NR cultivation in Europe and Asian dominance

The first tyre prototypes obtained from natural latex from Guayule and Russian Dandelion plants have been presented. The production of the first prototypes is a clear indication of the technical performance and economic potential of the rubber extracted.

Following the cultivation of Guayule and Dandelion plants and the extraction of latex from them, the Dutch tyre company Apollo Vredestein, a partner in the EU-PEARLS European project, has recently produced the first prototypes of tyres manufactured using natural rubber produced in Europe. The prototypes will undergo exhaustive tests over the coming months before steps are taken towards the production phase. This success is opening up new market expectations that in a not-too-distant future will be able to break the Asian rubber monopoly.

The EU-PEARLS European project, through which this development has been tackled, began four years ago with aim of seeking alternative sources of latex and rubber for Europe, and thus reduce the commercial dependence on the Asian market for this resource and promote the cultivation of latex-producing plants in the European Union. This project is being funded by the European Commission's 7thFramework Programme and developed by partners from eight different countries, among which is the Neiker-Tecnalia research centre alongside 12 institutions.

NEIKER-Tecnalia has been commissioned to research, among other things, the genotyping of the two species earmarked for substituting imported natural latex, and the possibilities of introducing them into Europe: the guayule (Parthenium argentatum) shrub and the Russian dandelion plant (Taraxacum kok-saghyz). The guayule is regarded as the more promising crop for cultivation in the Mediterranean areas, whereas the Russian dandelion is more suited to the northern and eastern countries of Europe.

Some natural latexes are the main ingredient for extracting natural rubber, a raw material that is indispensable for all kinds of industries and essential in the manufacture of surgical gloves, condoms or tires. All the latex used in Europe had been imported and is mainly extracted from the rubber tree Hevea brasiliensis. The biggest producers worldwide are Thailand, Indonesia and Malaysia, three Asian countries that virtually hold a world monopoly over this resource.

Synthetic alternatives

Natural rubber is a unique biopolymer that cannot be substituted by synthetic alternatives in many of its most important applications, like medical products, condoms, footwear or adhesives. This uniqueness is prompting the European Union to avoid the latent risk that the producing countries may decide to carry out a co-ordinated increase in the price of this raw material, which happened with crude oil in the 1970s.

Initial studies have shown that both the Russian dandelion and guayule are a good alternative to the rubber tree. Guayule is already being used

to produce biomass on a large scale in Spain, yet the rubber from the Russian dandelion seems to be easier to extract. The research has focussed on optimizing the development of the growth and speed of growth of the Russian dandelion in order to increase its content of natural rubber available for extraction.

Apart from the monopoly problem, world production of natural rubber, mainly linked to the Hevea brasiliensis rubber tree, is facing a number of threats. The rubber tree is highly vulnerable to pests and diseases and its cultivation is closely linked to very specific climate conditions which exist mainly in tropical zones of Asia and South America.

Preventing latex allergy

Another fundamental problem with the rubber from this tree is the latex allergy it can cause and which would be avoided with latex from guayule or Russian dandelion. Another threat is the increase in the demand for natural rubber in the emerging countries. This situation is taking place in a world context in which the supply of natural latex is inconsistent and has led to the doubling of the price in the last two years.

The results of the research are expected to be presented on 24 and 25 September, 2012 during the closing conference of the EU-PEARLS European project in Wageningen (Netherlands).

ANRPC's story

Global natural rubber (NR) output is likely to advance by 4.9% to 10.83 million metric tons this year, according to the Association of Natural Rubber Producing Countries (ANRPC). ANRPC members produce about 93% of the global natural rubber. They have produced 10.33 million metric tons of natural rubber last year.

The NR supply growth for 2005-2011 of member countries is related to the average annual increase in tapped area of 1.8%, yield per hectare (1.7%) and production (3.5%)..

Thailand was still the largest producer with 34.82% followed by Indonesia (28.88%), Malaysia (9.71%), India (8.67%) and Vietnam (7.91%). ANRPC forecasts that Thailand would produce 3.6 million tonnes of NR, Indonesia (3.2 million tonnes) and Malaysia (1 million tonnes), by this year.

