saplings for 0.5 acre to 2 acres area; in Dhalai and West Tripura each grower received 3,000 tea saplings for 0.5 acre area. An estimated 2,500 STGs benefited from this project all over Tripura. For three years the STGs will continue to get the benefits under MGNREGA, including everything from sapling to labour. Many tea producer societies have benefited from this project.

The Pruning Season

FROM PAGE 1

Abdur Rahman, a small tea grower from Islampur, pointed out, "We have labourers who come from outside and cut the bushes for us. I do not understand the variety of the pruning. They decide what to do. Tea Board of India provides training only to the self-help groups, so we do not have any formal training. We take loans from the leaf suppliers. They do not charge us anything and there is no timeline for payment either. They do not ask for any document or contract. On the other hand, the bank asks for too many documents and has strict repayment rules. Moreover, we are asked to keep our property mortgaged to borrow money from them. Suppliers also pay us whenever we want them to pay, whatever the amount. We find non-institutional sources and the suppliers more convenient. We also use this money for purposes of garden

maintenance."

"Basically, most of us are unaware about technical knowledge in tea. We have to hire technically experienced or skilled persons, and usually they are pruners from the nearest estate gardens or people from the tea labourer community who have been thrown out of estate gardens. But then, the

Some of the STGs carry out pruning by referring to technical advice from their fellow farmers. The majority of the growers, though, give out this work on contract or hire labourers.

estate gardens workers often cannot manage time to work in others' gardens. In a few villages some growers are pruning in their own plantation. These people are trained at TRA or an agricultural university, but only a few of them agree to do work in other plantations," pointed out a grower from Jorhat.

In the Dimakuchi Zone, like in the other parts of the state, pruning is done majorly in the months of December and January. Some of the STGs carry

out pruning by referring to technical advice from their fellow farmers. The majority of the growers, though, give out this work on contract or hire labourers. "STGs here make their own financial arrangements for getting the pruning done. Most STGs use their savings for pruning activities. Some divert amounts from other income sources towards pruning activities. A few of the STGs have also fallen into the habit of borrowing money from STG agents, on the basis of the understanding that the debt would be paid off with the income from green leaves in season," explained an STG from Dimakuchi.

Small growers resort to taking an advance because of their poor financial capabilities, but in some cases it is seen that the easy flow of money and the absence of terms of repayment also attract people to take money from agents. As far as pruning is concerned, no small grower is properly equipped with the skill for it. Only a few have had some training in this aspect. So it will take a good strategy to come out of the trap of credit, while growing cost is making savings insufficient to meet the expenses. In such a scenario, alternative sources need to be worked out.

Small Tea Grower Collectives in Bodoland, Assam

The project 'Sustainable Livelihoods for Small Tea Growers' envisages formation of primary producers' societies (PPSs) of growers who engage in collective leaf trade directly with bought leaf or estate factories. Some among them might graduate to the production of processed green or black tea. This column tracks the progress of these growers in Assam, West Bengal, Tripura, Arunachal Pradesh and Mizoram.



The Team

J John 9868164009 jjohnedoor@mac.com
Pallavi Mansingh 9810393391 pallavimansingh@gmail.com
Kaustav Roy 9609761867 kaustav.roy998@gmail.com
Minto Goswami 9957309749 minto.goswami81@gmail.com
Pijush Goyari 8011008314 pijuscec@gmail.com
Lalhriatpuii 9612609131 lalhriatpuii87@gmail.com
Dayananda Pashi 9436923630 daya.pashi630@gmail.com
Sujit Hazarika 9435670378 sjt.haz@gmail.com
Shampa Das 9508760636 sampadas1988@rediffmail.com
Manoj Boruah 9957346526 monojboruah1234@gmail.com

