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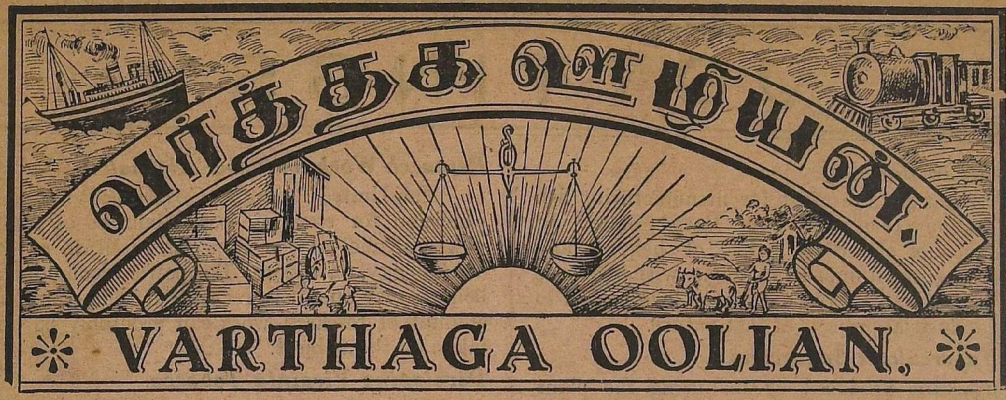

VARTHAGA OOLIAN.

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EDITOR: T. V. K. NAIDU.

JOTTINGS

Fish Oil in Baroda.

Preparations are afoot for manufacturing fish oil on a commercial scale in the Baroda State. In furtherance of the State policy of helping and encouraging small industries along with big ones loans have been advanced by the Government to several industrial projects of that nature.

Anti-Tuberculosis Sugarcane.

Sugarcane produced by manuring the plant with dead cobra is stated to be very efficacious in curing even most chronic and obstinate cases of tuberculosis. This type of cane was first cultivated in Bhopal by the State Conservator of Forests. After the cobra manured cane has been produced, the treatment, it is stated, consists in the tubercular patient simply chewing a small piece of cane every morning for some time.

Grants for Cooperative Godowns.

During the first quarter of 1940—41, in connection with the development of Cooperative loan and sale societies, Rs. 4025 was granted by Government to five rural Cooperative Credit Societies in the Trichinopoly District for the construction of godowns. An expenditure of Rs. 1410 was incurred on account of the special staff employed to assist Cooperative Societies in Consolidating holdings.

Cooperative Sugar Manufacture.

A cooperative sugar manufacturing society has been formed at Coimbatore with a share capital of Rs. 12½ lakhs. The society proposes to give a fixed price for the cane. If the area of cultivation is increased, it is stated, it would be possible to work the society's sugar factory for 250 days in the year. The factory would manufacture 400 tons of sugar per day. It has been resolved to request the Government to lend the services of an agricutural demonstrator and a cooperative inspector free to the society for two years.

Tanning in Baroda

The tanning industry in the Baroda State is making good progress, and full advantage is being taken of the facilities afforded by the State for imparting training in tanning technique. The number of students have increased from 16 to 35 during the 3 years the scheme has been in operation. To meet increasing demands and afford extended facilities for such training H. H. the Maharaja Saheb has been pleased to sanction Rs 2814 up to 31—7—43, which will enable the department of industries to upen three additional training classes making a total of 9 such classes in the State.

Research Work on Power Alcohol.

The United Provinces Government are making provision for starting special courses of study in power alcohol at the Imperial Institute of Sugar Technology, Cawnpore. The power alcohol industry being a new one, it is recognised that considerable amount of research work can profitably be undertaken on the subject.

Developing Virginia Tobacco.

An attempt is being made at the tobacco farm at Jhansi U. P. to develop raw Virginia tobacco for manufacturing cigarettes through scientific methods. The scheme, if successful, is likely to spread over a period of ten years at a recurring expenditure of over Rs. 25,000 a year. It will be interesting to recall in this connection that one-fourth of the world's tobacco is produced in India.

Regulating Cultivation of Crops.

The Government of Madras are said to be considering a scheme to curtail the groundnut crop for the next year. A general scheme is now being examined by the Government of India for regulating the cultivation of crops the export of which has been partly or wholly stopped on account of the war. They are now examining the whole question and inquiring what and how much of particular crops cannot be exported on account of the closing of European markets.

Steel Output of India.

India is now in a position to meet the present steel demands from the Middle East, Iraq, Kenya and Uganda After meeting all demands in sight, a balance of untested light steel products of 10,000 tons per month will be available for the United Kingdom and a further 10,000 tons of scrap per month for the next twelve months. Arrangements have been completed for the supply of 3,00,000 tons of pig and foundry iron to the United Kingdom at the rate of 50,000 tons a month.

Sugar Industry in Bengal.

The Government of Bengal have approved the constitution of a Sugar Sub Committee of the Industrial Survey Committee in order to investigate the position with regard to the production and supply of sugarcane as well as the sugar manufacturing industry in Bengal. The committee will make recommendations with a view to ensuring an adequate supply of sugarcane of good quality at prices fair both to growers as well as to the manufacturers and to ensuring the marketing of sugar and sugar bye-products so as to secure a fair and reasonable profit to the manufacturers.

VARTHAGA OOLIAN

SEPTEMBER 1940

Munitions Supply and Industries.

THE objectives of the Eastern Group Conference, which is to take place in October and the Roger Mission are likely to give a great fillip to further industrial progress in this country and advance the place which India occupies among the twelve industrial countries of the world. This is only incidental to the main purpose of the Conference and the Mission, which is to ensure maximum use being made of the existing and potential capacity for war supply of each participating country. The joint war supply policy which will be settled at the Conference will, it is hoped, make the countries of the Eastern Group as far as possible self-supporting for war supply purposes, the deficiencies of one participating country being made good from the available or potential resources of the others. The special mission under the chairmanship of Sir Alexander Roger is to investigate the means of increasing India's production of munitions and other war stores, both for her own needs and to meet the needs of the Forces in the Middle East and East of Suez.

We are glad that, while the deliberations of the Conference would be limited to war supply problems, they would include the essential needs of the civil populations of any participating country where they constitute a war supply problem. We hope the Conference and the Mission will meet with success in their endeavours and enable the participating countries of the Empire to help in the successful prosecution of the war.

But we have to point out that for the successful prosecution of the war not only have the munitions to be produced and men trained for defence purposes, but also the civilian population should be supplied as far as possible with their essential requirements and kept contented so that they might be expected to exert themselves better in their help to the defence services when the need arises. For instance, for financing war expenditure, the people should be in a position to bear any additional taxation that might be proposed. The trade of the country, both internal and foreign, should be maintained as far as possible unimpaired. The presence of the representatives from the various countries of the Empire at the Conference at New Delhi next month should be taken advantage of in exploring the chances of an increased inter-empire trade. It is stated that unofficial conversations might be inaugurated with this object in view. It is proposed to suggest to members of the Conference that on matters which may be described as predominantly civilian problems, they should engage in conversations with the Commerce Department outside the regular proceedings of the Conference. One of the participating Governments, it is stated, in accepting the invitation to attend the Conference, have given a clear hint of their anxiety to enter into wider discussions of this nature. Other countries might entertain similar views.

Both for the consideration of the war supply problems and for the initiation of trade and economic discussions, the services of non-official commercial and industrial experts should be availed of by the Government of India. If the inclusion of non-officials in the Indian Government's Delegation to the Conference is not possible owing to any reason, an unofficial advisory body of experts might be set up so that the official delegation and the Government of India might be in touch with it and seek advice on matters under discussion whenever necessary. That such an advisory body might be found useful is evident from the efforts made by the Commerce Department to get information on the productive capacity of this country from the various Chambers of Commerce and trades associations. During the course of the conference the Government of India might be in need of information on many other points and an advisory body close at hand will prove very useful. We hope the Government will have no objection to its creation. This body, enlarged if necessary later, might be utilised when regular trade discussions (as the outcome of the informal conversations at the Conference) are taken up with the Empire countries.

War Risk Insurance.

THE Indian War Risk Insurance Scheme which is to come into force in October should be welcomed by all especially in view of the continuation and extension of hostilities in the present war against the Nazis. There may be some, who might think that, in view of the distance that separates India from the war theatres, war risks are either few or nonexistent, while there may also be a few who might be thinking that the scheme is unjust because it applies to the whole of India while it should apply only to coastal towns and other places likely to be attacked by the enemy. The present methods of warfare give no immunity to any particular place or territory. It is not possible to divide the country into areas liable to enemy attacks and those immune from them. As the international situation changes, threats may arise at any place at any time. Besides enemy action may affect not merely the merchants of coastal towns, but all the areas wherefrom goods and raw products are sent to big marketing centres, resulting in a crash in prices. Hence it is clear that the scheme should be introduced in the whole of the country.

