

Technical Paper 1 - Standards & Best Practices on Plantations

by Dyan Seneviratne

(Dyan Seneviratne is a Member of the World Bank Expert Panel – Plantations 2017)

Introduction

In this paper of mine I shall strive to show the reader examples of ‘attention to detail’ and making one realize that the ‘Planter’ is a multi-talented, forward thinking leader with constant zeal! Let us never make him feel inadequate and/or insignificant in the macro-image of the ‘plantation industry’ where the new investors are constantly demanding ‘high growth’ and bottom-line enhancement – buzz terms indeed! Simply put: don’t put the cart before the horse – ever! The profits will come – eventually. But plantations are not for ‘quick fix’, Fly-By-Night’ speculators!!

In reality today, Sri Lanka has the dubious distinction of having the lowest yield/ha [YPH] and consequently the highest cost of production [COP] out of all four major tea producing countries - namely India, China & Kenya. And if we don't look sharp, lesser tea nations such as Vietnam, Indonesia and even Turkey may overtake SL’s tea productivity!

Personal observations based on factual experience: I recall when the writer was an Assistant Superintendent under the legendary Ranjan Wijeratne at Demodera Group in 1971 planters from Indonesia were sent to SL and directed to us to learn tea nursery techniques. Today planters from SL are sent to Indonesia to learn the ropes!!

When the undersigned was the Manager of Pettitagala Estate, Balangoda [1979-1984] its YPH was raised from 1100 to 1950 kg/ha, whilst at same time reaching the highest NSA amongst SLSPC estates; similarly when he managed SL's largest tea plantation - Hapugastenne way back in the mid eighties its YPH was raised from 1500 to above 2500 kg/ha. Same story for Diyagama West - the then largest plantation in the upcountry - YPH was increased from 1200 to 1900 plus when this writer managed those large estates.

This is not meant to blow my own trumpet but to merely state that if Superintendents of estates could increase their YPH, and thereby reduce overall costs; up the NSA whilst at same time enhancing capital value of property with Replanting of large tracts of land and maintaining all fields in spotless weed-free condition ***and*** attending to all essential agronomic practices including effective draining, deep forking, mulching, establishing of high and low shade, constructing terraces etc, why not now? In addition we – most of the ‘then superintendents’ maintained all their estate roads and field paths in first class order.

The workers were a happy lot – most Superintendents of estates of an earlier generation spoke Tamil fluently and took pride in not only beautifully manicured tea plantations but also kept their work-force contented by attending to their needs expeditiously. Visits to workers’ abodes were de rigueur! And effective follow up action even more important. **The estates were abuzz with activity and enthusiasm!** Speaking to a former well respected Director of the TRI a few years ago, he disclosed that many of the present-day planters are

unable to effectively nurture a young tea plant to maturity! This is whilst most of the plantations – at least the large commercial plantations are wallowing in the mire of low productivity, oscillating between 700 & 1600 kg/ha – anything higher are exceptions!

RE-PLANTING & INFILLING MUST BE ‘ON-GOING’

It would be logical to get on to a well planned, coordinated and simultaneous twin-pronged tea re-planting and infilling program that is sustainable and oriented to achieve 3000 kg/ha plus where the re-planted areas are concerned. A Tea plant CAN be brought to maturity in 24 months IF effectively and enthusiastically monitored from selection of mother bushes to nursery environment to creating the ‘right conditions’ in the field. Extensive soil rehabilitation should never be a nominal operation. Planting of Mana grass to be done as close as possible, effect proper conservation via drains etc, then lop every 45 days; fertilize every other lop and one would then have enough rich, carbonic matter within 12 months!

When planting tea comes along – one should ensure that **each** planting ‘hole’ is of required dimensions; **only the best nursery plants** go out to the ‘Clearing’ – that is an absolute must! The formative period of the first 14 months are critical as is the retention of moist conditions in soil by copious thatching, prevention of erosion of life-enhancing top soil; the high/low shade is already established **before** introducing tea plants –once again a critical factor – often overlooked! The timely and judicious ground and foliar nutrient applications need to be emphasized. Of course the young plant needs to be ‘framed’ so that its primary and secondary braches would blossom to support a vibrant, potential plucking table – the economic base of each bush and by extension the entire field that would directly contribute to the overall productivity of the whole plantation.

So the raising of the YPH of the nucleus plantation is a sine-qua-non for reasons obvious – higher productivity would lower costs significantly. Presently many take easy way out by opening their factories for Bought Leaf Operators – this is a ‘Double Edged Sword’ – Quality of leaf is adversely affected. One then is at the mercy of unscrupulous Leaf Collectors. Bought Leaf per se is not an evil option but it should not be the primary source of leaf. Each estate unit should be self-sufficient. Then taking on B/Leaf under strict conditions and monitored daily would be a bonus!

NON-PRACTICAL BUDGETS BEING THRUST ON PLANTERS?

Today we see tinkering of budgets a.k.a. ‘Estimates’ in plantations – Managers left out of equation, are ‘handed over’ budgets that are mostly un-workable with nominal amounts ‘allowed’ for each item under say, ‘Draining, Thatching, weeding etc based on, at times, inflated crops! In this scenario Managers are mortally scared to ‘over-spend’ ANY such item. Efficiency appears to be – you are given 1000/- rupees as ‘budgeted’ and if you ‘spend’ 950/- you are a ‘good boy’ – regardless of the ‘ground situation’!

Costs then reduced by increasing yields and not by fudging figures whilst dropping overall standards, withholding essential macro/micro nutrients and weakening our primary assets – our tea bushes! We did not make the capital value of our plantation units decline as is sadly

evident by observing state of ‘estate roads’ for instance; akin to dried up river beds!! And ‘New Clearing’ appearing like deserts with young twiggy plants, wine-glass shaped, making a Herculean effort of surviving the rigors of sun, wind and drought and/or excessive rains! No wonder many – especially those in Finance look at ‘tea Re-planting’ as an absolute waste of money – ***it would be a waste if we go on re-supplying 70% dead plants each year!*** The expected returns would not even reach levels that the old-seedling fields [that were uprooted] gave! Do sub-standard work – constantly looking over shoulder at those accursed un-workable budgets and that would be the result – useless clearings that would have to be later abandoned!

Reverting to Re-Planting - Managers should be given an overall total budget for entire clearing; and not itemized allocations for each sub-item. Because each acre / ha of land has its own peculiar issues to deal with. For example some sections may need more intense draining or terracing or thatching as the case may be. **Need-based budgeting based on practical experience ensuring quality is essential. We have to move away from earlier practice of forcing down throats of Superintendents un-workable estimates that only look good on paper but of no value overall!**

People often ask this writer how he did increase YPH / Productivity / lowered costs in all tea plantations he managed whilst with the industry for 38 years. His answer is simply thus:

Look after the ***SOIL, BUSH & PEOPLE.***

Let’s ponder the above 3 elements – how would your tea plant/bush grow without the support, moisture and nutrients from the soil? Many are under the mistaken notion that ‘soil’ is only an inert medium of only offering ‘anchorage’ to the bush – wrong!!

