

wealth and welfare.
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For God
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 Country



An
 All-India
 Weekly.

Chief Editor :
Mrs. M. R. JANAKI
 B.A. (Madras), L.T., (B.H.U.)
 M. R. A. S. (Lond.)

(DEVOTED TO ECONOMIC AND WELFARE PROBLEMS)

WEALTH & WELFARE

Editorial Office : Lucknow. Publishing Office: Madras—Saidapet.

VOL. III No. 43
 12 pages.

Lucknow, Friday, 28th October 1927.

Registered
 No. M-2119.

10 FEB 1928

To

ADVERTISERS

Our Third Annual Issue will be brought out by the middle of November 1927, and we propose to print several thousands of copies, circulating all over India, Ceylon, East and West. The weekly will be illustrated and will reach the important officials and the non-officials in the country. The special advertisement charges will be:—

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Chief Editor, "Wealth & Welfare"

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HEALTH.

BANANAS A REMEDY FOR SCURVY.

Investigations and experiments made recently under the supervision of Walter H. Eddy, a specialist in nutrition, proved that the banana may be placed among the important sources of vitamins, especially of the anti-scorbutic vitamin C. It is therefore of great value in preventing and curing scurvy, a disease due to the lack of this vitamin in the diet. The vitamin content of the banana, its availability and comparative cheapness make it a competitor with orange and tomato juice for use in infant feeding.

Doctor Eddy reports a case of an infant being cured of scurvy by being fed every four hours with a mixture of ripe bananas and milk. No signs of digestive disturbance appeared. Banana and milk, in proper proportion, constitutes a complete food.—*Good Health.*

REGULARITY IN HABIT THE KEYNOTE TO HEALTH.

Those who have had most experience with modern mothercraft realise that one of the most important factors in infant management is to avoid irregularity of, or undue frequency in, action of the bowels; such irregularity leading to troublesome conditions of diarrhoea which all those experienced in handling children know to be one of the most difficult symptoms to deal with in the infant. The

The common muscular tension associated with indigestion is usually followed by a fatigue which is nature's protest and which leads to a refusal to act, at any rate, for a period. It is obvious that if the inner lining of the bowel be torn or broken it provides a more facile opportunity for the absorption of toxins and bacterial matter than the undamaged lining would present.

The evils of constipation have been very much exaggerated. It has been generally stated that among these evils are the absorption into the system of the products of decomposition from the faecal matter, but it does not require very much thought to appreciate that neither decomposition itself nor the absorption of the products of decomposition can occur so readily from hard or constipated faecal matter as from a fluid nutritive medium. The more liquid the bowel contains the greater would be the rate of decomposition and the more easily would follow the absorption of the resulting toxins—a thought which we recommend to those who are advising the method of training infants to follow the habits of such animals as birds or sheep. Further, those who succeed in training infants in frequent and irregular acts of defaecation will probably be disappointed not only in regard to their expectations of improved health in the baby, but by the reaction—inertia of the bowel—which is almost sure to follow just as it is consequent upon attacks of uninvited diarrhoea.

It has to be borne in mind that the human infant, though biologically founded in the same fashion as the animal, has to meet a life governed by rules, conventions and customs, the inevitable concomitant of civilisation, and that the normal instincts which are entirely adequate to the needs of wild untrammelled animal life have, in civilised life, to be supplemented and restricted by education. This education begins at birth and concerns itself with the education of the body no less importantly than with the education of the mind.

In regard to the functions of nutrition, the wild animal is guided in its search for and selection of food by the physiological condition of the body, eats when it wants and defaecates when the physiological condition of the body requires it.

In the human animal this nutritive function has been brought into line with the requirements of custom. Meals are taken at regular intervals and the physiology of the body to some extent adapts itself to this experience. As a natural corollary, defaecation should be regular, and, with the exception of the infant, at 24-hourly intervals is found to be satisfactory to the health needs of the organism.—*National Health.*

TO WHOM COLD WEATHER IS NOT ADVISABLE.