The scheme makes insurance compulsory for all those who have for sale goods of the value of over Rs. 20,000 in any one district or presidency town in British India, but persons holding for sale goods of less than Rs. 20,000 can insure them if they so wish subject to payment of a minimum premium. The premium has been fixed at half an anna per cent per month. We hope the Government would reconsider the rate by the end of the quarter in the light of the conditions then existing and alter the rate suitably.

The Government of India are, it is stated, considering the question of introducing for immovable property in India a scheme for making good the damage on lines similar to that in the United Kingdom. There the question of making good the damage done by war will be considered at the end of the war; but as at the end of the war it will be difficult to assess the cost of damaged buildings, the Government there have appointed a commission to assess the value of the damage as it is being caused. This information will be collected and preserved and at the end of the war collated to entitle the owners of damaged property to such financial assistance for reconstruction as may be permitted by the position of the British Treasury. The Weir Committee on war damages had decided against the possibility of an insurance scheme for air raid damage to property. We hope the Government of India would take note of what the British Premier stated recently in the House of Commons on this question. Mr. Churchill then said that it would, in his judgment, be worth while for a further examination to be made of the scheme for the insurance of immovable property, particularly as it would affect the small man. The man of small means may not be in a position to wait till the end of the war for help. Help should be given to him soon. We hope the Government of India would have this aspect of the matter in mind when they decide the question of war damage to property.

Failure of Co-operation in Madras.

THE recommendations of the Committee on Co-operation in Madras Presidency taken together reveal an admission of the failure of the cooperative movement in this province. 35 years of cooperative effort has not improved the position of the people, and drastic remedies like the rural insolvency law, alteration in the mortgage system and violations of contracts are suggested. Unlimited liability basis of the societies is to go and the credit societies would simply be another version of the joint stock banks and other money lending institutions, the main difference being that the former would be afforded certain facilities and privileges, under the Cooperative Societies Act. The failure of the movement will be more apparent when we consider that there has been phenomenal growth in the number of credit societies, while the number of non-credit societies and credit societies with non-credit activities has, till lately, been very small The people had been induced to join the societies because of the low rate of interest at which loans are available.

We are glad, however, that the committee have made some very valuable recommendations. They have done well in giving up the unlimited liability basis. Whatever might have been the conditions in the country about 35 years ago, the present conditions do not favour the retention of that principle. While we agree that new usufructuary mortgages should be automatically redeemable in a fixed number of years, we are against using this principle to the existing mortgages. In many cases the mortgaged lands would not even have paid a reasonable rate of interest. Such expropriations without compensation and the resulting impression gaining ground that creditors might be victimised later under a more socialist or communist regime would undermine the credit structure of the country.

There is a complaint that there is a lack of cooperators imbued with missionary zeal to run cooperative institutions. Co-operative missionaries had been working in the beginning of the movement and if the movement had not profited thereby it shows that there is something inherently wrong in the structure of the movement. No movement can expect honorary service for all time. Every movement should so develop in strength and vitality as to dispense with the service of the honorary worker. If enthusiastic workers are needed, it is better to face the problem squarely and try to recruit them on ordinary business principles. The organisation should make it worth the while of the worker to work better by offering him reasonably sufficient inducements.

The inherent weakness of the movement in its early stages was that while the people were offered loans at a lesser rate than that prevailing at the time, it was not sufficiently low when one considered the poor returns from the land. The yield from land ranges from three to four per cent and if a person borrows a thousand rupees, he would have to forego the returns from land worth at least three thousand rupees for a considerable time in order to repay the debt. And since money cannot be had at sufficiently low rates for the benefit of the poor agriculturist, it is necessary to see what could be done to improve the economic condition of the people. We have more than once stressed in these columns on the importance of the subject. We have not only to improve the methods of agriculture, but also to see that the ryot gets a reasonably profitable price for his crops. We are glad that the Committee have made certain sound recommendations on this aspect of the question. They have for instance recommended that loans against produce should be developed through village societies which should provide facilities for storing the produce in the interval between harvest and sale, and that Government should extend financial assistance for the construction of godowns. They have also made valuable recommendations regarding marketing societies, societies for the improvement of cottage industries, societies for weavers etc. Intensive work on the lines suggested would not only inculcate the ideals of cooperation in the minds of the people, but also improve their economic condition. For, when people see that they stand to gain by cooperation in other fields than credit, the number of non-credit societies and non-credit activities in credit societies would grow as the number of credit societies grew in the early stages of the cooperative movement in this province. We hope the Government, the Co-operative Department and the social workers would concentrate on non-credit activities while at the same time strengthening the credit side of the movement.

The Groundnut Trade of Madras.

WE are glad that the Commerce Member of the Government of India had a conference with the groundnut interests in Madras Presidency before taking any measures for improving the position as regards the groundnut trade. Some of the facts that emerged at the conference were that there was no surplus of groundnut in the market, that last year's production had been almost entirely consumed notwithstanding the dimunition of exports and that the present problem related only to providing a market and adopting measures for the consumption of the present crop.

The British Government are buying a considerable portion of the groundnut production and a minimum price has been fixed for this purchase. The problem of surplus disposal would not be very serious if some of the measures suggested are taken up in earnest. For instance, until we are certain of an expanding consumption, the area of cultivation should be restricted and the surplus of the present crop should be properly stored for future use. For this purpose a scientific investigation of the proper methods of storage should at once be undertaken. Advantage might be taken of the presence in India of the delegates to the Eastern Group Conference to explore, unofficially, the chances of an increased inter-empire trade in this product.

We are glad that the Conference also agreed that measures should be taken to increase the internal consumption of groundnut. Experiments are being carried out to utilise groundnut oil as a lubricant either by itself or in proportionate mixture with mineral oils. If the experiments prove successful, groundnut would have a growing internal market. Increased production and consumption of vegetable ghee would no doubt go a great way to solve the problem to a considerable extent and every reasonable effort should be made towards this end. We, however, regret that the non-officials displayed totalitarian tendencies in their attack on the producers of Vanaspathi (vegetable ghee). The latter had not been given an opportunity to state their case nor were any facts and figures given at the Conference to justify the attack on the price or production of artificial ghee by the so-called ring. Nor was any assurance offered to the "ring" for the disposal of any increased output at reasonable prices.

It is possible, with a proper advertisement and sales organisation, to increase the sales of the groundnut ghee at a cheaper price and thus make for an increased internal consumption of groundnut. We hope the Commerce Member would get into touch with the manufacturers of the artificial ghee so as to evolve a feasible scheme for an extended use of the nuts by them.

As Sir Ramaswami Mudaliar says, the cumulative effect of the various means suggested might prevent the problem of the surplus becoming serious and we hope necessary steps would be taken to carry these suggestions into effect as early as possible.

South Indian Railway.

THE death of Sir Percy Rothera, a former Agent and General Manager of the South Indian Railway, removes from the Home Board of this Railway a member with outstanding abilities and vast personal experience of the working of a great railway system in South India. For Sir Percy joined the South Indian Railway Administration in 1896 and continued till 1935 except for a brief period when he served with distinction in the Mesopotamian Expeditionary Force during the last war. The Home Board is certainly the poorer for his death, for they would miss the valuable experience gained by Sir Percy during his long service in the Railway. Now that Railway administrations have to adapt themselves to changed conditions of modern times, a member with the requisite experience in actual touch with the changing conditions would be found not only desirable but also necessary. We doubt if any with the necessary qualifications could be had in England now. The best course that the Home Board could adopt is to take the present Agent and General Manager, Mr. C. A. Muirhead, who is an efficient administrator, as one of the Directors in addition to his holding the present office. The present war conditions making communications difficult will prevent speedy consideration of some of the urgent problems, but the presence of a Board Member here in the person of the Agent fully conversant with the general policy of the Railway Company and the local conditions relating to any important question might lead to speedy disposal of important business. This proceedure might be considered out of the way, but considering the needs of the circumstance nothing can be said against it.

Creation of Habit as a Sales Factor.