OUR HIGHLANDS & FERTILE RAIN-FED LOWLANDS – IDEAL FOR TEA, STILL!

Some Heads of RPCs proclaim that much of SL’s tea estate soils are ‘old’ and would not lend itself towards producing healthy, vibrant tea bushes. Whilst certain areas may be too steep and / or constantly buffeted by strong winds, many of the so-called sterile soils or at least their condition symbolizes gross neglect and abysmally poor management over an extended period of time; however ***much of it is reversible.***

AIMLESS ‘DIVERSIFICATION’ IN THE PAST WAS A WASTE OF RESOURCES

The aim should be to increase the national YPH of our tea [RPCs and Smallholders] with a **reduced** extent and diversify all other areas for productive pursuits. ‘Diversification’ became a hastily contrived ‘escape strategy’ during the JEDB/SLSPC era and sadly even adopted by some current RPCs! For instance if a field was/is ‘difficult’ to manage – full of weeds, prone to illicit plucking, too far from worker quarters etc they used to ‘diversify’ on to forestry [a few gum trees here and there!] or spices – a sprinkling of clove trees, coffee trees, passion fruit etc without ever pondering that the same issues might crop up later or worse robbed with impunity! Result? Productive tea / rubber lands being abandoned!

COMMERCIAL FORESTRY & OTHER VENTURES YET UNTAPPED

Some present RPCs have identified commercial forestry as a viable venture as it would cost around Rs 32/- to manufacture just one kilo of tea, using imported oil as opposed to a mere Rs 8/- to manufacture one kilo of tea using fuel-wood. It has been analyzed that the plantation sector alone would need around 4,000 hectares of commercial forestry.

Yet it is not only 'Forestry' that the plantations need to diversify. A planter has only got to use his imagination and creativity and he'll see so many other potential ventures that would bring in the \$\$\$. Fuel-wood, high-value timber, export oriented greenery / vegetables [also for local market], exotic fruits, cut-flowers, spices such as Cinnamon [*Kahawate RPC had got onto Cinnamon diversification very well in much of their low country estates*] inland fisheries, dairy farming, livestock [piggeries, poultry farming]; Cocoa, rain-water harvesting, commercial wind-power, hydro-power, solar power grids, converting factory roofs with solar Panels; agro-tourism – hang gliding / trekking, photo-ops, eco experiences etc.

A plantation should not be perceived as a mono-crop venture anymore; rather as resource-rich lands that abound with natural resources aplenty – innovation and creativity would work wonders!

SOILS ARE NOT A STERILE ENTITY. DON'T MAKE IT SO!

There are no 'quick fixes' of making soils fertile. We need to get our basics right and have bags of patience; besides meticulous planning and timing of any agro-operation is all so important. Also we must strictly abide by the 'Rules' of Mother Nature when it comes to 'planting' in all its facets!

Yet before the writer gets onto the 'The Tea Bush' – think of soil pH vis-à-vis tea, soil porosity, soil compaction, moisture retentive qualities of soil; moisture percolation ability as against water running off on surface; cat-ion exchange capacity etc. There is an absolute necessity to establish lateral and leader drains; to deep fork, to mulch and thatch soils; to bury prunings perhaps; to attend to stone / live terracing on a need basis etc. If ignored your soils would be soon depleted of its moisture retentive qualities and fast descend to that of compacted, gravelly and worse, sterile soil that would encourage surface run-off, making even make NPK applications a waste!

YEILD PER HA [YPH] – A MUCH ABUSED AND MISQUOTED TERM!

Before working out the Yield per Hectare one must consider the following significant factors germane to YPH: the barometer of the health and standing of a commercial tea estate.

[1] 'Stand' per ha [No of bushes in each ha]; is 'census' taken of bushes at each pruning? Bush stand 20 years ago may be significantly reduced today, if no infilling done! How can we term a 'tea acre / ha' thus if its bush population is only 3000 / 7500 per acre/ ha?

[2] Mixed stand or exclusively seedlings – if so 'Old Seedlings [prior to WW11] or New Seedlings or 'Clonal Seedling' seed taken from cloned mother buses. OS were planted on the 'Up & Down' system and not planted on the contour. Hence its Bush Stand much lower than if planted on contour.

[3] Pure VP Block – if so mixed cultivars or separated into Clonal blocks. VP tea could yield at least 3 times more than OS tea; certain cultivars such as TRI 3000 & 4000 series are higher yielding and would thus produce more than some of the say, darker pigmented clones.

[4] The vibrancy / health of bushes overall – here soil moisture / shading [or lack of it] NPK inputs – ground / foliar; then degree / harshness of tipping / plucking impact on bush growth/yields. Today some estates have secured 3000 YPH mark; some linger at 700 kg/ha!

[5] In a typical 4-year pruning cycle did one attain the ‘Maximum Spreading Potential’ [MSP] of the bush by its 18 month post-pruning? Each bush must spread to its maximum spread within 18 months after pruning. This can be ensured by trained pluckers and close monitoring. In short – better the spread higher the number of potential plucking points on plucking table and thereby translates to higher yields. Dynamic & close supervision needed.

[6] Are all bushes ‘pluckable’ – here there are possible constraints – e.g. height, bush tables covered with creepers, bushes located on too steep a terrain, bushes skiffed at ‘last plucking round’ to counter excess height etc. Unattainable heights mean unplucked tea bushes. Period! Harvesting must be elevated to A1 priority in field supervision, always.

MONITORING OF QUANTUM PER PICK PER ROUND

There are countless areas of bush management, to say the least! However one glaring factor that supervisors miss out is to monitor the quantum per pick at each plucking round. The ‘totals’ of each round should not vary more than 5 to 8% plus or minus. If there are high variations per pick one could safely assume that only a part of the field is plucked but shown as totally plucked or some leaf is robbed by people of adjoining estates or worse illegal plucking under moon-light where such leaf is siphoned off to shady Green Leaf Collectors! Or simply ‘false’ plucking rounds! Units that display dramatic YPH drops display these issues.

LET US TACKLE ‘WEEDING’ SCIENTIFICALLY!

