GENERAL REVIEW

OF

NATURAL RUBBER PRODUCTION

Until the outbreak in 1941 of war in the East, natural rubber had enjoyed, with some fluctuations in prosperity, all the advantages of an essential raw material for which no satisfactory substitute had been found. There was no other material a rubber manufacturer could use, although strenuous efforts by other countries to produce, for strategic and political reasons, a satisfactory substitute for natural rubber, and the keen interest shown in these developments by rubber manufacturers and by the powerful American oil companies had not passed unnoticed.

Geared to the rapidly developing motor car and transport industry, the natural industry had enjoyed on the whole a long period of steady expansion. But even in the decade before the war, the development of new rubber-like materials that could replace natural rubber for special purposes, and new products of the plastics industries, gave clear indications of an increasing challenge to natural rubber.

In the years between the two wars, the prosperity of the natural rubber industry depended mainly on the rate of consumption and cost of production. Because natural rubber had no serious rival it was possible for producers to regulate production by co-operative action so that production and consumption might be fairly well balanced. During this period the industry by means of research in the development of improved planting material and better methods of cultivation and production was able to reduce production costs. Whereas annual yields of 500 lbs. per acre were considered reasonably good 15 to 20 years ago, present-day average yields of 1,200 lbs. per acre from budgrafted areas are considered normal, and from the newest selections yields of 2,000 lbs. per acre have been obtained. Along with improvement in planting material and methods, other notable advances have been made in estate factory organization and the methods of preparation of natural rubber in the various forms in which it is now exported. The larger organiza-

tions have established central factories for the preparation of improved smoked sheet, crepe, and special products, such as concentrated latex.

It has been customary in Malaya to divide the rubber plantation industry somewhat arbitrarily into two principal sections—estates and smallholdings, and to regard properties of 100 acres and over as belonging to the first category and those of less than 100 acres, to the second. At the upper end of the scale are the large, company-owned estates, highly organized and operating in units of 20,000 acres or more, and producing in many cases special grades of rubber and latex. At the other end of the scale is the peasant smallholding of 3 acres or less, producing as a rule a low-grade product. Between these two extremes we find every type of producing organization, from the holding up to 10 acres—family owned and operated, through the miniature estate of 25 to 100 acres owned by a resident or non-resident Asian proprietor up to the large company-owned estates. This, in brief outline, was the structure of the producing industry before the second world war; an industry built up of units of every conceivable type and size engaged in the production of a natural product for which no satisfactory substitute had yet been found.

The manufacturer of rubber articles was obliged to purchase the produce of this industry, sometimes by direct contract between producer and user, but to a far greater extent through rubber marketing organizations. The manufacturer took the rubber he was offered and largely by his own efforts discovered ways and means of using it to the best advantage. The more progressive sections of the producing industry were alive to the need and the practical good business value of improving the quality of their product but, because the bulk of the manufacturers' needs had to be filled from the open market manufacturing processes had to be planned to use the general market product. The principal consumers of rubber were generally reluctant to pay a premium for specially prepared rubber, and this was principally because such material was seldom available in a sufficiently large quantity to make it worth while. There was in fact little incentive to develop the value of natural rubber by special attention to quality and liaison between producers and manufacturers was never sufficiently strong.

COPYRIGHT © MALAYSIAN RUBBER BOARD

The second world war changed this picture for ever. Under the stress of the war, the synthetic rubber industry in America developed rapidly. At the end of the war the potential production of GR-S was approximately 1,000,000 tons per year. To achieve this remarkable goal it had been necessary to accept for large scale production the first satisfactory synthetic rubber that would satisfy the urgent need for a usable bulk substitute for natural rubber. The defects of the first-produced GR-S rubbers were well-known, but needs were too pressing to allow time for the patient research necessary to improve the quality of GR-S rapidly enough to supply the large quantities immediately required. When hostilities ceased and the rubber producing countries were re-occupied, natural rubber again became available. For a time the manufacturers were ready to take all the natural rubber that producers could provide, until the natural rubber hunger of the war years was at least partially appeased.