THAT the creation of a habit could be utilised as a good sales factor is illustrated by the success of the experimental work that is being conducted by the Indian Tea Market Expansion Board in some of the important cities of this country. The object of the experimental propaganda is the inculcation of the tea drinking habit into all sections of the population of these cities by means of free liquid tea and sale of pice packets of dry tea to all sections and sexes of the communities. For this purpose each city is divided into a number of working areas each under the jurisdiction of a demonstrator. The demonstrator distributes a cup of tea per day to every individual in the area. The distribution is to the house and not to the individual. If a household consists of seven people, the house gets seven cups of tea so that the drinking of tea at a certain time every day becomes a domestic occurrence. This campaign has been found to be so successful that more towns have been included in the scheme. The Commissioner gives his opinion that the campaign is achieving its object and states that in almost all the shops in the areas where such campaigns are conducted stocks of tea have increased and moreover the bulk of this stock is in small packets which are rapidly replacing the old trade in loose tea.

In this connection we would offer a suggestion. It is not enough inculcating the tea drinking habit. It is necessary to make arrangements for the continuous supply of small packets of tea of the same quality that is used in the campaign. The big tea concerns might join and pool their resources to issue, for the use of the poor, standard packets with a distinctive mark containing good quality blend of tea, at reasonably fair prices As adulterated and inferior tea is sold in many places and good tea is generally difficult to procure at reasonable rates, the tea drinking habit, even if formed, may be given up if the Board does not arrange for efficient widespread sale of a standard quality product.

Agricultural Statistics of Pudukkottai State for the year 1939—1940.

Village papers show 7,22,051 acres which comprises of .—

(1) Forests 22,357, (2) Not available for cultivation 1,95,678, (3) Other uncultivated land excluding current fallows 41,863, (4) Current fallows 2,05,842, (5) Net area sown during the year 2,56,314.

Crops irrigated were :—Rice 1,05,797, Jowar 687, Bajra 173, Maize 901, Other cereals and pulses 6,279, Sugarcane 40, Other food crops 1,775, Cotton 3, Other non-food crops 75 acres.

Total area sown with crops were :—Rice 1,11,553, Cholum or jowar (millet) 12,090, Cumbu or bajra (millet) 5,496, Ragi or marua 23 564, Maize 1,426, Gram (pulse) 20,332, Other food grains including pulses 35,059, Sesamum (til or jinjili) 373, Ground-nut 21,644, Cocoanut 1,342, Castor 352, Others 67, Condiments and spices 997, Sugarcane 43, Others 184, Cotton 662, Tobacco 15, Fodder crops 54, Fruits and Vegetables including root crops 1,718, Food 1,904, Non-food 21,970, Net area sown during the year 2,53,802.

Number of live-stock, ploughs, and carts :— Bulls 1,830, Bullocks 81,973, Cows 63,568, Young stock (calves) 33,642, Male buffaloes 5,886, Cow buffaloes 17,134, Young stock (buffalo calves) 7,664, Sheep 2,93,349, Goats 1,16,639, Horses 82, Mares 60, Young stock (colts and fillies) 14, Donkeys 1,000, Camels 1, Ploughs 57,815, Carts 13,748.

Incidence of the land revenue assessment on area and population :—Total revenue from land (excluding cesses) of district Rs. 9,35,903, Population of district 4,00,694, Total revenue from land per head Rs. 2—5—4, Land revenue assessed on fully assessed area Rs. 7,84,492, Incidence per acre of land revenue on fully assessed area for total area Rs. 2—5—9, For cultivated area Rs. 3—14—0, Population of fully assessed area 4,00,694, Land revenue assessment per head of population of fully assessed area Rs. 1—15—4.

Special Features in the Mysore Census.

Some of the special features of the next census in Mysore were explained recently by Mr. P H. Krishna Rao, Census Superintendent in Mysore. Cattle census would be correlated with the population census. Certain essential rural and urban statistics would be collected during the census and made available in each village, taluq and town. A survey would be made of the house room available for each family in urban areas and a census would be taken both of cottage and organised industries.

Training of Technicians.

The Government of India are making immediate arrangements to train about 3000 technicians for war industries in accordance with the recommendations of the Technical Training Inquiry Committee appointed in June last. Further arrangements are contemplated in order to meet the requirements of technical personnel for war work estimated at approximately 10,000 men annually. The Government have accepted all the recommendations of the Technical Training Inquiry Committee. The Committee had recommended among others, that as the time factor was of the first importance, the training course should be intensive and should not ordinarily exceed one year in duration, that the Central Government should pay the whole cost of training and provide all the additional equipment required and that trainees should be paid stipends which will be subject to refund if the persons trained fail to accept the employment for which they had been trained.

It is stated that Provincial Governments are being addressed with a view to obtaining volunteers for war training from among students who are already in technical institutions and arranging for technical institutions to take in additional students for war training up to the limit of their present capacity.

No Unemployed.

Some remarks by the Committee are worth noting. The Committee expresses the opinion that, during the next two or three years, it would be difficult to train more skilled men than war production work could absorb; that the stimulus given to Indian industrial system by war production would be maintained after the war and that the risk of any considerable number of skilled men becoming unemployed was small.

Education and Industry.

The Committee also remark that the present system of education in India is too academic and not sufficiently in touch with the day to day needs and conditions obtaining in industry. The intensive war training now contemplated will correct these tendencies and contribute to a more efficient system of technical education after the war.

Experimental Silk Farm in Mysore.

The establishment of an experimental silk farm on Biligirirangal hills, Mysore State, has been sanctioned by the Mysore Govenment. The main activities of the farm will be the rearing of pure foreign breeds of silk-worms. The Government have also sanctioned the development of new seed-cocoon producing areas in Dodballapur and Kyatasandra areas; the release of about 50 acres of forest land in Chikkamangudde to a Harijan sericultural colony and the establishment of a Government Grainage at Ummathur in Chamarajanagar Taluq, Mysore District.

More than 2,000 acres of land in Mysore were newly brought under mulberry up to the end of June 1940.

A sub-committee has been appointed to review the progress so far made regarding the supply of disease-free layings and to suggest steps to accelerate the pace so that an adequate supply of good seed is available within a reasonable period.

While agreeing with the need to introduce legislation to control silkworn seed supply in Mysore, the Sericulture Board has referred a draft regulation to the above sub-committee so that definite propasals may be made regarding the area where control may be introduced.

The Board has recommended to Government the grant of Rs. 500 to the Mysore Silk Association to hold a Provincial Sericultural Conference.

Salts Prevents Heat Stroke.

An extra ration of salt is reported to have proved beneficial in the maintenance of the general health of troops of the army in India in the hot weather and is considered to be useful in the prevention or reduction of heat stroke and the effects of heat according to the annual report on the health of the Army in India for 1938.

To allow for the increased loss of salt from profuse perspiration during hot weather an extra salt ration has been allowed at certain stations between May 15 and September 30. The preponderance of cases of heat exhaustion is towards the end of the hot weather period when the drain of salt from the body is likely to have its greatest effect.

A daily loss of salt in the perspiration which is not made good by the daily food after two or three months is considered to produce a deleterious effect on the general health.

World Trade.

Movements in international trade, as indicated in a recent issue of "The Monthly Bulletin of Statistics" of the League of Nations, show expansion in the exports of raw material from producing countries since the outbreak of war; increase in the production of petroleum; in the shipments of rubber; and in shipping freights.

Exports.

Manganese ore from India, tin from Netherlands Indies, meat and lead from Australia, linseed from Argentine, timber and ferro-alloys from Canada, figure among the commodities showing increase in exports. The world production of petroleum for January and February 1940 was estimated at 24½ and 23½ million tons respectively. An interesting figure regarding the stocks of crude petroleum in the United States is that, where as at the end of August 1939, it was just over 34 million metric tons, by March 1940, it seems to have risen nearly to 36 million tons. In the case of rubber, where as the monthly shipment of rubber from producing countries during the first eight months of 1939, where roughly 80,000 metric tons, in both February and March 1940, the amount was 115,000 metric tons.

Price Movement.

The general level of prices of primary products as quoted on American markets, after having risen on the average by some 15% above the ore war level, remained fairly stable between the end of 1939 and the beginning of May 1940. In the grain markets, however, substantial falls were recorded during May. Prices of tin and rubber increased considerably.

Note Circulation.

Among the countries whose note circulation is shown for the end of April 1940, the most striking change an increase by 16% in the course of the month-oocurred in Denmark. In Germany, the circulation of Reichsbank notes continued to expand, being 15% higher in April 1940 than in October 1939, and 47% higher than in April 1939. The note issue of the Bank of France has shown a more moderate increase (by 8% since October and 25% since April 1939) and that of the Bank of England has risen even less (by 2% since October and 10% since April 1939). After the sharp expansion of currency in the autumn of 1939, there was a comparative stability, up to the end of April 1940, in such countries as Roumania, Switzerland, Hungary and Greece.

New Types of Third Class Carriages in S. I. Ry.

An improvement in the standard of comfort of third class passengers and more especially to small excursion parties has been provided by the construction of two new types of coaches for use on the Broad Gauge.