If plucking is the costliest and most labour intensive operation on a ‘tea-estate’ then a ‘close second’ is the cost of NPK Fertilizer and of course weeding – ground condition maintenance. The writer recalls the challenges he faced in keeping estates weed-free in the early days of his career. Much of the ‘Weeding’ was done using implements such as ‘Scrapers’ which did much harm to soil as it would loosen it and expose it to be washed away during the rains. Weeding was considered a ‘necessary evil’!

One must realize that ‘weeds’ like any plant need sunlight, moisture and ‘good soils’ to thrive. All 3 elements need to be present for weed growth. Moisture and ‘good soil’ cannot be reduced or eliminated; however sunlight if controlled would significantly lessen weed growth – hence Mulching, establishing cover-crops and ‘Thatching’ on weed-seed-free surfaces would ensure weed free conditions! Apart from mulching and thatching, bush-to-bush merger of tea bushes would effectively reduce sunlight penetration towards triggering off germination. Weed seed germination is from seed availability – which comes to being from flowers of weeds. ***So weeds must be ‘tackled’ before flowering!***

The use of herbicides on large commercial tracts of tea lands are needed – if used judiciously and timed. Some pre-emergent weedicides need to be sprayed on bare ground before pruning along with the Dolomite Applications. These two operations done **once in 4**

years in a 4-year PR Cycle field would reduce excess soil acidity plus effectively lessen weed-seed germination on pruning when sunlight starts to stream in and would otherwise trigger large scale germination of weed-seed. At 'Tipping' and thereafter at each plucking round for 18 months one only needs to uproot manually the few weeds that spring forth until bushes have merged – after which weeding per se is not an issue if bush to bush merger was achieved during 18 month period after pruning.

The trick is to proactively tackle the question of weeding or 'Ground Condition Maintenance' – go for it [manually or chemically] before flowering of weeds. This is absolutely essential. One should avoid spraying of herbicides on tall 'flowering weeds' that are seen even above the tea bush table – the 'spray drift' would effectively scorch much of the side branches besides being a waste of funds as herbicide are ineffective on mature weeds or weeds with a rhizome!

To keep a plantation absolutely weed-free is not by using implements but by the 3-pronged strategy of manual / chemical & cultural [thatching / bush-merger]. One important point to remember is if one takes over an estate 'riddled with weeds' one cannot have low weeding operational costs during the first 3 months. If for instance estimated cost of weeding is Rs 400/- per ha you cannot do weeding at such costs initially. One may have costs of even Rs 1,000/- per ha to start with. However it would gradually reduce along with the 'weed population'. Sadly some RPC Heads insist that Managers 'show' such costs 'within the estimate' from Day One. Result? ***One significant section of the plantation would be in heavy weeds and may not even be 'fully plucked' – thus materially reducing the YPH!***

YIELD PER HA BASED ON 'REAL' GROUND SITUATION

Accordingly the Yield per ha means much more than a mere figure. However it is vital that all estates, 40 hectares and above at least are re-surveyed field by field; excise areas with large boulders, mini forest blocks, gardens etc. So the survey should actually reflect the tea area per se. Furthermore those fields having less than a minimum stand, say 7,500 per ha or 3000 per acres should be temporarily removed from 'Revenue Extent' – the reason for poor YPH should be ascertained; then one should get onto a proper Replanting of field. Infilling could also be considered but it should be done for fields having around 65% stand so that a max percentile of 35% could be tackled. ***If Infilling is carried out at each pruning then the question of a dwindling bush stand does not arise!***

CULLING OF WEAK BUSHES

During much of the late 1960s and 1970s the writer recalls that culling of weak bushes together with uprooting of dead bushes were done 24 months before pruning in mature fields and such areas squared off and planted densely with a suitable grass such as Mana [Guatemala was less preferred because of its tendency of crowding the surrounding healthy tea bushes] and then lop the Mana @ 45 days and fertilize with Grass Mixture such as U.625 every other lop, i.e. 90 days. And so when pruning is eventually carried these grass blocks would have been adequately rehabilitated. Infilling then is carried out as an essential post-pruning operation along with applying 'Limbox'; Mosing & Ferning well before 'Bud-Break'; 'Draining' mostly to reach its original 'Lateral Drain dimensions'; repairing all broken stone terraces; deep forking and even burying of prunings in fields with 80% stand and above. The

idea was to ensure retention of healthy bushes and introduction of new bushes that would replace the old, moribund and indeed dead bushes. Naturally even the so-called old seedling fields [OS] due to effective infilling, yielded even 2000 kg/ha or more!

However, Infilling amidst poor / senile seedling tea is also futile because of the disproportionate nutrient demand of the younger bushes and consequently the bush returns for plucking – some bushes would be ready for harvesting whilst the others of the old seedlings would be in ‘bud-stage’!

From ‘Soils’ & ‘Bushes’ this writer gets on to the vital ‘People’ of a plantation.

‘PEOPLE’ ON ESTATES

‘The People’ are all those attached to plantations – typically the workers, staff and executives; yet one should also take the children and ‘pensioners’ into the equation too as they too would have a hand in total productivity! Anyone who is directly and or indirectly affected by activities on a plantation: would form the definition of ‘people’ on a plantation!

Let’s take the pluckers – those who are entrusted with harvesting tea bushes of an estate to begin with. The usual practice is when a child – usually a female is around 15 to 16 years they are selected to pluck certain ‘old fields’ [to do least damage to the plucking table!] or some are supposed to be tutored by an experienced plucker and after a few months of such ‘training’ they are drafted in to the main gangs of pluckers. The question of planned and structured HRD type initiation does not really get the attention it should receive!

The undersigned recalls when he was managing SL’s largest tea property – Hapugastenne, he realized that in order to extract its potential he had to recruit at least another 100 pluckers urgently. The problem was that all the resident pluckers were already deployed on plucking! He was then compelled to source potential pluckers from a radius of 3 to 4 km from the divisional boundaries by sending out motivated ‘scouts’ who were briefed on the ‘profile’ of the pluckers required – at least physically – we did not want emaciated runts to begin with! Surprisingly quite a few sturdy-looking young females turned up – most of them had never ‘touched’ a tea bush, leave alone plucking them!

However most of them had done their O/L – some even had passed their O/L in Science subjects! Plucking would have been furthest from their minds! We called them **‘Harvesters’** and *gave them attractive T-Shirts with the term ‘Harvesters’ emblazoned* only after the writer carried out a crash course of 3 weeks on theory of plucking even giving them botanical terms relevant to the tea bush and leaf, photosynthesis, transpiration, naming the different leaves etc and do’s and don’ts of plucking with appropriate scientific terms in Sinhala – that struck a chord with them and they gradually changed their attitudes! Then we got onto to the practical side of training plucking aided by the champion pluckers, capping it off by selecting the best three trainees at a ‘test’ based on theory & practice!