Primary Producer Societies in Bodoland					
Name of the Society	Location	No. of Members	Area (acre)	President	Secretary
Zion Small Tea Growers Society	Rangsupur	53	69	Jowel Tudu	Benedict Hemrom
Kokrajhar Primary Tea producer Society	Kokrajhar town	52	300	Bipul Sarkar	Umakanto Brahma
Parbatjhora Tea Producer Society	Tipkai	67	150	Ratendranath Brahma	Biswanath Brahma
Evergreen Tea Society	Nagriajuli	58	100	Khem Bahadur Thappa	Abhiram Boro
Pub-Defeli STG Society	Bangalipara	48	80	Krishna Rai	Jagat Bottorai
Banjyoti Society	Rajagarh	56	82	Sasa Dhar Nath	Drubjyoti Nath
Samannay Society	Dhwrwmjuli Jangal	55	96	Pankaj Kalita	Chandan Deka
Green Valley Society	Rajagarh	62	106	Pramod Hazarika	Hementa Das
Sambridhi Society	No.1 Dimakuchi	54	96	Parsuram Chettry	Chandra Magar
Sriraj STG Society	SUKLAI	56	110	Banshi Kattal	Somnath Sapkota
Bithorai Society	Totlapara	66	130	Kagen Boro	Charan Daimary
Rwdwmsha Society	Barangabari	53	105	Prabin Boro	Kukhol Boro
Sona- Bilai Society	Bhergaon	59	110	Sabin Boro	Dwipen Boro
Diamond Leaf STG Society	Koirabari	51	121	Anil Ch. Boro	Porimol Boro
Jawlia Dewan STG Society	Kagrabari	56	104	Dhaneswar Boro	Prafulla Kochari
Jurua STG Society	Nalapara	45	98	Nani Rajbongshi	Narattam Rajbongshi
Rwdwmkang STG Society	Batabari	52	105	Logon Boro	Amar Boro
Sanjwrang STG Society	Dhwrwmjuli	56	92	Upen Boro	Dharmeswar Boro
Milanjyoti STG Society	Nanke Suklai	54	98	Sri. Agni Khanal	Sri. Birsa Orang
Hajw sher STG Society	No.1 Tanki Basti	55	89	Anando Boro	Baneswar Boro
Rupali STG Society	No. 2 Sonajuli	57	98	Lakhi Kalita	Narayan Thakuria
Pipalholi STG Society	Pipalholi, Borengajuli	60	102	Chandra Chettry	Krishna Katwal
Golden STG Society	No.2 Singribari	53	97	Bistiram Boro	Ritu Deka
Dweep STG Society	Borengajuli Khuti	60	100	Mohan Pokhrel	Dadhi Dhakal
Ramdheni STG Society	No.2 Suklai	56	98	Prem Pd. Katwal	Bhim Chettry
Bishnujyoti STG Society	No.3 Suklai	54	102	Shiva Adhikary	Tanka Sarma
Himalaya STG Society	Suklai	70	120	Prakas Das	Amar Sittoula
Pragati STG Society	Borengajuli Khuti	58	105	Babul Das	Nagen Bezbaruah
Golden Life Society	Bhergaon	76	140	Kiriti Kundal Deka	Dharmakanta Rabha
Gwrlwi Bilai STG Society.	Patakata	57	98	Boloram Brahma	Subash Boro

Replanting Subsidy Announced by TBI

The Tea Board has announced the subsidy for replanting and rejuvenation for the different regions effective from current fiscal. Accordingly, for the small sector in Tamil Nadu, the cost of replanting has been estimated at Rs 369,500 a hectare.

"A subsidy at the rate of 25 per cent of this cost amounting to Rs 92,375 will be disbursed. The subsidy will be disbursed in two instalments. The first instalment comprising 60 per cent of the subsidy amounting to Rs 55,425 will be paid after completing the planting. The second instalment of 40 per cent amounting to Rs 36,950 will be paid after two years from the completion of planting," he disclosed.

Source: The Business Line, July 20, 2012

Technical Tips on Pruning and Skiffing

Pruning and skiffing are the most important operations among all the cold-weather operations in tea.

What is pruning?

Pruning is a cyclic operation; it provides fresh stimulus to the tea bushes for new vegetative growth. For keeping the bushes in a vegetative stage of growth, the old set of maintenance foliage is completely renewed by pruning. With the increase in the age of shoot-bearing wood, the size and weight of the shoots (leaves) on the plucking surfaces decrease, more banjhi formation occurs, and ultimately there is total loss in production. As such, pruning is a very essential operation in tea.