The smaller coach has a seating capacity for 76 passengers and is built on the compartmental principle, with four compartments two of twenty-one seats and two of seventeen seats, and provided with upper bunks. Each compartment has a separate water closet and the coach itself is equipped with a dynamo. Educational Institutions taking out small excursion parties will find the use of this coach very comfortable.

For the use of larger excursion parties and marriage groups, a similar coach, but with a seating accommodation for 104 passengers and provided with 6 compartments two of 20 seats and four of 16 seats with water closets to each compartment has been recently constructed.

These facilities should be appreciated by the public in general and Educational Institutions in particular.

Empire War Supplies.

The Government of India in consultation with His Majesty's Government in the United Kingdom have been considering possibility of establishing close liaison between India, the Commonwealth of Australia, New Zealand, the Union of South Africa, Southern Rhodesia, Burma, Malaya, Hong Kong, Ceylon and the African territories represented in East African Governors' Conference for the purpose of ensuring that the best possible use is made of their resources existing and potential for the purposes of the war.

It is hoped that Conference will enable the participating Governments to settle a joint policy for the co-ordination and development of their resources for the purposes of the War and to establish some form of permanent liaison arrangement with that object in view.

Seed Storage.

Investigation in the Silvicultural Section of the Forest Research Institute, Dehra Dun have shown that the seed of most species retains its vitality when stored in airtight containers, but different seed covers, such as well washed coarse sand, sifted decomposed vegetable manure farmyard manure or sifted nursery oil do not seem to have any significant effect on germination within shade of without.

Larger Imports Into Empire from India.

The recent extension of the war in Europe has meant a loss of about 22 per cent in value on an average of the total Indian export of principal commodities and a loss of about 18 per cent of the total value of the total Indian export trade of all commodities with all countries during 1938—39.

However, the off-take of about 7 non-Empire countries constituted a record. For example, in June 1940 Iraq imported Indian merchandise to the tune of Rs. 7,07,380 against Rs. 3,00,357 for the corresponding month of the previous year. Thailand (Siam) increased her imports from India to Rs. 6,82,055 against Rs. 1,67,902; Egypt to Rs. 37,67,981 against Rs. 9,54,187; Portuguese East-Africa to Rs. 8,46,451 against Rs. 5,94,992; United States of America to Rs. 2,31,21,759 against Rs. 1,54,04,063; West Indies to Rs. 6,63,096 against Rs. 88,876 and South America to Rs. 39,54,953 against Rs. 20,41,215.

The total volume of Indian export trade to the British Empire stood at Rs. 10,37,08,942 against Rs. 7,75,52,005 in June 1939. The United Kingdom alone imported from India merchandise to the value of Rs. 6,58,43,211 against Rs. 4,83,21,128 in June 1939.

In the period April to June 1940, the total value of exports of Indian merchandise to the British Empire was Rs. 31,17,57,606 against Rs. 20,48,98,295 during the same period in 1939. Out of this volume of trade the United Kingdom alone took goods to the value of Rs. 18,97,52,579 against Rs. 12,21,11,678 previously.

The total value of the export trade of India with all countries during 1938—39 was Rs. 1,62,79,00,000 and the total value of India's export trade with the principal continental countries affected by the war during the same period amonnted to Rs. 29,21,00,000.

There has been absolutely no export trade with U. S. S. R. Norway, Germany, Belgium, Austria, Czechoslovakia and Italian East-Africa for the past few months.

On the other hand, in June 1940 exports to some of the remaining continental countries dwindled. Thus exports Sweden dropped to Rs. 3,861 in June 1940 from Rs. 3,89,890 in June 1939; to Netherlands to Rs. 61,123 from Rs. 50,91,065; to Switzerland to Rs. 38,844 from Rs. 1,33,664; to Italy to Rs. 1,70,999 from Rs. 12,06,996; to Borneo and Java to Rs. 1,49,053 from Rs. 7,88,174; to Japan to Rs. 51,45,075 from Rs. 1,23,54,659; and other foreign countries to Rs. 13,30,290 from Rs. 32,99,766. Since June most of these markets have been further affected.

PUBLICATIONS RECEIVED.

London Chamber of Commerce Journal
The Pudukkottai Gazette
The Industrial Australian and Mining Standard
Mysore Chamber of Commerce Bulletin
South Africa Standard Bank Review
Mysore Information Bulletin
Official Journal (Union of South Africa)
Indian Jute Committee Bulletin.
Monthly Survey of Business Conditions in India.
Statistical Bulletin of the International Rubber Regula-
The Cochin Government Gazette [tion Committee
Monthly Summary of the National Bank of Australasia
The Madras Wholesale Market Rates
Market Information Bulletin (Ceylon)
Madras Market Price Current (Patterson)
Share Market Report (Maconochie)
Pudukkottai State War Information Bureau Bulletin
Monthly Review of the Bank of Nova Scotia
Statistical Bulletin of the International Tin Research
Textile Digest [and Development Council
Indian Information.
Southern India Commerce
Indian Soap Journal
Circulaire Commerciale
Bombay Information
Monthly Record
The Whip
Indian Listener
Commercial News
The Prince
Advertiser
The Commercial Opinion
Ceylon Radio Times
Sunday Observer
Indian Concrete Journal
Hyderabad Radio News
Indian Tea Bulletin
The Ceylon Trade Journal
Railway Herald
Gram Udyog Patrika
Economic News
Journal Officiel
Industry
Guardian
Indian Trade
Batanagar News
Indian Sugar
Ceylon and the War
Sugar Bullettin
Eastern Economist
The Indian Trade Journal
Indian Farming
Anglo-American News

Percentage losses in the export of principal commodities from India to the continental countries are:—Seeds 56 per cent; raw jute 54 per cent; raw cotton 25 per cent; raw hides and skins 33 per cent; oil-cakes 41 per cent; metals and ores 17 per cent; cotton waste 49 per cent; coir manufactures 38 per cent; coffee 37 per cent; lac 20 per cent; bones for manufacturing purposes 95 per cent; raw rubber 24 per cent; spices 19 per cent; manures 40 per cent; black tea 1 per cent; tanned hides and skins 2 per cent. The total value of the exports of these commodities to the European countries affected by the war amounted to Rs. 27,63,24,000 out of a total export trade of India in all these commodities amounting to Rs. 1,24,28,24,000. In other words the war situation has affected these commodities to an extent of 22 per cent. The Government of India are, it is stated, fully alive to the situation created and actually examining the ways and means of meeting it.

Picking of Citrus Fruits for Marketing.

Too often local producers pick fruit before their right stage of maturity. To ensure the arrival of fruit in the market in an attractive and satisfactory condition to the trade they must be picked at their best stage of maturity.

Oranges, grapefruit, mandarins, &c., usually attain their best stage of maturity a little before they are fully coloured. The sugar content and quality increase up to this stage of maturity and the fruit acquire their best flavour when they are picked at this stage. At the same time if kept on the tree too long the fruit become flat and insipid.

Oranges and grapefruit should therefore be picked at this stage of maturity and it has been found that grapefruit in particular gain flavour and softness of flesh if kept for a week after picking and stored in a dry and cool shed or room. If the fruit are picked earlier before they are matured, especially in the case of oranges, grapefruit, &c., they assume a light yellow colour and an external appearance which may deceive one into believing they are ripe, but they never acquire the rich delicate flavour of the fruit ripened on the tree. They usually have a decidedly acid and sometimes a bitter flavour and never the true flavour of the fruit.

Limes and lemons must be picked when they are fully developed but while they are still green. If allowed to ripen and turn yellow on the trees they become over-ripe and do not develop the acidity that characterizes a fruit picked at the right stage.

In picking, the following procedure should be carefully adopted :—

(1) No fruit should be allowed to drop while picking.

(2) The fruit should not be handled roughly or bruised in any way.

(3) The fruit should be picked with a proper length of stem but not too long, *i.e.*, $\frac{1}{8}$ inch.

(4) It would be advisable to use clippers, picking bags, field baskets, &c , to prevent mechanical injury to the fruit.

(5) No fruit should be picked when the trees are wet due to rain or dew. In wet weather the fruit are turgid and are easily injured. A bright clear day is ideal for picking.

(6) No fruit should be exposed to sum for more than an hour after picking.

Reproduced from the Ceylon Agricultural Department's Handbill No. 42.

Paper Making at Dehra Dun.

On paper made in its Paper Pulp Section, the Forest Research Institute, Dehra Dun, has brought out its latest Annual Report on Forest Research.