VILLAGE LASSES TRANSFORMED INTO CHAMPION PLUCKERS

Within a mere six months down the road these very same young ‘village lasses’ became champion pluckers themselves, beating those experienced ones hollow! This trained and motivated group of pluckers certainly helped towards establishing records in YPH hitherto

never ever reached and exceeded thereafter! So pluckers need to be carefully selected and thereafter vigorously trained both in theory and practice before they are sent out to the fields. *We need to motivate them. We need to listen to their issues/ woes at home; we need to know what type of food they consume; they need to be aware of the importance of consuming milk, eggs, pulses etc. We need to check their blood and see if they are anemic; if so immediate action be taken with iron supplements etc.*

Before looking at improving the quality of an estate, one must improve the quality of his workers – overall! Isn't this then fundamental without looking at workers and / unions with an adversarial stance? **Workers are not a 'cost' to be cut! Instead a motivated work-force you sincerely love as they could then do wonders that were hitherto unimaginable!!**

Plucking [harvesting] was and is the costliest item on a tea plantation. It requires much planning, training, motivation of gangs, monitoring physical / mental aspects of pluckers etc. Sadly little supervision is seen by many estate executives on this vital aspect!

THE ESTATE MEN MATTER TOO!

The next matter under 'People' – the other workers apart from pluckers: usually the male 'sundry' workers – here too one must identify the inherent talents of each and every worker – looking into historical data / kanganies' assessments and decide further on what type of further training they need, depending on their physical attributes, general behaviour and of course the needs of the estate – both short and long term.

For instance on one estate, on assumption of duties the writer found that there was an apparent dearth of 'Pruners' – the young SD [Assistant Superintendent] had been 'told' that that was it! We called for the checkrolls of the past 4 years and it transpired that quite a few workers who had feigned ignorance on how to handle a pruning knife had in fact been enthusiastically pruning! On further probing it was revealed that most of the pruners had decided on a plan to inform the new 'Durai' / Superintendent [the young SD had also been relatively new] that they did not know how to prune! Pruning is considered one-of-the toughest physically taxing jobs on a tea estate; we did not adopt a confrontational course but spoke to each of the 'actors' on a one-to-one basis [addressing them together would have been suicidal!] and before long they were smiling, willing and able pruners!!

Similarly the estate's executive staff – Manager and executive assistants must keep a record of each and every worker and then by extension even their dependents – one must know their names [including their nick-names!] details of their houses / toilets / gardens, even names of their pet dog and more importantly their proven competencies and potential. Would they fit [pruners apart] in as good carpenters, masons, even cooks? One has only got to look at the bigger picture – we did so during the pre-computer era. How easy record keeping of such magnitude would be in today's context!

THE PLANTER SUPERINTENDENT – STILL THE PIVOT!

The estate Superintendent should be the sole authority. Yes he could either make or mar a plantation. It is therefore absolutely essential that one looks into all possible aspects before recruiting a young man to take job of planter-trainee and thereafter to rise up as an Assistant Manager and finally to being a fully fledged Superintendent / Manager.

An athletically sturdy man would be preferred; yet one must not ignore the intellectual part of it! Remember iconic planting personalities like Ranjan Wijeratne, Ken Balendra, Sepala llangakoon etc were renowned planters in then Ceylon [now, Sri Lanka]

SOME OF TODAY'S RPCs

Some of the present day RPCs have some excellent tea and are indeed managed very well. The writer could pick out RPCs like Bogawantalawa, Talawakelle, Watawala, Elpitiya – that still appear green and robust! They could however still intensify their Replanting ratios and innovativeness! Conversely some RPCs are incompetently managed with dismal results.

Bogawantalawa RPC being run by an astute non-planter, namely Jayampathy Molligoda has shown the rest how to look at plantations from a different paradigm. He has identified the resources of each unit innovatively and indeed pragmatically. One needs to stop and identify the latent, albeit untapped resources that each estate is blessed with and then plan and nurture parallel business ventures which need not be only Tea, Rubber, Cinnamon etc. For instance Kahawatte RPC is moving away from one-crop model to multi-cropping. We need to think afresh, yet the existing plantation crops need to be protected and its products enhanced by value-addition. ***Dyan Seneviratne***

Land management and productivity: The management of soil fertility consists of two areas: *[a] The conservation of existing soil fertility [b] Improve the fertility of soil that is already low.*

Above aspects are what adds to negativity with Replanting and dwindling yields saying that [erroneously] the Sri Lankan Tea industry is doomed due to degraded and 'old' soils! However as soil is a living entity such fears are misplaced as depending on key management practices adopted, tea growing could either enhance or degrade soil productivity. In fact judicious and timely irrigation, a sine-qua-non, has the potential to transform an infertile soil into a highly productive one; yet one must be cognizant that 'too much' of aqua-aid can also increase the rate at which soil nutrients are lost through leaching, as well as leading to a buildup of salts, if such soils are not properly and effectively managed.

Harvesting [plucking] of tea leaves removes a significant amount of the essential nutrients that plants have absorbed from the soil. Also at times of Re-planting / New Planting / Pruning when vegetation is insufficient to cover the soil adequately, accelerated erosion may result in further loss of nutrients that are lost from the soil and if not replenished, soil fertility will decrease. Such exposed soil also tends to harden and become less permeable due to soil lost through rain-splash dispersion. Exposed 'hard pan' soils lose its colour, texture and ability to preserve moisture; soon leading to 'sterile soils' grossly inimical to successful plant growth!

Most tea growers are familiar with terms such as chemical fertility, organic carbon and pH of the soil deciding on fertilizer needs as well as Dolomite applications etc. Yet many managers lack awareness of 'physical fertility' which involves examining the soil to determine its compaction, moisture retention, aeration etc and critical 'biological fertility'.

Physical Fertility of Soils: The matrix consists of solid matter joined by spaces whilst holding moisture and air both of which are essential for biological and chemical activities. Significantly, depending on the size of the mineral components, they could be classified as sand, silt and clay. The organic matter originates from mainly plants and to a lesser extent, of animal origin.

The solid fraction is responsible for anchorage of the roots. Part of the solid fraction, i.e. minerals and organic matter are responsible for storing nutrients as well. A proper balance of mineral and organic matter results in proper 'tilth' and biological activity, essential for transformation, retention and release of nutrients from the applied fertilizer to the soil.

The basic physical properties of the soil are: its colour, texture, structure and consistency.