The common muscular tension associated with indigestion is usually followed by a fatigue which is nature's protest and which leads to a refusal to act, at any rate, for a period. It is obvious that if the inner lining of the bowel be torn or broken it provides a more facile opportunity for the absorption of toxins and bacterial matter than the undamaged lining would present. The evils of constipation have been very much exaggerated. It has been generally stated that among these evils are the absorption into the system of the products of decomposition from the faecal matter, but it does not require very much thought to appreciate that neither decomposition itself nor the absorption of the products of decomposition can occur so readily from hard or constipated faecal matter as from a fluid nutritive medium. The more liquid the bowel contains the greater would be the rate of decomposition and the more easily would follow the absorption of the resulting toxins—a thought which we recommend to those who are advising the method of training infants to follow the habits of such animals as birds or sheep. Further, those who succeed in training infants in frequent and irregular acts of defaecation will probably be disappointed not only in regard to their expectations of improved health in the baby, but by the reaction—inertia of the bowel—which is almost sure to follow just as it is consequent upon attacks of uninvited diarrhoea.

MILK VITAMIN AND RICKETS.

[PANCHANAN BASU M.D. (Berlin).]

Vitamin is the life-giving factor of food. Its chemical structure is not known but its functions are well known to the physiologists. It promotes growth and development in general, it nourishes the vital organs of the body specially the ductless glands, namely the thyroid, adrenal bodies, pituitary bodies etc. And in this way it indirectly controls the whole metabolism of the system.

From what we have said above it is quite natural that milk which has been provided as a food for the young growing

mammals should contain a good deal of this life-giving and growth-promoting factor—vitamin. When I talk of milk I mean milk natural and normal as it is sucked by the young animal, from the mother's breast, so that the ideal source of vitamin is raw fresh milk.

Mother's milk is the ideal food for the new-born baby, because it is sucked directly from the breast. There is no chance of its being contaminated by bacteria or dust. The nursing mother must have good nourishment in order that she may produce vitamin-rich milk. It has been found by experimenting on milch cows that cows fed on green fodder produce a relatively vitamin-rich milk than the cows fed on dry fodder. The quantity of vitamin in the milk of cows in temperate regions depends also on the sunlight to which the cows are exposed. So in temperate regions, where during summer cows remain whole days out-door grazing on green fields, the milk is found to be very rich in vitamin in the summer season. Of course in temperate regions where green fodder is not available at all in winter the advanced dairy farmers have been trying to enrich the vitamin content of the milk by exposing the cows to rays of the artificial sun or the ultra-violet rays.

If we are to take analogy from these experiments on milch cows, then the natural conclusion is that the nursing mother should eat plenty of green vegetables cooked in such a way that the vitamins are not destroyed. She should not be exposed in a house where she has no opportunity of basking in the sun.

The vitamins, I have said before, are abundant in raw fresh milk. If the milk is heated for a long time at 100 degree centigrade, that is at boiling temperature then it loses its vitamin and this boiled milk is therefore unable to supply the vitamin needs of the growing baby.

What is the effect of absence of vitamin of the food in the baby? It means the onset slow and certain of that disease called rickets. In the popular mind, rickets is a disease associated with softening and deformities of bone. But this deformity of bone is only one of the symptoms of the disease which is evident when the disease is in its advanced stage. Rickets is not a bone disease only, it is a disease of the whole body. In rickets the resistance of the body to disease is diminished, that is why such rickety children are very liable to diarrhoea or to bronchitis. It is through these secondary complications that rickets owes its heavy mortality among the infants who are artificially fed.

I have said that artificially fed babies are prone to rickets and its complications. For in artificial feeding of babies one usually employs various milk mixtures and milk-foods, that is the so-called patent baby foods. These lack in vitamins and unless some vitamins are added artificially these foods are absolutely useless and unwholesome for the artificially fed

baby. As I have said before that *fresh and raw milk contains the vitamins intact, but they can not be used as such because of the danger of infection.* The infections that may be transmitted through raw milk are numerous, namely infantile diarrhoea, dysentery, typhoid, cholera, and tuberculosis. So the risk is too great, if we give raw milk. Attempt has been made to free the milk from the disease-bacteria without at the same time diminishing its vitamin content. This is done by pasteurisation, that is heating the milk at 60° to 70° centigrade for at least half-an hour. This process can be adopted in household by utilising a metal pot in which the milk bottles are placed and in which the water is heated by slow fire and its temperature is controlled by thermometer.

