

STRATEGIES FOR REGAINING REPUTATION FOR SRI LANKAN RUBBER

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Sri Lanka although has the longest history among South East Asian countries for producing Natural Rubber for export, today we have dropped down to the 9th position among the rubber producers in this region. In 1993, we have produced 106 000 MT of Natural Rubber while our production in 1978 was 155 000 MT. Hence Sri Lanka is no more considered as a major rubber producer in the world. In order to regain the reputation and demand we had for our raw rubber in the World Market, apart from improving the quality it is also necessary to increase the rubber production in our country by a substantial amount. As the area available for planting rubber is fully utilized already, the only way to achieve that is the use of modern technology to increase productivity of rubber land. There are several reasons for this decline in rubber production such as:-

- a. Decline in acreage due to urbanization and crop diversification.
- b. Poor management of the rubber estates.
- c. Poor yielding PB 86 clone which dominated 90% of our plantation until 1986.
- d. Interruption of tapping by rain.

With the improvement of the rubber price there are signs of replanting marginal tea lands in Southern province now with rubber. With regard to management of estates, at least in some plantations under private management there are improvements in the management techniques adopted now, although at the beginning there were few unacceptable techniques that were used by some estates possibly on the advise of their foreign Consultants to over exploit with high levels of stimulation. Regarding high yielding clone, I am proud to say that the clone RRIC 100 series developed by the RRISL has performed better than the clones produced anywhere else and also in the 1974 clone exchange programme, RRIC 100 clone has been identified as the most promising clone. This clone yields over 2500 kg/ha/yr whereas the other clones such as PB 86 yields only just over 1000 kg/ha/yr.

The rainguard introduced by the RRI to minimize the interruption of tapping by rain has shown excellent results and if all the plantations use rain guards as it is now done in India, the rubber production in the country should go up by at least another 15-20%. Even the slight improvement shown in the rubber production in 1993 over 1992 could be attributed to the use of rainguards in some of the estates and

in few smallholdings. If all these precautions are strictly taken, it is not very difficult to increase the NR production in the country to 200 000 MT by year 2,000.

Some of the plantations feel that late tapping or other alternatives are more economical than using rainguards. But Agricultural Economists analysis does not show any reasons which are beneficial to the plantation than fitting rainguards at this juncture. It must also emphasized here that rubber growers are a little reluctant to deviate from the traditional practices and implement new technology for high productivity. But, unless we move forward with the advancement of science we have no way of surviving in the future.

It must also be emphasized here that maintenance of rubber plantation in Sri Lanka is much cheaper than in India. In India all the rubber plantations are sprayed with Copper Oxychloride and various other fungicides to control leaf diseases like *Phytophthora* and the spraying is done by means of helicopters or high powered atomizers fitted to tractors. Apart from the huge health and environmental risk involved in spraying Copper and other oil based emulsions in urban areas, the cost of spraying per hectare is Rs.4800/- per year.

But Scientists of RRI, Sri Lanka have been able to produce and recommend clones which are completely tolerant to these leaf diseases and hence spraying of any fungicides is not important for the rubber plantations here. Even the Sulphur dusting and spraying of chemicals to Sri Lanka plantations carried out regularly by the British Planters during colonial days have been successfully done away with by the RRI Scientists without any adverse effect to the plantation. More than the savings in monetary terms, this will protect the environment from dangerous fungicides which would develop dangerous health hazards to the generations yet to be born here.

One of the major problems that was faced by Sri Lanka when 90% the plantations were in PB 86 was that the raw rubber produced in Sri Lanka was high in Mooney viscosity (Mv) and hence was harder for mastication in rubber products industry. Based on a complaint made in this regard by Japan in 1982, one of the reasons for replacing PB 86 with RRIC 100 series was to lower the Mv value to 60 – 65 level from 80 – 85 units recorded early. Already the PB 86 population in Sri Lanka has dropped down to about 60% and by year 2000 it will be brought down to about 45%, in order to increase productivity while maintaining the Mv also at the same level as in other countries. However, some buyers of Sri Lankan rubber have already started inquiring about the reason for this viscosity drop. The only answer is that it has been done on a request made by the consumers and as a result now Sri Lanka rubber is also as soft as rubber from any other origin.

Similarly there is a world wide rumour that there are leachable proteins in NR based dipped products like gloves and they cause skin allergies and sometimes death. This is believed to be a rumour spread by the synthetic rubber producers. Any way there are no leachable proteins in our latex based gloves over normal limits and the

RRI Sri Lanka is now equipped to test it by the latest technique called Bredford dyc test developed by MRPRA and certify this fact for surgical and examination gloves made for export.

Principal grades of rubber manufactured:

In Sri Lanka nearly 45% of the total rubber is produced in RSS form while another about 30% is converted to latex crepe and sole crepe mainly for export in raw form. Our TSR production from the inception in 1970 is very low and has never exceeded 16% of the total production of rubber. However, there has been a significant improvement shown in the concentrated latex production in the country and in 1993, a total of 12 000 MT of concentrated latex has been produced. As far as exports are concerned, the most important grade produced in Sri Lanka is the latex crepe. In latex crepe thick and thin grade production and in plantation sole crepe production, Sri Lanka lead the World today and so far there is nothing to match these grades of latex crepes produced anywhere in the world. The Sri Lankan hand made highest quality latex crepe rubber is known as the champagne of Sri Lanka in the World Market.