Vietnam takes lead

Vietnam's rubber production increased at the highest rate, rising 8% over 2010 to 811,600 tons in 2011.

Major latex companies in Vietnam include latex mattress producer Kymdan, which was established in 1954 by Nguyen Van Dan, who holds two related patents—one for latex mattress production and another for "absorbing (the) body's heat from latex mattresses" and Vạn Thành, which began in 1982 by producing rubber shoes, rope and other products.

It started manufacturing latex mattresses in the 1990s. Lien A, which was established in the 1970s, has a 20 hectare facility in Ho Chi Minh City. The company says it had the first Vietnamese-made latex mattress to pass durability tests performed by LGA Furniture Testing Laboratory in Germany. Lien A sells products in Asia and Europe and recently entered the U.S. market.

Most rubber plantations in Vietnam are run by state-owned corporations. This year, Vietnam is projected to expand its plantation area to 800,000 hectares, enough to produce 1.2 million tons of rubber for domestic and international demand by 2015.

IRSG Report

According to an IRSG report released recently, total global rubber consumption was to be 25.8 million tonnes on a moving annual total (MAT) basis in June 2012, increasing marginally from 25.5 million tonnes in March 2012, expanding at 1.1%. Total global natural rubber (NR) consumption contracted in Q2 2012 10.9 million tonnes in June 2012 from 11.0 million tonnes in March 2012 on a MAT basis. The global synthetic rubber (SR) consumption, on the other hand, continued to expand in the three months to June 2012, rising to 14.9 million tonnes on a MAT basis.

The global total rubber supply continued to increase, but at a decelerating rate, growing by 2.1% in June 2012 as compared to 4.4% in March 2012, measured on a MAT basis. Compared to total rubber consumption, the slowdown was less pronounced. The relatively faster rate of growth of NR production lengthened the market, pushing the NR stock level up to 1.5 million tonnes in June 2012 on an annual moving average (AMA) basis. The SR surplus was reduced in Q2 2012 and as a result the SR stock level increased to 3.6 million tonnes on an AMA basis in June 2012.

Global NR exports increased at an accelerated rate in Q2, reaching 7.6 million tonnes on a MAT basis in June 2012. The expansion of the world total SR exports was halted in June 2012 and contracted following 29 consecutive months of positive growth. The MAT was 8.5 million tonnes in June 2012.

NR physical market prices continued to fall through Q2/Q3 on slowing demand. With increased Chinese imports accompanied by reported higher levels of inventory in the bonded warehouses, the three major producers plan for export and supply control to ensure stable prices had little impact on prices under the overall ‘bearish’ NR market environment.

In Q2 2012/Q3 2012, butadiene prices in all regions continued to fall on the back of weak demand from downstream users. A sharp rally was seen in July 2012 in Asia, while a marginal come-back was noted in August 2012 in Europe and the US. The impact of the butadiene price decreases were transferred to SBR and BR and the latest level represents the lowest for the year so-far for all regions and elastomers.

On aggregate, the trend of the volume of exports of selected latex general rubber goods from the five leading countries appears to continue to

expand in Q2 2012/Q3 2012. The stimulus for growth appears to be the falling cost of the raw materials. Global NR latex consumption increased marginally in Q2, reaching 1.3 million tonnes on a MAT basis in June 2012, driven by a resurgent demand in the Glove Sector.

Based on the latest available data and forecasts, the Secretariat now expects total rubber consumption to reach 26.6 million tonnes in 2012 and 27.6 million tonnes in 2013. Global SR demand is forecast to grow by 2.7% to 15.4 million tonnes in 2012 and by a further 3.7% to 15.9 million tonnes in 2013; global NR demand is forecast to rise by 2.5% to 11.2 million tonnes in 2012 and by a further 4.3% to 11.7 million tonnes in 2013. Global NR production is forecast to rise by 3.2% to 11.3 million tonnes in 2012 and while in 2013, the output is expected to increase by 4.4% to 11.8 million tonnes.

dailymirror.lk