The basic objectives of pruning

1. To keep the bush in a vegetative stage; 2. To renew wood and maintenance foliage to provide stimulus for new growth; 3. To maintain convenient frame height for efficient and economic plucking; 4. To correct the past defects in the bush frame (removal of knots, dead branches, etc.); 5. To regulate the crop distribution and quality and 6. To reduce incidence of pest and diseases.

Types of pruning/skiffing

1. Rejuvenation pruning/medium pruning (RP/MP)

This is a heavy type of pruning done at 40cm-50cm from ground. It is done in the period from end December to January. The basic objective of RP or MP is to rejuvenate (renew) the frame of old tea by removing almost all knots in the frame, along with dead and diseased woods, by pruning.

Important points to be considered before RP/MP: i. The section must not be uprooted for next 12-15 years; ii. Sections having continuous yield decline due to the presence of knots with dead and diseased wood, and have more vacancy (but not more than 25 per cent); iii. Provide rest to the bushes at least 6-8 weeks prior to pruning; iv. If soil has a low-medium status of potash, apply additional doses of potash @35-40kg/ha and phosphate @15-20kg/ha in end August or early September; v. Spray MOP 2 per cent OR SOP 2 per cent (for organic garden) as foliar at fortnightly interval during rest period; vi. If the section is infected by stem diseases (*Poria/ Acaulospora*), dip the pruning knife in 10 per cent copper oxychloride solution after pruning of each bush.

Important points to be considered after RP/MP: i. Remove the prominent knots left after pruning; ii. Clean out dead and diseased branches, cut out cavities and holes up to the live wood; iii. Apply Trichoderma pasting (20 per cent)/Indoapstein to the surfaces as well as in all other prune surfaces; vi. Leave a breather (a healthy branch) shoot having at least 25-30 mature foliage in south-west direction in relatively weaker bushes and remove just at the start of bud break. (A breather is a healthy shoot that is not pruned at the time of normal pruning but pruned after bud break occurs in the pruned sticks. A breather provides shade to reduce sun scorch of cut surfaces, contributes photosynthates (food materials) to the roots and helps in growth of the roots.); v. Spray 12kg washing soda or 4-5kg caustic soda/soda ash with 4kg quick lime dissolved in 200 litres of water; vi. Dried-up mosses should be removed using a hessian cloth; vii. Clean and deepen the existing drains; viii. Infill the vacancies; ix. Spray insecticides when there is about 40-50 per cent bud break to protect the emerging buds from sucking pest.

Tipping height: Tip the primaries at 65cm-70cm (26 inches-28 inches) from ground level.

2. Height reduction prune/corrective prune (HRP/CP)

As the name suggests, this is mainly done to: a) reduce the height of the frame (due to rise in pruning height in every subsequent cycle, plucking reaches an unmanageable height); b) remove the upper layer knots; and c) make adjustments if wood at normal LP level is not clean and sizeable. HRP/CP is lighter than RP/MP but heavier than normal LP.

Pruning height: Decide the pruning height where maximum number of upper-layer knot can be removed (normally, it should be 50cm-60 cm from ground level).

Points to be considered before and after pruning: Same as RP/MP

Time of HRP/CP is end December to early January. The height of tipping in HRP/CP is 65cm-70 cm above ground level.

3. Light prune (LP) or cut across

LP is normally done at the end of a pruning cycle. It is done to renew an entire set of maintenance foliage – that is, top hamper of the bush. LP is done 4cm-5cm (1.5 inches-2.0 inches) above last LP mark. (Retain a new wood allowance of 4cm-5cm). But if LP is following RP/MP, then LP will be at 7cm-10 cm above RP/MP mark.

