USE OF SMALL HOLDERS LATEX IN THE MANUFACTURE OF CENTRIFUGED LATEX

BY

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I think it is appropriate to put forward the concept of peoples' latex or common man's latex or perhaps JANA latex and forget this often hackneyed term small holder latex. As you know Jana latex can be more appealing and perhaps you will find funds pouring down your way to upgrade Jana rubber.

For more than 15 years, I have been working with the small holders rubber and of course with the small holders themselves. Now I will share my experience with yon on the use of peoples latex in the manufacture of centrifuged latex. Mawanella Rubber Complex began manufacture of centrifuged latex in 1982 but as all of you are aware there are a few other producers in Sri Lanka who have much longer experience in producing concentrate here. Our culminating experience was the capturing of export markets during last years international rush for "White gold". As for the quality of latex, foreign buyers were very happy and in fact they immediately planned joint ventures with us which did not materialise unfortunately due to country's security situation. We made the small holders also happy during this boom by sharing our profits with them in a very fair way.

When compared with the other concentrate manufacturers we were in a unique position because prior to 1982 the small holders were used to bring latex for Technically Specified Rubber manufacture which do not emphasize on a high d. r. c. content. If one can keep the latex fluid just until it reaches the factory for coagulation that was sufficient. The staff and the systems adopted also were geared to achieve that end. Although we were handicapped at the begining that way, quickly we were able to overcome the problem by selecting centres or small holder groups receptive to education and training. We made the small holders in those centres with potential for quality improvement receptive by offering reasonable financial incentives. The results were encouraging and gradually we improved our quality to that of international standards.

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To supplement our collection, we buy latex from medium sized estates too and by that we could compare quality of latex from different sources. Our conclusion is that although the average small holder latex may be inferior to average Estate latex, a certain segment of small holder latex is always better than average quality. So this suggests the quality may not totally depend on the source of latex. Quite correctly, quality of field latex will be a function of managment irrespective whether it is from a small plantation with 100 trees or a large plantation with 1000 or 100,000 trees.

Irrespective of the size of the plantation, sound management will produce sound quality latex while laxity in management will bring poor quality latex. If we assume that estates are well managed, due to that reason along, we can predict that latex from estates are well poduced.

As far as centrifuged latex production is concerned, how important is the managment of these plantations? I think, it is only to the extent of prevention of mishandling of field latex which exudes from the tree as a pure natural product free of many harmful characteristics. As in any other agricultural commodity, it is the mishandling by man down the line which causes the deterioration of quality. I think the only way we can differentiate latex is based on degree of mishandling. Of course the larger, more organised estates are well equipped and have necessary resources and expertise to handle latex well. There lies the difference. Why cant we get the small holder also to handle his latex in a proper manner?

What is the problem with the small plantation owner? Is he not interested or not motivated? Or is he lacking necessary technical know - how and resources? Could it be that we do not want the small men to be developed any further? If he improves, we cannot exploit him any longer by offering poor prices claiming poor quality of his produce?

I think his problem could be the cumulative effect of all these factors. In short, he has not realised the true value of his product or its true maket potential.

It is important here to discuss some problems faced by the small holder in latex production which directly affects production of latex concentrate, quality and quantity wise. While quality of incoming latex affects process control and the final product, and its cost, quantities will affect economics of operation.

We must remember that most of the present small holdings have been planted not by the present owners but perhaps by their parents. Inherited property will not create great enthusiasm unless its returns are very encouraging. Most of the legal owners of such small holdings do not devote their time to manage their properties well, resulting in poor quality and poor yeilds.

Another problem faced by them is the scarcity of good reliable tappers. Majority of small holders hire tappers and in fact tappers are the real decision makers in these mini plantations. They take decisions pertaining to prodution and marketing. Now we canvass tappers before we approach the owners of small holdings. Certain incentives are offered to tappers who agree to deliver latex to centres. Finally what the owner gets is very negligible. Actually the average small holder is a very unhappy man. So it is quite difficult to convince him to deviate from current practices which according to him are most economical.