Nearly five tons of writing, printing, typing, wrapping, newsprint, drying, cover and brown papers, and mounting boards were made in the experimental factory, of which about three tons were supplied to various Government institutions, besides 1,100 lbs. of pulp supplied to the Archaeological Survey of India for use in the preservation of monuments.

Researches are being continued on the manufacture of wrapping paper from raw materials available in India's forests. Paper has been made both in the laboratory and at the factory from *ulla* sulphate pulp alone, and from mixtures of *ulla* sulphate pulp with chir sulphate and chir mechanical pulp.

Newsprint from Indian Material.

By grinding chir (*Pinus* longifolia) and bendi (*Kydia calycina*), attempts are being made to prepare mechanical pulp for the production of cheap wrapping papers and newsprint quality of papers. A fairly satisfactory quality of newsprint has been made from a mixture of bendi mechanical pulp and bamboo chemical pulp, and studies are being continued on the production of mechanical pulp from bendi and other soft woods.

Apart from investigations on various types of grasses from Rewa, Madras, Sind and Jaipur, as to their suitability for manufacture of paper and straw boards, details of the processes necessary for the production of cleaner and better sheets of paper out of waste paper from offices have been worked out for the Sialkot Jail. Special investigations into the causes of discolouration of pulp were undertaken on behalf of paper mills aud an interim report on a tentative method of bleaching to prevent discolouration has been submitted to the Paper Makers' Association, Calcutta; investigations ors being continued.

Paper Making as Cottage Industry.

With a grant made by the Government of the United Provinces, studies have been made of the possibilities of improving paper making processes, so that hand-paper making can be carried on as a cottage industry ; and writing papers and envelopes (white and coloured) drawing papers, blotting papers, cover papers, wall papers, greeting cards, etc., have been made out of raw materials such as tailors' cuttings, paper cuttings, bamboo and grass pulp, etc. Other raw materials available in or near the villages will also be tried.

Possibilities of Kamala Dye Powder.

How with scientific method of preparation India may yet regain for herself the export market, which she is losing, for Kamala, an orange–red powder consisting of minute red glands and hair of the fruit of an evergreen tree Mallotus, which grows throughout the plains of India, and may have, in addition, a synthetic dye industry of her own, is revealed by investigations which the Forest Research Institute, Dehra Dun, has lately been making.

The tree from the fruit of which Kamala is derived, is common in the United Provinces and occurs in profusion in Bengal, Bombay and Orissa. The ripe capsules are gathered in February or March and the powder is collected either dry, by shaking the capsules in a bag, or wet, by stirring them in water and collecting the sediment in the form of cakes.

Kamala has been used as a dye and an anthelmintic in India for centuries and has been exported to Europe and America for the same purpose for a long time. As a dye it is used for imparting to silk and wool a bright orange or flame colour.

High Adulteration.

Lately owing to high adulteration there has been a setback in the export of this product. Pure Kamala is said to contain not more than 1.5 per cent of ash. In trade, however, a powder with 5.8 per cent of ash is considered satisfactory, and it is on this specification that the European and American importers primarily purchase it from India, but quite frequently the material available in the Indian market is highly adulterated with sand, earthy impurities, red brickdust, etc., and samples containing as much as 50 to 87 per cent of mineral matter have been reported.

Uses for Kamala.

The experiments at the institute show that Kamala, when properly prepared, should not only find favour with the foreign importers once again, but it can also be profitably utilised in this country for a variety of purposes. The colouring matter, being soluble in oils and fats, could be employed for colouring hair oils, butter and its substitutes and in the form of its water soluble sodium or ammonium salt, for colouring aerated waters.

In India foodstuffs are often deliberately coloured, but India is not yet producing synthetic dyes, all of which have to be imported, and, therefore, if any suitable vegetable raw material could be employed for the extraction of an edible dye, it should be welcome. In the United Provinces alone about 1,000 maunds of Kamala is collected annually, and the whole of it could be converted into dye and made available for colouring silk, wool, oils, fats, food materials, etc.

BOOKS RECEIVED.

Ceylon-Day by Day Tours.

Ceylon Calling.

Visit Ceylon-The Enchanted Isle.

Colombo.

The above from the Director, Government Tourist Bureau, Ceylon.

The Annual Report of the Department of Industries and Commerce, New Zealand for the period ended 31st March 1940.

Administration Reports of the Government Press, Archaeological Department, Sri Chitralayam, Education Department, Publication of Oriental Manuscripts, Department for the Uplift of Backward Communities, the Excise Department, Forest Department, Marine Department, Coopertive Department, Economic Development Board, Alleppey, Landing and Shipping Fees Committee of the Government of Travancore for 1114 M. E.

Annual Report of the Agricultural Marketing Adviser and summarised reports of Senior Marketing Officers in provinces and certain States for the year ending 31st December 1939.

The Local Authorities Handbook of New Zealand 1937–38 from Government Statistician.

The Annual Report on the working of the University of Travancore for the year 1114 M. E.

The Crow in its relation to Agriculture by E. R. Kalmbach, Bureau ot Biological Survey.

The feeding of chickens by Harry W. Titus, Bureau of Animal Industry.

Liquefied gas for the household by A. H. Senner, Bureau of Agricultural Chemistry and Engineering and Helen S. Holbrook, Bureau of Home Economics.

Forestry and Permanent prosperity by R. F. Hammatt, Forest Service.

The stablefly-How to prevent its annoyance and its losses to livestock by F. C. Bishopp, Bureau of Entomology and Plant Quarantine.

Judging fabric quality by Bess Viemont Morrison, Bureau of Home Economics.

The Vegetable Weevil by M. M. High, Bureau of Entomology and Plant Quarantine.

Report of the Chief of the Agricultural Marketing Service 1939 U. S. A. by C. W. Kitchen.

Report of the Chief of the Sugar Division 1939 U. S. A. by Joshua Bernhardt.

Report of the Southern India Chamber of Commerce, Madras for 1939.

Tin and its uses (No. 6)

Eri Silk Cottage Industry in Baroda.

The Government of Baroda sanctioned last year a scheme for training cultivators in eri culture. A specialist was obtained from the Government Silk Institute at Bhagalpore and classes were opened at Devli in Kodinar taluka on 1—7—1939, and later at Kachhiawadi in Navsari district. 84 persons in 8 villages of Kodinar taluka and 7 persons of Kachhiawadi in Navsari taluka were trained in these classes.

The eri silk eggs reared by these classes have been declared to be satisfactory by the Government Silk Institute of Bhagalpore. Demonstrations in eri silk culture were given at exhibitions held at Amreli, Vyara, Baben, Dhamdachha and other places.

In view of the success of the scheme and the interest the public has taken in this industry, Government have ordered that the scheme should be continued for another year.

Industries in Baroda.

During the year 1938—39 all the 16 cotton mills in the Baroda State as also the Cement, Salt, Match and Sugar Concerns were working satisactorily. A new concern, the Tata Chemicals, was floated during the year to undertake the manufacture of heavy chemicals such as soda ash, caustic soda, bleaching powder and chlorine. Necessary lands have been acquired and construction work has been started.

In the calico printing and engraving classes 149 and 18 students respectively were trained. A metal work class was started at Baroda. 18 students were admitted and trained in moulding casting, filling etc. Demonstration in spinning aud handloom weaving were carried on in different centres. Improved methods of bark tanning were demonstrated to the chamars of various places. A trained eri silk demonstrator was obtained from Bhagalpore and a class for conducting experiments in eri silk worm was started from May 1939.

The number of factories working under the Factory Act during the year was 130 as against 137 in the previous year. The total numbar of operatives was 34,314 os against 34,208 in the preceding year.

To remove unemployment among educated persons belonging to the back-ward classes a scheme was sanctioned for giving scholarships to the members of the backward communities. Each candidates will be deputed to the various mills as apprentices every six months with a view to their future employment in those concerns.

Agriculture in Baroda.

During the first three months of 1940, the following were the outstanding items of agricultural progress in the State of Baroda. The use of 1027 A. L. F. cotton seed is rapidly increasing. Arrangements are in progress for opening a seed farm at Diyodarda near Patan and a fruit farm at Gandevi. Visit of H. H. the Maharaja Saheb and H. E. the Viceroy to the Government farm at Baroda in January has stimulated interest among agriculturists. Uptake of improved agricultural implements was maintained. Scheme enabling cultivators to buy implements at one third the cost price on instalment basis came into being. The six cotton sale societies pressed 3,775 bales. Marketing is in progress through the centre opened for the purpose at Surat in January. 1,685 Bengali maunds of ghee was graded.

Cooperation in Baroda.

