

agement and sales; and by the introduction of new machinery, great economies were to be effected in coal cutting and surface handling. Neither one nor other of these desirable results has been achieved, but we are informed upon good authority that costs are now twenty-five to thirty per cent. higher than what they were when collieries were operated by the original owners. The Maritime Record has estimated that in Cumberland County the leading colliery's costs are approximately two dollars a ton on coal shipped, but this is quite conceivable, for the same authority has stated that the average wages of coal hewers is \$3.06 a day.

It is evident, therefore, that Nova Scotia coal cannot be delivered in this Ontario market and compete with Ohio coal, even with the advantage of sixty cents a ton protective duty. The Engineering and Mining Journal quotes 95c. to \$1 at Ohio collieries for run-of-mine. Moreover for steam purposes Nova Scotia coal is not regarded of equal grade, but for gas-producing purposes it is better suited. Extended markets are not to be obtained by relying upon protective duties or Government assistance, but rather by improved methods and reduction of costs in every possible way.

TROPICAL PRODUCTS AND BRITISH CROWN COLONIES.

We often hear of the Crown Colonies of Great Britain, without taking pains to ascertain what or where these colonies are. Some day soon we purpose giving a list of them, and some statistics about them; but meanwhile intend only to notice an illuminative paper read before the Royal Colonial Institute in London on 14th March, entitled, "The Crown Colonies and Places." The author is Sir Charles Bruce, G.C.M.G., an old and able servant of the crown, who after being librarian of the British Museum, held important posts in British Guiana and in the Mauritius. He shows at great length—the paper occupies 43 pages of the Journal of the Institute—what the effect of British colonial policy has thus far been; the extent and variety of climate of the crown colonies; "of what good are they?" and how shall we treat them to accomplish their best development?

These crown colonies are scattered literally all over the world, from Ceylon and Hong Kong in Asia, to Gambia and Mauritius in Africa, to Honduras and the West India Islands in America, Fiji and New Guinea in Australasia. They comprise, besides the 2,334,000 square miles of territory in Africa, 125,987 miles in Asia, 116,650 in America, 97,975 in Australasia, 3,702 in Europe—a total of 2,678,330 square miles with a population apart altogether from Canada, India, and Australia proper of more than thirty-six millions. A great deal of this enormous territory lies within the tropics; and as a vast share of the products of the earth used for foods or the raw materials of manufacture come from the tropics, it is the object of Sir Charles Bruce and the able men who commented upon his lecture to get British public men and capitalists to develop cultivation in these vast districts to the best advantage, and to enhance the resources of the British Empire.

We proceed to give, in a desultory way, not having room for the extended arguments advanced, some kernels of fact from the paper as well as from the discussion which it evoked. Sugar is an article of

tropical produce of enormous consumption, which is increasing yearly. More of it can be grown in tropical Britain. The world's consumption of cocoa rose from 64,507,000 kilos (142,000,000 pounds) in 1894 to 127,355,000 kilos (280,181,000 pounds) in 1903 practically doubled. Consider the importance of cotton, in which it is said ten millions of the population of Great Britain are directly or indirectly interested. Sir Charles goes so far as to say that "it seems to be certain that under a proper system of organization British colonies and protectorates can produce all the cotton required to afford the United Kingdom an adequate and stable supply." Another tropical product of very marked importance is rubber, the variety of uses for which in commerce and the arts is growing at a great rate. British people at home and abroad have been experimenting with rubber planting. Sir W. Thistleton-Dyer said at this meeting that as long ago as 1876 he brought the first Para rubber plants from Brazil to Ceylon and Singapore; and "already it has been shown that the rubber tree will grow on the Gold Coast of Africa with as much facility as in Brazil." And the important fact was communicated by Prof. Wyndham Dunstan that Para rubber seeds have been sent for examination to Kew Gardens and the Imperial Institute, and found to contain 40 per cent. of oil which promises to be of much commercial value. By the way, it is a circumstance worthy of notice that there are about 160 men from Kew Botanical Gardens serving in four distant quarters of the world as curators, experimenters, etc. So that England cannot be said to have done or to be doing nothing towards increasing the products of the soil in her dominions.

Stress was laid by one of the gentlemen present at the meeting, Mr. Benjamin Kidd, upon the fact brought out in the paper that all the great self-governing colonies of Britain are in the temperate regions while the crown colonies are in the tropics. And, added Mr. Kidd, the natural channels of trade in the world are between the tropics and the temperate regions. Referring to tropical products, this speaker mentioned cotton, tea, cocoa, india rubber, rice, sugar, tobacco, maize, fruits, oils; while those countries have also hides, gold and other metals. He insisted upon the vital importance the tropics are going to possess in the future, and consequently the important part the crown colonies will play. Referring to rice, so largely grown in India, "a third of the human race at present live upon rice." And Sir W. H. Treacher made it known that the Federated Malay States, which grow rubber largely, yield seven-tenths of the metallic tin produced in the world.

Passing by, regretfully, the fiscal considerations mentioned in the discussion and some suggestions as to labor in the tropics, we have only space to-day to mention what was said, among other sensible things, by the chairman of the evening, the Duke of Marlborough. "Turning to the question of health, it is clearly impossible to develop our tropical and sub-tropical colonies as we could wish unless we remove the disabilities which till recently have existed in the shape of malaria and other tropical illnesses. * * * * The London and the Liverpool schools of Tropical Medicine have done much to mitigate the terrible diseases which lay low so many of our countrymen in the West African colonies." The Duke, who is colonial under-secretary in the present cabinet, expressed his resolve to encourage industrial and technical, not merely clerical, training among the