However, due to some problems connected with grading and packing, this grade of rubber has suffered badly so far and the demand for latex crepes have collapsed completely. There is no reasonable price paid for latex grade until the recent artificial demand that arose in the World market due to the scarcity of rubber. Even then the premium paid for this grade is insufficient to match the extra cost involved in producing this rubber. Hence, in order to eliminate these grading and packaging problems, the following Technically Specified Blocks Rubber (TSR) grades have been proposed for latex crepe rubber; where the physical properties which depends on the method of manufacture of the grade and the other specifications required for the specific end use have carefully been taken into consideration.

Proposed new improved grades of latex crepe presented in Technically Specified Block Rubber Grades:-

(a). Food and pharmacutical grade (TSR F/P)

Contain less than 0.02%, foreign matter commonly known as Dirt.

Amount of moisture in the rubber is less than 0.5%

Allergy causing Natural protein content is minimal and hence the % N content less than 0.35

No leachable chemicals and hence safe for medical and food applications.

Colour white or off white.

(b). Adhesive grade (TSR - AD)

Percentage of foreign matter/Dirt less than 0.03%

Percentage moisture content less than 0.5%.

Protein content is also low as in the above grade

Soluble in solvents without leaving a gel

Free of toxic compounds

Pure water white in colour

(c). General purpose grade (TSR- GP)

This grade is similar to ordinary grades of crepe made from fraction removed and bleached latex.

Recommended for white shoe soles and bright coloured products like toys.

(d). Low nitrogen grade TSR - LN

Made by enzyme coagulation. No fractionation or bleaching done in processing.

Colour brownish. % Protein level is reduced to minimum and hence the N% is less than 0.1. Percentage remain on ashing is also below 0.1

Water absorption minimal and hence suitable for making water seals.

Concerning low heat build up recommended for dynamic rubber products, tyres for supersonics and for making bridge bearings.

(e). Yellow fraction grade TSR - YF

Not suitable for solution process products as it cannot be dissolved completely to get a thin solution.

Colour yellowish brown. Suitable for making very hard vulcanized surfaces such as rice huller roller surfaces and earthquake protectors.

The main problem faced by the consumers of Plantation sole crepe from Sri Lanka during the past was the poor packaging of the material in fragile and wet Albezzia boxes, as a result of which the rubber reached the final destination mostly without the packaging boxes or contaminated with mould caused by the wet packing material. There have been many complaints of injuries caused to the people who handle damaged Albezzia boxes reported from the consumer factories. Such injuries cost a lot to the consumer as the health regulations in EEC countries are very strict.

However, after the introduction of corrugated card board boxes for packaging of sole crepe rubber and making it mandatory from 1.9.1994, this problem has now been solved and the demand for sole crepe has increased significantly since then. Under this packaging even the steel strapping has been replaced by Polyester straps.

With regard to RSS, here too the problem of grading and packaging arose to the consumer. Arrangements were made as far back as 1978/79 to grade and pack at least part of the RSS No.1-3 grades in compact polythene wrapped 33 1/3 kg small bale form graded as TSR 5 (RSS). The demand for this grade has so far been good and by this method we have been able to save lot of money in the form of freight charges while minimizing quality claims. However, the export of low grades of RSS and Scrap crepe, which is still allowed in Sri Lanka causes lot of damage to the name of Sri Lanka rubber in a big way.

Sri Lanka now make very high quality concentrated latex to meet ISO requirements in significant quantities mainly for domestic use. However, if there is any excess there is a possibility of exporting it either in flexi bags or in resin coated drums for overseas end users. This will be encouraged only if the price paid for the latex is more attractive than selling it in the form of dry rubber because cost of manufacture of concentrated latex is high as this needs high capital expenditure to set up concentrated latex factories. Even the cost of preservatives used for concentrated latex is quite high and over Rs.5.00 per kilogram of dry rubber.

RRI has already taken initiative to obtain ISO 9000 quality registration for all latex crepe rubber factories, which is the prime requirement for exporting commodities to EEC countries, USA and to Japan in the future. Obtaining ISO 9000 registration will enable Sri Lanka to cater to the needs of these countries uninterrupted and hence this message must be conveyed to the consumers abroad through our Trade Missions abroad. This will enable us to regain the demand we had for latex crepe rubber and the premium price for it before 1969.

In other countries like Malaysia, this type of technical information are fed to the consumers by the rubber promotions bureaus set up by them in all important consuming countries. In USA alone, there are four Rubber Promotion Bureaus maintained by Malaysia in principle industrial cities while having similar Bureaus in other countries too. But we in Sri Lanka, cannot afford to do so. Hence we have to depend totally on our Diplomatic and Trade Missions abroad in this regard. Arrangements have already been made to distribute brochures on these aspects to their offices abroad. If their full-co-operation is given in this regard, I am sure that we can easily regain the position we had for rubber as an export earner in the future too.