There was good progress in the cooperative movement in Baroda State in 1938—39. The number of cooperative institutions increased from 1139 to 1244 while the membership increased from 55,735 to 60,379. Out of the total number of societies nearly one-seventh were engaged in non-credit activities which is a good sign for the cooperative movement in the State. Besides, credit institutions are also engaging themselves in non-credit activities. For instance two of the agricultural banks were engaged in supply and sale activities. One of the bank, that at Amreli has been authorised to organise a market for agricultural produce.

There were 13 development associations and 12 rural reconstuction societies.

A cooperative Insurance society commenced operations during the year. Some societies with large membership have introduced the provident fund system.

The State cooperative department, as usual, continued the policy of inducing credit societies to undertake non-credit activities. Seven new societies were organised for the distribution of cotton seeds to members.

Two new societies were registered for the consolidation of scattered holdings raising the number of such societies to 79.

Twelve new cotton sale societies were registered making the total 30, while a number of village credit societies were induced to undertake joint sale of cotton.

There were three groundnut societies and five village supply societies, two in each being new registrations for the year.

Besides these, there were 11 milch cattle societies, two for cattle breeding, 12 housing societies, one insurance, 72 weavers' societies and 21 students' stores societies.

REVIEWS

The Textile Digest.

[Quarterly Journal of the Textile Association (India). Published at Ganesh Bhuvan, Suparibaug Road, Bombay, 12.]

The July issue of the *Textile Digest* contains a number of useful articles relating to the Textile industry. Mr. T. G. Choudhari writes on Weaving Shed Efficiency while the Place of Power in the Economy of Textile Mills is dwelt with in another article by Mr. P. V. S. Iyengar. Dealing with the Limitations of Research as applied to Works' Practice, Mr. J. B. Sane says that the major part of the work of the Works' chemist consists in regularising those constant factors that he has to put up with, and then as and when possible, to adopt necessary changes in the chemicals and processes to yield economic, efficient and superior results. As regards the scope for a Works' chemist to take up research work on the lines of those employed in the laboratory where production is a secondary consideration, Mr. Sane says that the research work of the chemist will be mainly on the side of efficient and economic production and systematic organisation developed with a view to render the various processes fool-proof and of a routine character—processes in which the vagaries of the human element are reduced to a minimum *i.e.* in short, processes that have become normally mechanical. When these are achieved, the chemist might try to modify both these processes and the chemicals used, with a view to get better and cheaper results without affecting production.

There is also an informative article on the effect of humidity on cotton fibre.

Tin and its uses No. 6.

The sixth issue of this Quarterly Review of the International Tin Research and Development Council, contains an illustrated article, describing a special tinning machine designed to produce more uniform and less porous tin coatings on tinplate. This machine embodies certain new features which are not yet employed in industrial practice, one of which is a device for securing a smooth drive for the rollers.

Another article which is of particular interest at the present time, explains the uses of fusible alloys for the mountiug of dies and punches for press-tool work, for foundry work and for bending tubes and sections.

An article entitled "Fluxes for Soldering" gives important information regarding the types of flux available and the uses to which each type is suited. Further details are given in this issue as to the best methods oi ensuring adhesion of bearing metals to bearing shells of cast-iron and alloy steel.

Other articles give examples of technical difficulties encountered by tin consumers and of the Council's suggestions for overcoming them; this service of technical advice is available to any firn engaged on processes in which tin is involved.

Copies of *Tin and its Uses* may be obtained free of charge from the International Tin Research and Development Council, Fraser Road, Greenford, Middlesex, England.

Tourist Guides to Ceylon.

[Ceylon, Day by Day Tours; Colombo; and folders, Visit Ceylon and Ceylon Calling. Issued by the Government Tourist and Publicity Bureau, Colombo.]

Well illustrated and neatly got up above publications give sufficient information for the tourist, who wishes to see Ceylon. In Ceylon, Day by Day Tours, all the important tourist resorts are described, the noteworthy sights in each place being noted with much detail. Colombo being the Capital of the Island, it has a pamphlet for itself. This is also profusely illustrated and contains much valuable information for the tourist.

Both the publications contain much information of a general character such as list of hotels, charges for rikshaws and taxis, information above transport facilities etc. Mention might be made here of the issue by the Ceylon Government Railway of cheap first class tourist tickets for travel to an unlimited extent during the available period at Rs. 50 for two weeks and Rs. 75 for a month. Specimen tours to suit the time at the disposal of the tourist lasting an hour or more and one to fourteen days are also included. We Congratulate the Bureau on the production of these publications.

The following are the Current Market at Negapatam on 22—9—40.

			Rs.	A.	P.
White Samba	190 lbs.	per bag	11	0	0
Red Samba	190 lbs.	,,	10	14	0
Katta Samba	190 lbs.	,,	10	6	0
New Crop (Kuruvai)	190 lbs.	,,	9	4	0
Rangoon Black Gram	216 lbs.	,,	15	12	0
Rangoon Madhiya Rice	225 lbs.	,,	14	8	0
Broken Rice (Rangoon)	230 lbs.	,,	11	4	0
Karachi Kadalai	220 lbs.	,,	14	10	0
Karachi Kadalai Mavu (Pea-cock Brand)	210 lbs.	,,	13	8	0
Karachi Kadalai Mavu (Key Brand)	210 lbs.	,,	14	8	0
Kadalai Full	210 lbs.	,,	13	2	0
Kadalai (¾ size)	210 lbs.	,,	12	14	0
Wheat Flour (Cross) (Ship Brand)	196 lbs.	,,	13	8	0
Wheat Flour (Tree Brand)	196 lbs.	,,	13	6	0
Wheat Flour (Nilgiri Brand)	196 lbs.	,,	13	4	0
Suji (Ship Brand)	196 lbs.	,,	14	0	0
Suji (Tree Brand)	196 lbs.	,,	13	12	0
Karachi White Gram	205 lbs.	,,	12	8	0
Kismis	164 lbs.	,,	30	0	0
Gingelly (Punasa)	164 lbs.	,,	12	0	0
Black Gingelley	164 lbs.	,,	13	4	0
Red Gram	216 lbs.	,,	12	12	0
Bengal Gram	216 lbs.	,,	15	12	0

Indian Piecegoods for Afghanistan.

There is considerable scope for the extension of Indian exports of cotton piecegoods to Afghanistan, according to the Indian Trade Agent in Kabul.

The total volume of cotton piecegoods and other manufactures of cotton exported by India to Afghanistan during the last quarter of 1939 amounted to Rs. 9,69,883 (1ndia) as against Rs. 8,25,385 during the corresponding period of 1938. In the same period, Japan improved her trade in cotton piecegoods and other manufactures of cotton from Rs. 14,03,708 in 1938 to Rs. 17,99,501 in 1939. Her trade in silk manufactures increased from Rs. 83,843 to Rs. 1,82,957.

Japan lost a considerable portion of its market in green tea, exporting to the value of only Rs. 1,01,579 as against Rs. 1,98,263 in the corresponding quarter of the previous year.

India increased her exports to Afghanistan during the quarter from Rs. 13,73,876 in 1938 to Rs. 21,82,796; Japan from Rs 18,62,626 to Rs. 21,86,307; the United Kingdom from Rs. 3,42,528 to Rs. 7,60,361.

Composting Cotton Stalks.

The method of Composting Cotton Stalks as practiced at the Government Experimental Farm, Akola, is given in *Indian Farming*. Composting is generally done in the month of January or February. The stalks are allowed to dry and then cut up into small bits in an old fodder cutter, when, however, a fodder cutter is not available, the stalks may be spread over hard ground in the field or preferably in the year's thresting floor in a layer about two feet thick and crushed by allowing a cart drawn by a pair of bullocks to go over the material. A ton of dry stalks can be crushed per day in this way. The chaffed or crushed material is then piled up in pits six to nine inches deep in four one foot layers near a well or any other place where water is readily available during the summer months. Each layer is first thoroughly metted with water and a solution of fresh cowdung or urine is sprinkled over it for inoculating the material with the necessary germs. A thin sprinkling of rotted manure hastens bacterial action and the addition of a small quantity of silt has been found to give useful results. The heap is raised layer by layer to a height of 4 ft., and kept moist by frequent watering during summer. The crushed stalks are thus piled up into heaps $10' \times 10' \times 4'$ or $20' \times 10' \times 4'$ whichever size suits the site or land available and are left over to rot. During the monsoon it should be completely turned over at least twice. If the operations are carefully carried out, the material becomes available for application within nine months and is as good in quality as well-prepared farm yard manure.