In many of the western countries the dairy farms have installed machineries for pasteurisation of milk on a large scale and such pasteurised milk can be obtained in sterilised bottles for preparing baby's food.

I have said before that rickets is caused by the absence of vitamin in baby's diet. This is not the only factor in the production of rickets. A doctor of Vienna named Huldchinsky, has now established beyond doubt that absence of sunlight as one comes across in the large tenement houses of big cities is one of the most important factors in the production of rickets. This corroborates well with the old idea that rickets is a disease of the people of low social status with filthy and insanitary surroundings but unfortunately we come across very often rickets in well-to-do

classes in India. This is ascribed to the rigorous purda system and the shutting of the babies from wind and sunlight, which one sees very frequently in rich families specially amongst the Mahomedans. Dr. Huldchinsky has shown that rickets can be easily cured by exposing the children to artificial sunlight or ultra-violet rays. The sunlight or ultra-violet rays are applied to the naked skin of the child. The system of putting new born babies in the sun, which is so prevalent in India is thus based on a very strong scientific grounds.

So from these above facts we see that sunlight can replace to a certain extent the absence of vitamin in the diet. This gave the idea to Prof. Moro of Heidelberg to activate boiled milk by exposing it to the rays of artificial ultra-violet lamp and his results were successful. He has gone so far as to expose dry milk powder in thin layers of 5 millimetre to an ultra-violet lamp at a distance of 90. c. m. that is about 24 inches. And in his children's clinic Prof. Moro has seen that this so called vitaminised milk-powder can efficiently cure rickets. This powdered milk which has been exposed to ultra-violet rays is now commercially manufactured in Germany and is being used for the preparation of baby's food. This discovery of activation of milk is an epoch-making one in the history of artificial feeding of children. The result of Prof. Moro has been confirmed in some of the children's clinics in Switzerland and in America.

In our country, sunlight is abundant for most of the year except during the rainy season. My suggestion is, why can we not utilise this free sunlight in revitaminising so to speak, boiled milk. For this purpose I shall suggest that boiled milk should be powdered in absolutely cleaned and flat trays, not more than half an-inch deep, and exposed to the strong morning sun in a place free from dust and strong winds. Of course one difficulty will be the flies and for this some one must scrupulously supervise this sunning process of milk. This sunning process can be carried under a screen or the best way would be in a closed box with sheets of that special kind of glass called vita-glass. This glass has the property of transmitting ultra-violet rays which the ordinary pane window glasses obstruct. Of course the use of this vita-glass chamber is the ideal condition for the activation of milk.

But for ordinary practice this activated milk powder will be more practicable. And it has been found that this property is not lost by keeping. And in using such milk powders with proper precaution one can be sure of absolute sterility of the baby's food.

The duration of exposure to the rays of the ultra-violet lamp is thirty minutes. But as the sun rays in the plains are not so rich in ultra-violet rays on account of the absorption that they go in penetrating through the dust and smoke, it is necessary, that the period of exposure should be at least doubled. Health and Happiness

THE MOTHER AND THE BABE

With the birth of the foetus in the womb, there comes through an unknown and mysterious process, changes in the mother's body and especially in the breasts. In outward appearances the changes are very marked, the nipples become more erect, the rings round the nipples become darker and the breasts themselves more tight. The last is due to the filling of the milk ducts with a substance at first watery which gradually turns into a white coloured substance known as milk. It is a mysterious arrangement that brings milk in the mothers' breasts to provide food and drink for a helpless creature who can take on other diet without injuring himself. It is the will of Providence that the child should live only on mother's milk and the arrangement is nothing but complete.

If the mother is healthy, as she ought to be, breast feeding is the ideal process for maintaining a babe. The problem of infant feeding should be approached with common sense and a liberal point of view. The objective is the choice of a diet that will promote normal development without producing digestive disturbance or, pathologic changes and the best diet is the breast milk.

If there is on extraneous cause present, the child may live on mother's milk alone for some months before teething. The supply of milk should be adequate and if

the mother be healthy, nothing is required to improve the quality of the food.