The above properties of soil are responsible for:

[a] Heat regulation and maintenance of soil temperature

[b] Compaction – how tight/loose the soil is

[c] Water and air holding capacity

[d] Aeration – supply of oxygen for root respiration

[e] Infiltration – amount of water that could enter the soil

[f] Percolation and drainage characteristics

[g] Workability – how easy/hard to work using machines and agricultural implements

[Source: Tea Research Institute: The Handbook on Tea]

Need for Forking Tea Fields: As compaction leads to decreased macro-porosity of soils resulting in decreased water infiltration and increased surface runoff, forking the soil is effective in loosening it for plant growth. Therefore, Forking at least once in a pruning cycle in alternate rows is essential to ensure soil fertility. The degree to which soils are suitable for tea depends therefore on extent to which good agricultural practices are adopted to prevent degrading soils.

Soil compaction is mostly caused by 'treading' with worker movement to perform harvesting and other cultural practices and leads to, apart from compaction of the surface soil layer, it also impedes entry of rain-water resulting in the surface runoff and causes shortage of oxygen, essential for sound root-growth. If the runoff is high, applied fertilizer could be washed away.

It is therefore reiterated that 'Deep Forking' is carried out to open up the soil without turning over the clod with minimum disturbance to feeder roots. This 'Deep Forking' is done by using a garden fork with three or four prongs of 37.5-45 cm [15 – 18 inch] long. The fork is forced into the ground at an almost vertical angle up to a depth of 15 to 18 inches and the handle is then pushed forward to open up a pocket behind the tines [prongs] whilst pushing the ground litter, green manure loppings into the fork – this is called 'Envelope Forking'. It is recommended by the TRI to carry out such forking once a pruning cycle in the Up and Mid country and once in two cycles in the Low Country.

Forking should be done after pruning at time of tipping and should not be done during or prior to onset of dry weather, because it exposes most of the soil surface, causing moisture loss from the exposed soil surface. Significantly, studies conducted at the TRI showed that forking could enhance tea yields by as much as 20 to 25%.

Soil conservation: The conservation of valuable top soil is vital from the fertility point of view. The soil in tea lands is mainly lost by erosion due to rainfall. Erosion is the result of detachment and dislocation of soil particles by rainfall. The onsite effect of soil erosion is the loss of fertility and the offsite effect is the silting of reservoirs and the blockage of down-stream water ways and drains. The silting of reservoirs affects the capacity of hydro-electric power generation and irrigation, to say the least.

The factors responsible for erosion are:

- [i] Rainfall [erosivity]*
 - [ii] Vulnerability of the soil for erosion [erodibility]*
 - [iv] Slope-length of the land*
 - [v] Steepness of the land [topography]*
 - [vii] Type and extent of soil cover and*
 - [viii] Management factors*
- [Source: TRI Handbook]

Soil erosion could be minimized by having adequate soil cover in tea lands as it prevents the soil from direct impact of rain drops on the soil surface.

The main methods of soil conservation are:

- [a] Mechanical [b] Biological and [c] Agronomic/Cultural*

Mechanical Methods of Soil Conservation: The mechanical methods of soil conservation are: *[a] Terracing and [b] Lateral and Leader Drain establishment.*

The terraces are flat strips across the contour and could be adopted when the slope is greater than 60 percent. They could be bench or stone type.

Bench Terrace: The surface of the terraces could be flat, sloping outward or inward [a.k.a. Reverse Slope]. Such Reverse Slopes help to minimize the runoff. The banks of the terraces are supported by stones or grass cover. The width of each terrace depends on the slope of the land and Vertical Interval [VI] between the two terraces and is given by the following relationship:

$$VI = \text{Slope } [\%] \times \frac{\text{Width of the terrace}}{100 - \text{Slope } [\%] \times 0.75}$$

Stone Terrace: Stone terraces are bunds made of stones across the slope. Building of stone terraces could be undertaken when there are stones available on the site.

Lateral and Leader Drains: The availability of proper lateral and leader drains are an absolutely essential method of soil conservation in tea cultivation. Lateral drains need to be

cut along the contour across the slope, at regular intervals depending on the steepness of the land. These lateral drains slope towards the leader drain situated mostly in the natural drainage path of the land. The 'Lateral Drains' have two variations, namely, [a] Lock & Spill Type where 'Locks' are kept at regular intervals and [b] the provision of 'Silt-Pits' in addition to Lock & Spill. The Lock & Spill and Silt-Pits help to retain the top soil while removing excess water in the leader drains.

The dimensions of the lateral drains are 45 cm width and 45 cm depth. The upper lip of the lateral drain should be planted with '*Vetiver Grass*' to form a grass hedge to minimize the soil being washed into the drain and also to prevent the collapse of the drain. The leader drain should be 'reverse-sloped' and ideally be paved with stones to prevent mini gullies forming. On either side of the leader drains grasses should be grown to prevent the collapse of soil into the drain. The drains must be cleaned after pruning to restore the original dimensions of the drains and silted soil should be removed and spread on the surface 2 to 3 rows above the drain and not below.

Biological Methods: Biological methods of soil conservation consist of:

[a] hedge-row planting of grasses, trees or bush species; [b] growing cover crops [c] introduction of agro-forestry

Leguminous trees or bushes are planted in double rows along the contour, across the slope at regular intervals depending on the steepness. This method is named as 'Sloping Agricultural Land Technology [SALT]'. The primary objective of SALT is to maintain sustainability in upland agriculture through conservation and recycling of natural resources. It is a biological system that improves soil fertility and protects the soil from degradation. Basically, SALT is a method of growing crops in 7 to 8 meter bands between contour rows of nitrogen-fixing trees.

These nitrogen-fixing [leguminous] trees, thickly planted in double rows ['hedge rows'] are lopped when the hedges are 1.5 to 2 meters tall to around 0.5 to 1.0 m and the cuttings or lopped tops are placed within the rows of the tea to serve as a mulch and organic matter. The advantage of hedge-rows is that apart from soil conservation, it adds organic materials by the continuous lopping of the hedge-rows. The following species are usually grown as 'hedge rows':

[a] Calliandra calothyrsus [b] Desmodium rensonii [c] Gliricidia [d] Accacia [e] Dadaps etc

Cover crops: Cover crops should be grown in inter-row spaces when tea is newly planted. Species commonly used in tea plantations are *Crotolaria* and *Desmodium*. They should be lopped before the onset of dry weather and used to thatch the soil surface to prevent the cover crops from competing with tea for moisture and nutrients.

Agronomic / Cultural Methods of soil conservation: Any form of ground cover is useful in minimizing erosion losses. The tea plant itself when fully developed into a bush will completely cover the ground and 'contribute' leaf-litter' which adds to moisture retention and erosion prevention enhancing 'soil fertility' and therefore all efforts must be taken to

ensure that the tea plant covers the ground as early as possible. When vacancies occur after pruning for instance steps should be taken to infill them with rehabilitation grass followed up with tea in areas suitable for propagation of tea, [rest left in grass] as early as possible.