When natural rubber became freely available breathing space was provided for research teams and technologists, to concentrate upon the improvement of their synthetic product. In the huge synthetic rubber industry, built up during the years 1941 to 1945, research has been greatly intensified since the war, and has resulted in notable improvements in the quality of the synthetic rubbers which are now produced. The great importance of rubber in world economy makes it imperative to safeguard future supplies. On the grounds of national security, consuming countries find themselves unable to rely entirely on the natural product. Therefore, strenuous efforts are being made in America and elsewhere to maintain an efficient and progressive synthetic rubber industry. To this end, American rubber policy has been directed towards the protection of the new synthetic industry by the mandatory usage of a minimum quantity of about 230,000 tons annually and by the maintenance in standby condition of adequate producing plants. Operation of synthetic rubber-producing plants is backed by intensive research financed from state funds and probably to a far greater extent by the individual enterprise of the large rubber manufacturers. There are many indications that a considerable measure of success is being achieved by this powerful drive as witness the consumption of synthetic rubber in America during 1948 of over 440,000 tons, almost double the minimum mandatory amount.

Synthetic rubbers are produced in a wide range of different types, some of which have specific uses in which they are found to be superior to natural rubber. It is by the development of special purpose rubbers, none of which may possess all the valuable properties of natural rubber though any one of which may be superior to natural rubber in one particular property, that the synthetic rubber industry is likely to threaten increasingly the prosperity of the natural rubber industry.

The manufacturer of synthetic rubber is in a strong position for he is supported by the resources both in money and technical skill of the highly organized chemical industries. During the war years it was the rule for the technologists engaged in the manufacture of synthetics to work in the closest contact with the user. This close contact has enabled the manufacturer of synthetic rubbers to discover what the user needs, to try to provide it and to assist in making its use successful by the consumer. The manufacturer has begun to develop a liking for the new material, specified as to quality and properties, that the synthetic rubber industry is able now to provide and he is becoming more and more critical of the quality of the natural rubber he receives.

It cannot be too strongly emphasised that natural rubber has for ever ceased to be the only satisfactory material the rubber manufacturer can use; it is only one of a number of rubbers which the manufacturer can use or reject according to his requirements.

A comparison of relative prices, pre-war and post-war, for some of the recognised grades of natural rubber provides a strong indication of probable future trends. For example, before 1941 the difference in price between the best quality smoked sheet and lower grades of crepe rubber was comparatively small, and this was also true in the early post-war period when the urgent need for natural rubber induced manufacturers to accept it in any form without too much regard for quality. From the beginning of 1947, however, the differential in price between RMA 1 and, for example, clean brown crepe has increased steadily. In January, 1949, clean brown crepe was selling at about two-thirds the price of RMA 1. One reason for this may be that the manufacturer is developing a preference for clean GR-S supplied to him with a complete specification as to quality; with such material available he is prepared to accept the lower grades of

natural rubber only at a considerable discount. The manner in which the rise of the synthetic industry has directed attention to the importance of quality as a factor in the future marketing and usage of rubber is a matter of the greatest importance to the natural rubber producer.

It is necessary to understand clearly what is meant by the term "quality" as applied to rubber. It seems at the present time that the producer, the dealer and the manufacturer use the term "quality" in different ways.

To the producer who makes smoked sheet, a good quality product consists of a well prepared sheet of conventional standard size, perfectly clear when viewed against a bright light, free from all visible traces of sand, bark, "bubbles" or other impurities, evenly smoked and carefully packed, baled and marked, to satisfy the requirements of his agents and brokers.

The dealer requires the product to conform to the standards on which the planter judges it, but it is common experience that the dealer's appraisal of "quality" may frequently be different from that of the planter.

To the manufacturer, the most important considerations are cleanliness and the physical and technological properties of the rubber he buys.

The method of grading in current usage by the producer and the market gives the manufacturer no information about those qualities of the product that are of the greatest importance to him, except perhaps the quality of cleanliness in its narrowest sense. It is common knowledge to the planter who has seen the rubber from his own estate being used in the factories of Europe and America that the manufacturer pays little or no attention to the quality stamp that he or the dealer have placed upon it. It is clear that the natural rubber industry will have to compete with the synthetic industry more and more on a quality basis, and to be in a position to compete successfully producers must give immediate attention to their current methods of preparation, grading and marketing of their produce. There is little that is new in this standpoint; for many years past many of the most progressive producers have devoted attention to the production of special qualities and improved or new forms of natural rubber for export.

This principle of improvement in quality must be extended to the whole natural rubber industry, and it is certain that the future prosperity of the industry as a whole, of each producing territory and of the individual producer will depend upon the speed and efficiency with which the necessary work is undertaken.

In the struggle with the synthetic competitor all producers of natural rubber meet in a common cause. We realise that the problems of different producers will not be exactly the same and each will have to solve them in the manner he judges best. But, the broad directions in which we have to work are the same for all; it is hoped that the present Meeting will provide an apportunity for a valuable exchange of views and opinions on matters of the greatest importance to us.

C. E. T. Mann