In no case the child should be deprived of his birthright for fashion, to steal a few years from the appearance of the body and to relegate the task to a nurse or a maidservant. We cannot find suitable words to give expression to the feeling with which we abhor this practice. The assimilation of inferior kind of milk degenerates the body as well as the mind of the child.

If the mother is suffering from any disease the case is altogether different. In that case only artificial feed may be substituted for mother's milk, otherwise not. There are mothers with insufficient supply of milk or those who experience fatigue in suckling their babes, and these mothers require proper care and nourishment so that the general health advances to a normal state of energy and well being, while continuing to breast feed her baby.

Mothers have got intimate connection with the healthy growth of the child even after their bodily separation and cases are very common, even an everyday experience, when mothers' indiscretion in the choice of diet brings disease in their suckling children. Taking of foods which are not easily digestible in mothers, produce griping and other digestive disorders in children, acid producing food in mother causing acidity, and so on. It is therefore essential that mothers take proper diet to produce lacteal secretion which will contain the normal percentage of fats and proteins which latter are essential for healthy growth and development of a child's body.

Before taking to other methods for improvement in the supply of milk, the mother may well try to find out for herself which diet will suit her best without creating any sort of disorder in the constitution. Regularity in all matters should be a point which is to be strictly followed, especially in taking meals, exercise and rest. The mother should take abundance of pure water, breathe pure air and take light, easily digestible food. Cereals and vegetables may be used to promote lactation.

It is common knowledge that exuberance of feeling affects the working of the human machine, beneficially or adversely as the case may be. The mother ought to take all possible care to avoid all kinds of mental worries and anxieties. Fear, anger and the like has got a great influence on the body and may in extreme cases stop the supply of milk altogether. These are the pitfalls which the nursing mothers should guard against, as they might lead to influence both the supply and the quality of the milk.

During the period of lactation there should be no sexual relationship with the mate as that might lead to a hastened pregnancy and the resultant evils or if by chance such catastrophe is avoided the breast milk is sure to deteriorate in quality as a consequence of excessive nervous excitement in the body of the mother.—H. & H.

(Continued on page 9.)

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For God, Crown and Country.

Wealth & Welfare.

Lucknow, Friday, 28th October, 1927.

EDITORIAL.

UNECONOMIC HOLDINGS.

It is a very common complaint in agricultural circles and the adoption of agricultural improvements, the ryot is the most important person in the economic life of India. Numerically his fraternity form more than three-fourths of the total population. He is the victim of economic forces over which very little control is exercised. He takes no notice of the political world and is hardly touched by the changes in fashion absorbing the attention of more civilised individuals. He does not care to dabble in questions of economics and hardly scrutinises whether his holding is economic or not. Government or patriots have to think for him. Between the Landlord and the money-lender he finds himself as between the Devil and the Deep Sea which are brought closer by the Courts of Justice. It is fortunate that the dumb millions of India are destined now to be in the hands of a Viceroy who is sure to prove the ryots' friend by taking keen interest in the Agriculture of India. The agricultural problems of the country have been scrutinised by the Royal Commission and the fruits of the Labour of his Commission will soon be in the hands of the public in the form of a report. Experts from all parts of India are of opinion that the science of agriculture is powerless so long as the cultivator's holding continues to be short of an economic unit. It is not possible to lay down by a rule of thumb what is an economic unit. With the increase of population the sub-division of holdings is gradually increasing. The average necessary expenditure of the ryot's family should at least be covered by the average income from the holding. The average size of the holding is different in different parts of the country and a bigger size is not necessarily indicative of a larger yield. It is the out-turn from the holding that is the most important factor in determining the ryots' prosperity whatever may be the size of a holding; it should not be so small as to be below the point of marginal utility, and it is the duty of the Government to see that the poor agriculturist is kept back from such a crisis, who should be in a possession

of such quantity of land as may be sufficient for the proper maintenance of himself and his family. The small size of the holding means a greater exhaustion of the soil, an insufficient security for the ryot and consequently a higher rate of interest on which he borrows; and is a fruitful source of friction and litigation. The sub-division of holdings is a great hindrance to the economic prosperity of the ryot and is an impediment, in the way of land development and land improvement, to effective organization and even to adequate tillage and intensive cultivation. Increasing population, frequent transfer of land and the rigid laws of succession, make it almost impossible to forcibly restrict the size of a holding. In India the rigorous law of inheritance involves a difficult economic question which cannot be easily solved. A comparison of the sizes of agricultural holdings in the different countries as specified below will show the relative position of India in that respect:—