The original materials and the rough proportion by weight in which they are mixed for Composting purposes are given as follows: cotton stalks 32 feet by 20 ft., by 4 ft. heap, 15 tons; cattle dung 2½ tons; silt 2½ tons; rotted manure, just sprinkling; total 20 tons. The cost of preparing this quantity of compost is estimated at Rs. 40—6—3; therefore the cost of one ton or 2½ cartloads of manure will be Rs. Rs. 2—0—3 *(i.e.)* roughly Rs. 0—12—9 per cartload. This is stated to be much cheaper than farm yard manure which costs not less than Re. 1/- per cartload.

Sugarcane.

The All-India sugarcane acreage up to the end of July is estimated 4,215,000 acres as against 3,705,000 acres at this time last year. This shows an increase of 14 per cent.

தக்காளி பயிரிடுதல்.

இவ்வருஷத்தில் தக்காளி பயிரிடும் காலத்தில் பொதுவாக தக்காளிப்பயிர் திருப்திகரமாக இல்லை. இப்படியிருக்க என்னுடைய தோட்டத்திலிருந்த தக்காளி மட்டும் ரொம்பவும் நன்றாக இருந்தன. ஆகையால் நான் எப்படி தக்காளிபயிர் செய்தேனென்பதைத் தெரிவித்தால் அதைக்கொண்டு மற்றவர்களும் உபயோககரமாக இருக்குமே என்ற நோக்கத்துடன் இதை எழுதலானேன்.

ஆகஸ்டு மாதத்தில் தோட்டத்தை 18-அங்குல ஆழத்திற்கு கொத்திப்புறட்டி அதிலிருந்த கற்களையும் குப்பை கூளங்களையும் எடுக்கச்செய்தேன் "சர்பாக் நர்ஸரி" யிலிருந்து எரு கொண்டுவந்து தோட்டத்தில் மூன்றங்குல உயரத்திற்குப் பாத்திக்கொத்திவிடச்செய்தேன். இந்த இடங்களில் மண் அவ்வளவு தரமில்லை. மேற்சொன்ன உரமானது முனிஸிபாலிடியில் விழுந்த குப்பைகளெல்லாம் சேர்ந்து ஒன்று அல்லது ஒன்றரை வருஷத்திற்கு மக்கவைத்தது. தோட்டத்தை அக்டோபர்-மீ வரையில் தரிசாகப் போட்டு வைத்திருந்து மறுபடியும் கொத்தி மட்டஞ் செய்யப்பட்டது. சற்றேறக்குறைய இதே காலத்தில் விதைகள் விதைக்கப்பட்டு தயாராயிருந்தது.

பக்கத்துக் கிளைகள் கிள்ளப்படுவது.

அக்டோபர் மாதத்தில் நாற்றுகளின் பக்கத்துக் கிளைகள் கிள்ளி எரியப்பட்டதைத் தவிர பயிர்செய்த முறைகளில் விசேஷ மாறுதல்கள் எதுவும் செய்யப்படவில்லை. கிளைகளைக் கிள்ளிவிட்டதனால்தான் மேற்சொல்லியபடி நல்ல பலன் கிடைத்திருக்கிறது. ஆகையால் தக்காளி பயிர் செய்வோரெல்லாம் இம்முறையை அனுஷ்டிக்கவேண்டும். மேலே சொல்லிய முறைப்படி பயிர்செய்தால் ஒரு ஏகரில் அதிகச் செடிகள் பயிர் செய்யலாம். ஒவ்வொரு செடிக்கும் அதிக சூரிய வெளிச்சமும் காற்றும் கிடைக்கிறது. பழங்கள் சிரமமில்லாமல் பறிக்கலாம். இடையில் கொத்து வெட்டு செய்வதற்கும் சௌகர்யம். ஆனால் இம்முறையால் செடிகளுக்கு இன்னும் கொஞ்சம் அதிக கவனம் செலுத்தவேண்டிவரும். ஏனெனில் ஒவ்வொரு செடியும் கீழே சாய்ந்துவிடாமல் ஒரு தடிக் குச்சி நட்டு செடிகளை அதில் கட்டவேண்டிவரும். செடிகள் ஒரு அடி உயரம் வளர்ந்ததும் சுமார் 7-அடி உயரம் குச்சிகளை ஒவ்வொரு செடிக்கும் ஒரு குச்சியாக அவைகளின் பக்கத்தில் நட்டு செடிகளை அவைகளுடன் சேர்த்து கட்டவேண்டும். செடி வளரவளர பக்கத்துக் கிளைகளை கிள்ளி எறிந்துவிட்டு செடிகளை குச்சிகளுடன் சேர்த்து கட்டிக்கொண்டு வரவேண்டும். இந்த விதமாக வளர்க்கப்படும் தக்காளிச்செடிகள் 10-அடி முதல் 12-அடிகள்வரை வளரும். ஆனால் பழங்களை சுலபமாகப் பறிப்பதை முன்னிட்டு அவைகளை 6½ அடிக்குமேல் உயரமாக வளரவிடாமல் சுமார் 6½ அடி ஆனதும் தலையை கிள்ளிவிடவேண்டும். குச்சிகள் பறுமனவைகளாயிருப்பதுடன் ஒரு அடி ஆழத்துக்கு மேலாவது நடப்பட்டிருக்கவேண்டும். இல்லாவிட்டால் மழை காலத்தில் மண் ஈரமானதும் செடி கனம் தாங்காமல் சாய்ந்துவிடும். என்னுடைய செடிகளுக்கு சுருட்டைநோய் வந்தது. முதலில் அதற்கு ஏதாவது மருந்துகள் வாங்கிப்போடலாம் என்று யோஜித்தேன். ஆனால் நான் மருந்து எதுவும் போடவில்லை. நோய்கண்ட இலைகளை மட்டும் ஜாக்கிரதையாகக்கிள்ளி நெருப்பிலிட்டு வந்தேன். இதைப்போல் ஒருமாதம் வரையில் செய்துவந்தேன். அதன்பிறகு ஒன்றும் செய்யவில்லை தக்காளி பயிர் செய்தலில் முக்கியமாக கவனிக்கவேண்டியது ஒன்று இருக்கிறது. அதாவது சிகரட், சுருட்டு முதலியன பிடிக்கும் பழக்கமுள்ளவர்கள் நோய்கண்ட ஒரு செடியை தொட்டுவிட்டு ஆரோக்கியத்துடனிருக்கும் ஒரு செடியை கைகழுவாமல் தொட்டுவிடக்கூடாது. (தக்காளி, உருளைக்கிழங்கு இவைகளுக்கும் இவைகளைப்போலவே புகையிலைச்செடியின் வர்க்கத்தைச் சேர்ந்த மற்ற செடிகளுக்கு மட்டுந்தான் இந்த விதி) என்னுடைய செடிகள் இதை எழுதும்போதுகூட வியாதியால் பீடிக்கப்பட்டவைகளாகத்தான் இருக்கின்றன. ஆனால் இன்னும்பல தோட்டங்களிலுள்ள வைகளைப்போல் அவ்வளவு கடுமையான வியாதியில்லை. அது எப்படிக்கிருந்தபோதிலும் எனக்கு சேர்சேராக பழங்கள் கிடைத்துக்கொண்டுதானிருக்கிறது. இப்பொழுது நமக்கு தக்காளிப்பழம் ஏராளமாக கிடைக்கிறது.

பொருட் காட்சிக்கோ, வியாபாரத்திற்கென்றோ தக்காளி பயிர்செய்ய விரும்புபவர்களுக்கு நான் ஒரு வார்த்தை சொல்ல விரும்புகிறேன். தக்காளி சரிவர பயிர் செய்வதற்கு ஜலம் பாய்ச்சுவதில் முக்கிய கவனம் செலுத்தவேண்டும். ஒருதரம் நீர் பாச்சியபின் இரண்டாந்தரம் நீர் பாச்சுவதற்கு இடையிலுள்ள காலத்தில் தரை ஈரம் காய்ந்து போகும்படியான நிலைமைக்கு விட்டுவிடவே கூடாது. காயும்படி விட்டுவிட்டால் அப்பொழுது முதிரும் பழங்களிலெல்லாம் வெடிப்புண்டாகும். இரண்டாவதாக ஆரம்பத்தில் தேவைக்குமேல் அதிக அளவு உரம் போடக்கூடாது. இப்படிச்செய்தால் செடியில் இலை வளர்ச்சி அதிகமாகி காய்ப்பு குறையும். கணுவுக்கு கணுவுள்ள பாகம் நீளமானவைகளாகி ஒரு அடிக்கு காய் குலைகள் குறையும். ஜலத்தில் கரைக்கப்பட்ட உரமாக சல்பேட் ஆப் அமோனியா, மாட்டுச்சாணி முதலியவைகளை உபயோகிக்கலாம். ஆனால் அவைகளை லேசான ஜலத்தில் கரைத்து உபயோகிக்கவேண்டும். (ஒரு கிருபர்)

அவன் களைத்து
விடுகிறானென்றால்
அவன் மேலா குற்றம்

ஒருக்காலும் இல்லை. இன்று முதல் அவன் தினந்தோறும் 11-மணிக்கு ஒரு தரமும் 4 மணிக்கு மற்றொரு தரமும் டீ குடித்து வந்தால் ஆயாசம் இல்லாமல் ஆனந்தமாய் வேலை செய்யலாம். சோர்வும் ஓய்ச்சலும் ஒழிந்து நாள் முழுதும் தெம்பும் சுருசுருப்பும் ஏற்படும். டீ மூளையைத் தீட்டுவது மன்றி மூலசக்தியையும் இளப்பிவிடுகிறது.