The essence is that unless the small holder receives tangible financial incentives all round, he may not wish to change.

From now on, I will discuss the problems faced by us in converting small holder latex in to centrifuged latex.

Basically there are two categories of problems i. e. Managerial and Technical. One could also identify another. i. e. Political problems although not encountered often.

Managerial problems are generally challenging while technical problems are very interesting and stimulating. Political problems at best can be regarded as demoralising.

Now let us tackle the problems one by one.

Managerial:-

(a). Location of small holders is important. Surveys have to be conducted to ascertain the availability of latex and to locate small holder pokets where you can establish an economical collection centre.

(b). **Organising and establishment of centres:-**

This involves finding suitable land, erecting a shed, mounting over head tanks, appointing an agent, providing equipment neeessary, training, canvassing and propaganda work etc. Safe keeping of centre equipment also poses a problem.

(c). Weighing in and purchasing latex without loosing small holder confidence. This is the most crucial aspect of the entire operation. All the disputes and irregularities can occur here mainly due to inacuracy of the metrolac and instability of latex. Another difficulty we encounter is making payments for latex supplied. All the small holders prefer cash payments but we have arranged a flexible system where we channel payments through various bank branches etc.

(d). **Transportation to Factory:**

Our target is to collect the maximum volume of latex using minimum number of collection vehicles before a prescribed time form a large number of scattered collecting stations. Most of the centres are located in the interior where the access roads are hardly motorable. So your fleet of vehicles must consist of different types of collection vehicles such as lorry bowsers, tractor trailors, tractor tankers, flat bed lorries of different sizes and may be a couple of bullock carts. You get the optimum use of all your fleet aiming at cost minimization. This is a very specialised area of activity and good planning skills are necessary to achieve what we want.

Often we have alternate or contingency plans because of unexpected breakdown of vehicles and other problems.

Timely transportation is vital in respect of Volatile Fatty Acid (VFA) control and good production planning.

(e). **Quality assurance of incoming field latex:**

This is a very difficult task. We encounter problems in initial d. r. c. and VFA content..

I. DRC

The dry rubber content of bulked field latex is usually around 25% and very rarely it exceeds 28%. Sometimes it is as low as 22%.

Even with a very little knowledge of principles of centrifuging operation,

one can understand the problem faced in concentration in converting such low d. r. c. latex in to concentrate of 60%.

The reasons for low d. r. c. are many. Deliberate adulteration with water is the main cause. High intensity tapping is another reason.

To overcome this problem price incentives can be offered based on d. r. c. of latex but results are not always fruitful. Other alternative is to reject low d. r. c. latex but that will result in a lowered intake of latex.

High VFA Content:

Initial VFA content of small holder latex can be as high as 0.07%-0.1% in many instances, although it should be lower than 0.03%. High VFA is due to poor yield hygiene and negligence on the part of smallholders or tappers.

Use of improperly cleaned collecting vessels such as plastic cans and subsequent adulteration with poor quality water coupled with delayed deliveries to the centres increases the VFA content.

Preservatives could be issued to be added as early as possible but they will not use it fearing a lowered metrolac reading. Since Ammonia solutions could be used in other areas such as in the preparation of straw based cattle feed and illicit liquor, we do not normally issue preservatives to small holders, because increased chemical costs out weight the advantages gained by marginal lowering of VFA content.

Dirt and other Solid matters:-

Small holder latex is generally contaminated with heavy and floating dirt particles and pieces of coagulum etc. These can be sieved and removed but indicates the poor treatment latex receive at the hands of producers.

Dirty coconut shells and rusty buckets and addition of fern leaves etc, to the latex bucket to prevent spilling over also cause much contamination.

(f)- **Prevention of Adulteration with harmful substances:-**

It is a common practise to mix latex with various kinds of known and unknown adulterants mostly organic types. Hot water is quite common and there are those who water operating close to centres. Subsequent destabilisation caused by these adulterants cannot be overcome by addition of preservatives.