Mulching and Thatching are vitally important cultural methods to conserve soil and moisture and to prevent weed growth in young fields. It is estimated that 30 to 35 tonnes of grass lopping per ha per application is necessary to achieve an adequate ground cover. This amount of grass could be obtained from one ha of grass planting at one lopping. Leaving the pruned litter [not branches which are usually removed by workers as fuel-wood] on the ground will also provide a good cover to minimize erosion in tea fields. *Dyan Seneviratne*

Human Resources & Effective Management of Plantations:

Reverting to 'Estate Managers' – it is no use to appoint 'Superintendents' and thereafter spoon-feed him or worse, make him feel impotent! Give him the 'Big Picture' and let him come up with the suggestions. During the early 1970s estate Superintendents would come up with proposals – a.k.a budget proposals a good six months before they huddle together to work out the annual budgets. Today the 'Clean Copies' that are handed over to Managers – sometimes we are told – a month or two after the new financial season has commenced is only an arithmetical formula!

This fixation with figures must stop if we are to resurrect this vital industry! For instance when subject of Re-Planting' is spoken of, many of those in authority today take on a negative stance and say things like – *Don't talk of Re-planting – it is impossible with today's high costs! Re-planting is not viable because it would take seven years to bear fruit!* Such views are totally unacceptable! At one time we were re-planting 50 to 75 acres per year!

Besides a planter worth his salt could plan, think creatively and indeed make things happen. 30 to 40 years ago none spoke about KPIs and KRAs; about 'effective delegation'; top down or bottom-up communication; vision, mission, 'balanced score-card' etc. Yet they effectively made 'things happen'.

The Manager of a large plantation then was in effect the CEO of a large business enterprise. The Manager then did not have computers & printers; scanners and photo-copiers; there were no ERP solutions; no HR Managers, no Manager Talent Retention, IT geeks, no Manager Finance, Manager this and Manager that! No MYOBE Accounting Software, instead only Checkrolls and CR books but tons of can-do-it attitude; they enthusiastically discussed their plans with their staff and workers in their respective languages; importantly they built trust – it was mutual. 100 acres of tea being re-planted in just one year was routine; no worthy, crunching numbers and pontificating that "New Clearings cannot be done" as its ROI was negative impacting on the GP & NP ratios! Planters then relied on their God-given common-sense. And they mostly delivered. And how!

Today, sadly there's 'Information over-load' via emails, Smartphones, Notebooks, Tablets etc; ironically a wealth of information creates a poverty of attention and common sense! It's perhaps a case of too many cooks spoiling the soup; that maybe explains the inaction by

some RPCs towards replanting, new planting, alternate forms of energy; resource identification towards producing those matching global demand – the list goes on.

Yes many RPCs seem rooted to age-old thinking and negativism whilst conversely non-traditional planter a.k.a. Small-Holder goes on new planting and indeed re-planting unhesitatingly! From a trivial input in the 1960s Small Holders deliver 70% of National Tea production! Today's planter instead of fritting away his precious time drinking and idle gossip should use his leisure time for active physical sports and self-help books on a plethora of topics available to upgrade his Leadership skills, speaking and writing ability, agricultural chemistry, Human Resource Development and Management; accounting skills, IT knowledge etc. Yes, there's so much to study and learn and re-learn!

The advice by this writer to planters: You have a job that most sane people will envy. Be aligned with nature and appreciate it. Count all the blessings you have and the myriad resources you administer; change the paradigm; don't wallow in self-pity and negativism; start opening your eyes, look around for those untapped resources, see how you could add value; seek new markets.; work out the ROI and go for it, if feasible!

Be an ideas man, yet be practical; not just a dreamer! Create an insatiable thirst for knowledge; start reading quality books. Yes, that's a hobby that's hard to beat! And, if you don't know Tamil or need to brush up your English, do so pronto! In short be focused on what needs/could be done and MOVE!

Henry Mintzberg wrote in *Business Week* that too many leaders don't see themselves as managers. They believe that their job is "to do the right things," while others are responsible for "doing things right." That may be impressive in a consultant's PowerPoint presentation or academic white paper!

Yet fundamentally, the best leaders are, first and foremost, managers. Like a good planter, they make things happen. They get results. They organize people; allocate resources, implement strategies – yes, whatever it takes to get things done. And that's key! I wish to share some management concepts.

Let me quote Brian Tracy from his best seller: 'How the Best Leaders Lead'. Tracy talks of the Seven Roles of the Manager: In any enterprise there are seven key roles of the manager. Each of them is only learned through trial and error and continuous practice. But they are all **learnable**, and he says, 'they must be learned for you to realize your full potential as a leader'. Brian Tracy continues: One of the most important management qualities is **flexibility**. The more different mental tools and skills you have to get the most and the best out of your people, the more flexible and therefore, the more effective you can be as a manager. So what are the seven roles of a manager, indeed of a Plantation Superintendent?

They are **[1] Planning, [2] Organizing, [3] Staffing, [4] Delegation, [5] Supervising, [6] Measuring, [7] Reporting.**

Fundamental stuff, really! Think about it: effective planters have been doing so for eons without a leadership guru telling us these basics! Yet today they have dissected and analyzed 'Management' to its finer elements. And we need to look at this science with an open mind.

PLANNING: Planning is the process of determining exactly what is to be done: Action without planning is the cause of every failure. Action preceded by thorough planning is usually the reason for every success. Find the time to be alone. As soon as you get a spark of an idea, write it down! ‘Think on paper’ – write down every detail of the goal or objective and every step you will have to take to achieve it. Get the facts, especially the financial facts. Refuse to rely on guesswork or the hope that everything will turn out all right. That’s courting disaster! Be even mentally prepared to abandon the plan and try something else if required. But once all aspects are sorted out, start visualizing ‘successful completion’ – that’s when your right brain kicks in – then you can do it! Just as there’s an 80/20 rule, there is also a 10/90 rule that says: “The first 10% of the time you spend in planning often accounts for 90% of your success when you put your plan into action.”

In business strategy, the purpose is to increase return on investments [ROI] and in totality, on equity, or ROE. The goal of the company or indeed plantation is to earn the very most possible on the amount of money invested in the business. On the other hand, in setting personal strategy, your goal is to increase “return on energy,” the amount of mental, emotional, and physical energy that you invested to get results. Think about it – because you save 10 minutes in execution for every minute you invest in planning, you achieve an ROE of 1,000 percent by thinking through every critical detail [Left Brain thinking] and then visualizing success [Right Brain Thinking] to make it happen. This is not some mumbo jumbo, guys – it does make sense! This may be a cliché now, but worth repeating the **Six P Formula**:

Proper Prior Planning Prevents Poor Performance.