ஆயாசத்தை இந்தியன் டீயிலை அகற்றுங்கள்

இந்தியன் டீ மார்கெட் எக்ஸ்பான்ஷன் போர்டார் விளம்பரம் I. K. 143

ஆண் பெண் சேர்க்கையின்றி உற்பத்தி.

இந்தியாவில் முதல் தடவையாக செயற்கை முறையில் ஆண் பெண் சேர்க்கையின்றி இந்திரியத்தைச் செலுத்தி வெற்றி கிடைத்திருக்கிறது.

மைசூர் பாலஸ்டயரி பாரம் மானேஜர் டாக்டர் ஜே. டி. சம்மத்குமாரன் அவர்களால் மேற்கண்ட ஆராய்ச்சி செய்யப்பட்டது. ஆராய்ச்சி சென்ற வருடம் ஆகஸ்டு மாதம் ஆரம்பிக்கப்பட்டது. பசுக்களுக்கு செயற்கைமுறையிலே இந்திரியம் செலுத்தப்பட்டது. அப்பசுக்கள் எல்லாம் நல்ல திடசரீரமுள்ள கன்றுகளை ஈன்றன. இந்தியாவிலே டெஸ்ட் டியூப் (ஆண் பெண் சேர்க்கையில்லாமல்) கன்றுகள் பிறந்தது இதுதான் முதல் தடவையாகும்.

ரஷ்யாவிலும் மற்ற இடங்களிலும் ஒரு வருடத்தில் அல்லது ஒரு பருவத்தில் காளையிலிருந்து எடுக்கப்படும் இந்திரியத்திலிருந்து 2,000-கன்றுகள் வரையிலும் ஒரு கடாவிலிருந்து எடுக்கப்படும் இந்திரியத்திலிருந்து 18,000-ஆட்டுக்குட்டிகளையும் உற்பத்தி செய்யலாம் என்று மெய்ப்பிக்கப்பட்டிருக்கிறது.

இந்தியாவில் பொலி காளைகள் கிடைப்பது அரிதாயிருப்பதாலும், நிரமான கால்நடைகள் பெருக வேண்டியதாயிருப்பதாலும், இம்மாதிரி செயற்கை முறையில் இந்திரியத்தைச் செலுத்தி கன்றுகளை உற்பத்தி செய்வது லாபகரமானதாகும்.

தென்னிந்தியாவில் ரப்பர் உற்பத்தி.

தென்னிந்தியாவிலிருந்து 1930 முதல் 1939 வரை ஏற்றுமதி செய்யப்பட்ட ரப்பரின் அளவும், ரப்பர் உற்பத்தியின் அளவும் வருமாறு :—

	ஏற்றுமதி (ராத்தல்).	உற்பத்தி (ராத்தல்).
1930	1,55,95,518	1,43,92,301
1931	1,00,22,602	1,16,70,715
1932	25,35,145	18,02,895
1933	44,22,638	50,48,049
1934	1,65,30,823	2,64,43,326
1935	2,64,28,701	2,75,53,762
1936	2,62,73,077	3,04,47,919
1937	3,09,03,971	3,22,66,479
1938	2,72,51,745	3,10,65,759
1939	2,73,60,650	... ...

இந்தப் புள்ளி விவரங்களில், தென்னிந்தியத் தரைமுகங்களிலிருந்து இந்தியாவின் இதர பாகங்களுக்கு ஏற்றுமதியான ரப்பரின் அளவும் அடங்கியிருக்கிறது. 1938-ல் 83,43,642 ராத்தல் ரப்பரும் 1930-ல் 78,21,003 ராத்தல் ரப்பரும் இந்தியாவின் இதர பாகங்கட்கு ஏற்றுமதியாயின.

பத்திரிகைகள் வரவு.

ஆரம்பக்கல்வி	குமரன்
செங்குந்த மித்திரன்	கதர் தொழில்
நல்வழி	குடி அரசு
மிராசுதார்	கூட்டுறவு
ஜகன்மோகினி	செட்டிநாடு
விடுதலை	கிராம இந்தியா
சுதேச நாட்டியம்	அம்ருதலஹரி
சந்திரோதயம்	கிராமவாசி
நவயுவன்	கிராம பஞ்சாயத்து பத்திரிகை
கிராம தூதன்	

சேமித்து வைக்கவேண்டிய சிறந்த ஆகாரம்.

பிரஞ்சு விவசாய சஞ்சிகையில் பார்மேவியன் கர்னல் லபிட்டி என்பவர் மேற்கு ஆப்பிரிக்கா வாசிகளால் மனிதர்களுக்கு உபயோகப்படக்கூடியதாக தயார் செய்யப்படும் ஒரு உணவு பதார்த்தத்தைப் பற்றி விவரமாக எழுதியிருக்கிறார். அது பின்வருமாறு :—6·6 பவுண்டு அரிசிமாவை இரும்புச் சட்டியில் கொஞ்சம் கொஞ்சமாகப்போட்டு கருகிப்போகாமல் ஈரம்போக மஞ்சள் வறுகளாக வறுத்து எடுத்துக் கொள்ளவேண்டும். 44 பவுண்டு தோல் உரிக்கப்பட்ட கடலைக்கொட்டை எடுத்துக்கொண்டு அவைகளின் சிவப்புத்தோலையும் உரித்துக்கொண்டு அவைகளையும் பொன்வறுவலாக வறுத்து எடுத்துக்கொள்ள வேண்டும். இரும்புச் சட்டியில் மணல்போட்டு அதில் வறுத்து கல்லடையால் மணலைச் சலித்து எடுத்துக் கொள்ளலாம். வறுத்த கடலைக் கொட்டையை முதலில் உரலில் பெரும்படியாக இடித்துக்கொண்டு அதன் பிறகு அம்மியில் மாவுபோல் தூள் செய்துக்கொள்ள வேண்டும். இப்படிச் செய்வதால் எண்ணைச்சத்து சேதமாகிவிடாமல் பசைபோல் ஒரு பதார்த்தம் கிடைக்கும். வறுத்த அரிசி மாவை இப்பசையுடன் சேர்த்துக் கலந்து இந்தக் கலவையின் நிறையில் 20ல் ஒரு பங்கு நிறை சர்க்கரையும் சேர்த்து கலந்து கொள்ளவேண்டும். இவை எல்லாம் சேர்ந்த பதார்த்தமானது பார்வைக்கு நன்றாகவும் அதிக சுவையுள்ளதுமான ஒரு மாவு பதார்த்தமாயிருக்கும். இவை மாவாகவே சாப்பிடலாம், அல்லது ஜலத்தைவிட்டு பிசைந்து சாப்பிடலாம். குழந்தைகளுக்கு ரொம்ப பிடிக்கும். பிரஞ்சு கினியாவில் இதற்கு "கஞ்ஞ" என்று பெயர். காஸாமான்ஸிலும் இதே பெயர்தான். மற்ற பிரஞ்சு காலனிகளில் அரிசி மாவுக்கு பதில் தினை அல்லது சோளமாவும் சர்க்கரைக்குப்பதில் தேனையும் கலந்துகொள்ளுகிறார்கள். நன்றாக மூடப்பட்ட தகரத்தில் "கஞ்ஞ" இரண்டு மாதங்களுக்கு கெட்டுப்போகாமல் இருப்பதாகச் சொல்லப்படுகிறது. பாரிஸ் லேபரட்டரிகளிலொன்றில் இது சேமித்து வைத்துக்கொள்ளக்கூடிய நல்ல ஆகார பதார்த்தங்களுள் ஒன்றென்றும் இதில் ப்ரோடீன் அதிகமாக இருக்கிறதென்றும் மேலே சொல்லியதற்குமேல் வேறு எந்த வித பக்குவமும் செய்யாமலேயே சாப்பிடலாமென்றும் சொல்லப்பட்டிருக்கிறது.

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