Important points in LP: i. Provide rest to weak bushes for a period of 3-4 weeks and retain

a breather in case of very weak bushes; ii. The pruning knife should be 15cm long and 450gm in weight; iii. Knife cleaning out to be done after pruning to remove banjhi shoots, trailing matidals, and any dead and diseased wood within one week, without removing any productive branch; iv. Spray a round of copper oxychloride (COC) @500gm in 200 litres of water within 24 hours of pruning, covering all cutting surfaces; v. Provide caustic/lime washing (doses already discussed) within 15 days after pruning and remove dried mosses manually after a week.

Time of light pruning: Mid-December to early January

Tipping in LP: Tip at an average height of five full leaves or 20cm above light prune level, whichever is higher.

4. Deep skiff (DS)

Deep skiff is an interim operation within a pruning cycle that helps in regulating crop distribution and extending pruning cycle without deteriorating crop and quality.

DS is done at 12.5cm-15cm above last LP mark. When it comes after LP, the cut is given at midway between LP and plucking level. After DS there should be a more than 50 per cent clear fork at the surface of the bush. Remove the thin and wiry banjhi branches and twigs after skiffing with a round of hand cleaning out.

Time of deep skiff: End November to early December

Tipping in DS: Tip at an average height of two full leaves, which normally comes at 7.5cm-8.5cm in old tea and 9cm-10 cm in young and healthy mature tea bushes above the light prune level.

5. Medium skiff (MS)

Medium skiff is normally done to either remove or renew the maximum number of die back points just at or above last tipping level, mostly under a dry and droughty situation. Medium skiff is given to remove the current year's crow's feet formed at the top of plucking/tipping level. If MS is done after DS, remove the crow's feet formed during the DS year, which normally comes at 5cm-6 cm above last DS mark. If MS is done after LP, remove crow's feet formed during pruning year, which normally comes at 16cm-18 cm above last pruning mark.

Time of MS: Same as DS

Tip the MS tea at an average height of one full leaf (4cm-5cm above MS mark).

Higher tipping allowance and delay in tipping may lead to excessive banjhi formation, thereby affecting the crop and quality. So, there should be an even level of cutting surface as far as practicable to avoid the difficulties at the time of plucking. Otherwise, the MS operation is not advisable except some specific situations.

6. Light skiff (LS) and level of skiffing (LOS)

These are the lightest forms of skiffing done in the sections to be kept unpruned. These operations are done to level the plucking table or to remove the shoots infested by pests like *Helopeltis*, and to get early flush. LS is done just above the original plucking/tipping height. LOS is done 4cm-5 cm above the initial plucking/tipping height just to level the table, removing excess creep and odd shoots above the table, and to retain more green tips of twigs on the plucking table. In Upper Assam LOS should be preferred over LS under normal conditions, done in January (2nd to 3rd week).

Pruning cycle

The period between two successive light pruning (LP) is termed as a pruning cycle. In between, lighter forms of cut (skiffing) or unprune, or a combination of both, are followed.

To exploit the productive potential of tea, depending upon age, vigour of the tea, soil texture, drought, shade condition, etc., the need for a combination of 3-4 years pruning cycle is considered. However, in doing so, the desired balance of percentage under different forms of prune/skiff should be maintained keeping in view the questions of quality, crop, availability of workers and incidence of pest and disease.

It has been found that in normal growing conditions, for the plains of north-east India 3-4 years pruning cycles are suitable. The four-year pruning cycle LP-UP-DS-UP is crop-oriented and also considered suitable for old tea and relatively weaker mature tea, but from drought and quality point of view it is not suitable. Among the three-year pruning cycles, LP-UP-UP is crop-oriented and best in younger group of teas but should be avoided in drought-prone areas. Pruning cycles LP-UP-DS and LP-DS-UP are both quality- and crop-oriented. After RP or MP, a cycle like RP/MP-UP-UP may be followed before entering into the normal pruning cycle.

Nabaseep Saikia

Assistant Manager, Bazaloni Group Limited, Tinsukia



Centre for Education and Communication
173-A, Khirki Village, Malviya Nagar
New Delhi – 110017
T: 91 11 29541858 / 29541841
F: 91 11 29542464 E: cec@cec-india.org
W: www.cec-india.org