ORGANIZING: Organizing is the process of assembling the people and resources you will need to fulfill the plan and achieve your goals; this is a key skill of leadership. People with good organizational skills are invaluable to any organization or Regional Plantation Co.! Nothing is possible without them! In its simplest form, organization requires that you make a list of everything you will need to carry out the plan on schedule and on budget. These ingredients include money, people, offices, equipment and technology. To ensure that you do not forget something essential, your list should be completed thoroughly before you take any action.

“For want of a nail, a horse was lost. For want of a horse, a rider was lost. For want of a rider, the battle was lost. From the loss of the battle, an empire was lost. Oh! What a loss for one small nail!” An oft repeated English Proverb

Organize your list of requirements by sequence – what you need to do before you do something else, and by priority – what is more important and what is less important. Start on the most vital elements of your plan first. Practice the 20/80 Rule of Organization. It’s a truism that the first 20% of time spent planning is as valuable or more valuable, than the remaining 80% of tasks.

STAFFING: You must attract and keep the people you need to carry out the plan and achieve the desired results. Your ability to hire the right people will account for as much as 95% of your ultimate success. Most of your frustrations and failures will be the result of having the wrong persons in a key position. **Leadership of RPCs: this gem of Management applies to you too.** Period!

DELEGATION: Delegation, simply defined is the skill of assigning the right job to the right person in the right way. You always have two choices: You can either do the job yourself, or you can get someone else to do it. Proper delegation is how to make sure that someone else does the job to an acceptable level of quality.

Your ability to delegate effectively is the key to leveraging yourself and multiplying your value to your company or estate. Delegation allows you to move from what you can do personally to what you can manage. Indeed delegation is one of the most important management skills. Without the ability to delegate effectively and well, it is impossible for you to advance in management to higher positions of responsibility. Today's businesses depend on the 'Speed of Trust' and effective delegation is integral.

Delegation is not only about maximizing your own productivity and value; it is also about maximizing the productivity of your staff. Your job as a manager is to get the highest return on the company's investment in people. According to global research findings the average person today is working at 50% of capacity. With effective delegation, you tap into that unused 50-percent potential to increase your staff's productivity. After all, your job as a manager is also to develop people. Delegation is the means that you use to bring out the very best in the people that you have.

The first step in delegation is to think through the job. Decide exactly what is to be done. What results do you/they want? The second step in delegation is to set performance standards. How will you measure to determine whether the job has been done properly or not? The third step is to determine a schedule and a deadline for getting the job done, conforming to the overall quality set.

The Art of Delegation

There are seven essentials for effective delegation:

Pick the right person. Picking the wrong person for a key task is a major reason for failure.

Match requirements of the job to the abilities of the person. Be sure that the delegatee is capable of doing the job. This factor is obvious but is often overlooked!

Delegate effectively to the right person. This frees you to do more things of higher value.

Delegate smaller tasks to newer staff to build their confidence and competence.

Once all factors are considered, delegate the entire job. One hundred percent responsibility for a task is a major performance motivator. The more often you assign responsibilities to the right people, the more competent they become.

Delegate clear outcomes. Make them measurable. If you can't measure it, you can't manage it. Explain especially to your sub-staff, *kanganies* etc what is to be done, how you think it should be done and the reasons for doing this job in the first place. They are not morons after all!

Delegate with participation and discussion, for instance after picking a 'Quality Circle' from your factory staff and workers. When workers, now called 'Associates' seem wanted and recognized, they respond in ways unimaginable; the writer has done so throughout his planting career and that half accounts for his YPH records, lowest COPs and Top Prices consistently whilst attending to New & Re-Planting, infilling, establishing commercial nurseries, absolute weed-free conditions with leaf litter working as a inhibitor of weed germination; estate roads and paths in perfect condition, wonderful worker/staff-management engagement & harmony! Sounds Utopian? Well he did it! Remember: delegate in such a way that people walk away feeling -" This is my job; I own it."

Practice **management by exception** when you delegate. Set clear goals, standards and deadlines for the delegated task/s. A job without a deadline is merely a discussion. Delegation is the key to growing your people. When you become effective at delegating with a few staff members, you will soon be given more people to delegate to, plus greater responsibilities, as a result of your delegating skills. All excellent managers are excellent delegators. In old-school thinking, people used to say that, "If you want the job done right, you have to do it yourself." However in new-school thinking the correct statement is, "if you want the job done right, you have to delegate it properly to others so that they can do it to the proper, cost-effective, quality standard."

SUPERVISING

Whether one is a PD [Manager] or SD [Asst.] in plantations displaying excellent plucking and/or tapping standards mean that your management is A1. And such results are not accidental. They revolve around intelligent planning and smart supervising.

This writer remembers, even as a senior manager Diyagama West, if he had half an hour of relatively free day time he would gleefully hop on to his personal Honda XLR 250CC and 'do a quick run' to the highest point of a plucking field and walk through a plucking field, supervising plucking. After all plucking cost was/is the costliest item on a tea plantation. It is critical that one devotes some time to plucking. Perfect standards AND well managed plucking costs means: half the battle won!

Supervising is the process of making sure the job is done on time and on budget. However, delegation is *NOT* abdication! You are still accountable for results. The job of a manager is

to get things done effectively though *others*. Your ability to organize the work and to supervise your workers, staff effectively to get the job done on schedule and on budget is the key to getting the results for which you are responsible. Your ability to supervise others can be greatly improved by learning what other excellent, well proven managers of estates have discovered and done over the years and by applying these principles and ideas to your interactions with your subordinates.

For example when the writer was an Assistant Superintendent on Brunswick Group Maskeliya way back in the early '70s he used to rummage through the archives with help from an accommodating Chief Clerk and pore over old files, noting down key points in circulars issued by a former Superintendent of Brunswick Estate Mr. Perkins who had an eye for detail! So be humble – learn from others and give credit to them as gratitude. Sometimes you don't have to reinvent the wheel! Pick up from others and progress – up!

Five Keys to Excellent Supervision

Accept complete responsibility for your staff. You choose them, you assign them, and you manage them. Look upon your staff with the same patience and understanding as you would look upon younger members of your family.

Practice the '**Friendship Factor**' with them, which consists of three components: *time*, *caring*, and *respect*. Give staff time when they want to talk to you. Express caring and concern for them and their problems. Treat them with respect – even your *Thalaivars* [Labour Leaders] the same way you would treat a customer or friend. This aspect should be part of your estate managerial DNA!