(g) **Seasonal fluctuation of in take:-**

When the small holders get their priorities straight based on cultured, socio economic or agricultural practise those who depend on their latex will be badly affected. Thus production planning become difficult. To fill the gaps during these short falls we can' t buy latex from others.

(h). **Latex Pirates;-**

One of the most frustrating experiences is the activities of latex pirates. Once we do all the ground work to open a centre in a particular location at a heavy cost, we expect to collect all the latex in the area over a long period. You do lot of canvassing to wean away the small holder from making sheet, train and condition them to sell their produce in latex form. After a while you will find an intruder in your area buying latex through another person. Perhaps he may offer 50 cents extra at the start and you are in for trouble.

(I). **High cost of Production:**

When compard with manufacture of Estate latex, conversion of small holder latex involves greater coats, due to the following.

1. Higher collection costs.
2. Higher transport costs.
3. Higher chemical costs.
4. Higher supervision costs.
5. Higher cost of quality control.
   Testing frequency is high.
6. Higher reject rate.

TECHNICAL PROBLEMS

1. Initial low d. r. c. reduces bowl efficiency, increases skim loss and lowers thruoghout. All these increase cost of production.
2. High VFA Content

   No easy solution except rejection of such field latex. Stringent quality control and assurance procedures are necessary.
3. Known or unknown adulterants.
   Affects stability of latex and contaminates the latex.
4. Highly variable quality.
   This calls for repetitive high frequency testing and close monitoring all the time. Entrance of new suppliers and exit of current suppliers alter the balance of quality of latex.

POLITICAL PROBLEMS

1. Unwanted pressure to open new centres in uneconomical locations.
2. Closure of uneconomical centres prevented.
3. Interfering in collecting centre adminstration. Collecting agents will run to local MP whenever we initiate action against them due to poor performance or malpractises.
4. Try to influence in pricing.

Suggestions and Conclusions

(1). Mobile Testing facility.
(2). Subsidised collection equipment to small holders.
(3). Formation of (Small holder) mini planters companies.
(Not Cooperatives.)
Gear the small holder to do business in a professional manner.

(1). **Mobile Testing Facility:-**

As the first step towards purchasing small holder latex based on laboratory d. r. c. determination, we can introduce a mobile laboratory with a not so sensitive balance, an oven, necessary sample coagulating epuipment and a small generator under the charge of a technician

who will visit 2 centres per day cross checking metrolac readings. This will improve the confidence among small holders to a very great extent and prevent shortages incurred or excesses gained by factories.

Adulteration and dilution also can be checked this way.

(2). **Subsidised Equipment for Collection:-**

We suggest the state subsidise the following;

1. Suitably designed Aluminium can for transporting latex to collecting centres.
2. Buckets and plastic cups for latex collection.
3. Latex collecting stations and tanks etc.
4. D. R. C. determination equipment at centre
5. Transport vehicles used to transport latex to factory from collecting stations.
6. Ammonia Gas.

(3). **Formation of Mini Planters Companies:-**

On a district or any suitable basis small holders can be grouped and made shareholders of a company in which the central factory also will own a certain percentage of shares. It has to be managed professionally and its business is to market its members produce through its own collecting centre network. Even the transport of latex to the factory could be undertaken by the company and the central factory will pay transport costs.

By this way the central factory management can concentrate on vital production related activities and costs also would be curtailed.

When smallholders themselves manage the centres, there is no room for malpractises and complaints.

Agreement can be reached between the central factory and mini planters company, regarding the pricing formula, quailty of latex and transport costs. If such a company can build up sufficient reserves, it can extend its activities to supply of fertilizer and training of tappers etc.

In conclusion, I can say that if there is a good understanding between the Central Factory and the small holders and also if the factory is genuinely interested in the welfare of its supplier small holders, all the problems related to manufacture can be over come.

What is required by the concentrated manufacturer is a sufficient quanitity of field latex within the specified quality parameters at an affordable price. If these requirements are satisfied he will not be concerned whether the latex is of estate origin or produced by the ordinary people.