Practice Servant Leadership, by seeing your job a position of trust with your subordinates. Just as they are there to serve you and the company/plantation, you are there to serve them, as well. Practice Golden Rule Management: Treat each person the way you would like to be treated if the situation were reversed. When you practice Golden Rule Management – you manage other people the way you like to be managed – you will then elicit higher performance from your people than in any other way. Try it. Practice it. It worked/works for me always! **The Best Managers:** According to numerous surveys of employees in the 'work world', the best bosses and supervisors possess three critical qualities:

Structure: Everyone knows exactly what needs to be done, why it is to be done, and to what standard. **Consideration:** The boss makes employees feel that he or she really cares for them. **Freedom:** Good bosses give their people freedom to perform. Once they are assigned a task, they try to stay out of the way, except to comment and to help when needed.

Back to School

One of your jobs as the leader or *Peria Dorai* [Manager] of a plantation is to be a teacher. The reason you are in charge is because of your superior level of knowledge and skill

[presumably!] One of the most helpful things you can do is to pass on your knowledge and skill to those who report to you. Teach other people how to do the job that you have already mastered. You multiply your output by teaching someone else how to do something that only you can do. And you, along the way, increase their value to the business and to your plantation and by extension to your RPC!

MEASURING: Measuring requires setting metrics – measures and numbers – for each part of the work, including setting standards of performance for each job; every business activity and that includes your plantation and even a Division and/or Factory can be expressed and defined in numbers of some kind, typically financial numbers. In Jim Collin’s famous book ***Good to Great***, he emphasizes the importance of the economic denominator in any business. This is sometimes referred to as the **Critical Success Factor** [CSF] the measure of which is the best indicator of the health of the business, or some part of the business. In sales, the measure can be the number of calls, or the number of face-to-face appointments. If it is the leadership of the company, the critical measure can be quarterly sales, profitability, or the share price. In business, the ultimate number is usually the ***net cash flow***, the actual amount of free cash that is available – after all charges – to pay out as profits and dividends. One must establish numbers for yourself in each key area. These become your targets and measures how well you are doing. Significantly, you must select one number that is more indicative of your success than any other and focus on that number, literally, every day – guaranteeing success! All rewards, recognition, promotion and bonuses in your set-up should be tied to performance, to achieving the numbers and measures you have set.

REPORTING: You must keep the key people inside and outside of your business / plantation informed at all times. This is one of the most important responsibilities of leadership – and of people at every level of the organization. Perhaps 95% or more of problems in a company can be traced back to poor or nonexistent communications. People were not informed of events or given information that was essential to their ability to do their jobs correctly. When in doubt, more information is better than less information!

Make a list of everyone who needs to know what you are doing and how well you are doing it. Sometimes you need to blow your own trumpet as no one else will do so! Start with your boss. What information does your boss need from you on a regular basis? Go and ask. Write it down. Report back regularly. What about bad news? Be sure you tell it first! If someone else conveys the negative information, it can easily get distorted and reflect badly on you before you even get a chance to comment! Practice a “no surprises” strategy. Knowing how to report to your boss is a key skill of ‘managing up’. Leadership is not only about ‘managing down’ – managing your employees and subordinates – it is also about managing your boss! Give those you report to honest and complete information and speak with candor. Don’t be afraid to suggest initiatives and to campaign hard for what you

believe. To get things done, you not only need your employees buy in to your goals; you need your boss to buy in as well!

Finally, to fulfill your potential, you must become excellent at what you do. Resolve to be the best, to join the 10 percent in your field. Set your standards high. Look around you at the best people in your field: think about how you could be as good as or better at your job than they are. The key to moving from good to great in your field is to ask yourself the brutal question: ***“Why aren’t I already the best at what I do?”*** The answer is always the same. The reason you are not at the top of your business / field is because you have not yet decided to be there or you have not backed that decision up with the hard, hard work on yourself that IS necessary! ***Dyan Seneviratne***

CONCLUSION: FOOD FOR THOUGHT!

In conclusion let me make a pertinent observation: It’s certainly gratifying to see the number of new players entering the lucrative pursuit of exporting tea – much of it in value-added form; even branding themselves on their unique singing ability – good for them! And now Tea has been embraced by multi-nationals such as Nestle who’ll be introducing Espresso Tea and even Tea capsules! That’s the tail-end of tea chain. Like the glory boys of Rugby – the Wing Three Quarters who plant the tries. But all the hard work is done by the burly, ‘thinking’ men in the Pack and ‘Insides’. That analogy fits the ‘people’ on plantations. The planters, their staff & workers – if the Tea Industry of this beautiful island is to thrive for the next 75 years, it needs to be supported every step of the way! Our fervent plea is not to pay step-motherly ‘treatment’ to the ***soil, bush & people of plantations!*** Period!

May SL’s Tea Industry aim for a national YPH of 2500–3000 kg/ha with ideally located state-of-the-art ‘tea-food centres’ each capable of churning out 3-5 m kg MT / Annum! Each estate to have at least five viable non Tea or Rubber business units producing high quality food – protein, fruit, vegetables and other export oriented products, run on non-oil energy!

Points to consider ref World Bank Funding for Plantations:

[1] Rain-water Harvesting [2] Drip irrigation for New Tea Planting [3] Soil conservation to enhance and sustain soil fertility [4] Mulching/Thatting on basis of providing 30 to 35 tonnes per ha per application from one hectare of grass lands [5] Fund first 02 Years after Re Planting *including* Back-hoe charges for soil preparation; [6] Internal Roads of estates [7] Supply of Pruning Machines [8] Nurseries: establishment of tea, shade, forestry nurseries [9] establishment of proper ERP systems on estates for effective MIS [10] modernizing ‘Centralized’ factories equipped with optimum automation; [11] effective global marketing with Value-Addition; product diversification [12] Upgrading with suitable training of personnel [currently mere daily paid ‘estate workers’] to achieve desired ‘Technical competencies’ as a precursor towards qualified Technicians on monthly pay, weaning them away from Trade Unions with political ambitions who invariably neglect worker productivity, well-being and welfare [eg: balanced diet, alcohol issues] and keen only on gaining ‘worker numbers’ which is the main source of finance for these TUs; [13] Funding proper & relevant training to staff and management executives on plantations [14] Up grading the NIPM & TRI to make these institutes more relevant and dynamic to serve the plantation industry [15] part-funding to replace aging supervisory vehicles such as

jeeps/motor cycles and Land vehicles – trucks, tractor & trailers for speedy leaf transport [16] Up grading of existing Hydro Power facilities [17] Upgrading and installing new leaf carrying chutes affixed to cables/pulleys to serve processing units located in valleys to receive leaf from upper reaches of plantation, swiftly. ***Dyan Seneviratne***