Name of Country.	Average size of holding.
England & Wales	62 acres.
Germany	21.5 "
France	20.25 "
Denmark	40 "
Belgium	14.5 "
Holland	26.0 "
United States	148 "
Japan	3 "
China	3.25 "
India	2 to 3 "

In India itself the sizes of holdings vary considerably in different provinces as will be evident from the following sizes:—

Name of Province.	Average size of ryot's holding.
United Provinces	7.83 acres
Madras Presidency	3 to 4 "
The Punjab	8 to 10 "
Behar	1 "
Orissa	8 "
Bombay Presidency	12½ "
Bengal	1½ to 2.08 acres

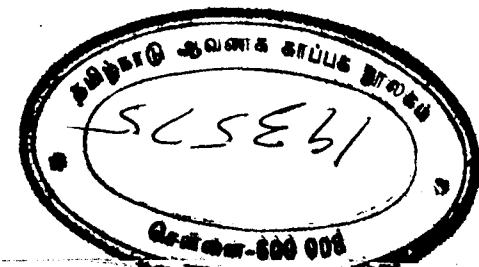
Dr. Harold Mann's examination of the sizes of holdings in the Deccan shows the following results:—

Year.	Average size of the holdings.
1771	40 acres
1818	17½ "
1820-40	14 "
1915	7 "

If statistics for other parts of India be taken, the figures would be equally alarming. The only panacea lies in education and co-operation. Education in methods of intensive cultivation and in growing a variety of crops on the same plot of land without impairing the quality of the soil by the use of different kinds of manures should be imparted. Real agricultural education with the old rural communalism which has died out in many provinces without being accompanied by the birth of any new conception of social solidarity should be restored and the old communal habits should be adapted to new social and agricultural needs. The Japanese cultivator is far more prosperous than his Indian compeer, which is due to his superior methods of agriculture and better organization through diverse forms of co-operative organizations and brotherhoods. Co-operative consolidation should be effected in villages. If the system of co-operation can be introduced and utilised to the full, a great and glorious future will await the agricultural interests of India.

AGRICULTURE IN MADRAS.

The report of the administration of this department during the year 1926-27 reveals that the Agricultural College can now accommodate forty students each year as against twenty previously. In the difficult matter of agricultural education the department has endeavoured to use to the best advantage such



* Revised figures after eliminating unsuitable lands.

ON THE LINE.

INDIAN IMPORTS.

"The following table shows the imports of motor cars during the past fourteen years:—

NUMBER OF MOTOR CARS IMPORTED.

(a) The country of origin of many of the cars imported from the years previous to 1920-21 is Canada.

Year	United Kingdom	United States	Canada	France	Italy	Other countries	TOTAL
1913-14 (pre-war)	1,669	868	..	111	7	323	2,980
1914-15	1,950	510	..	54	19	73	2,609
1915-16	787	2,136	..	57	11	11	3,121
1916-17	489	4,169	..	62	44	11	4,778
1917-18	39	1,222	..	1	18	11	1,282
1918-19	21	368	..	..	..	..	400
1919-20	448	9,353	..	3	17	81	9,925
1920-21	2,541	10,120	..	192	218	42	15,482
1921-22	790	862	..	156	292	37	1,985
1922-23	449	1,865	..	61	131	24	2,323
1923-24	1,005	2,985	..	153	310	30	4,383
1924-25	1,682	3,106	..	215	367	18	5,380
1925-26	2,399	4,178	..	367	860	21	7,727
1926-27	2,546	4,030	..	607	1,416	12	8,612
1927-28	..	4,416	..	..	..	..	13,197

Of the total imports Canada supplied 34 per cent., the United States 30 per cent., the United Kingdom 19 per cent., and Italy 11 per cent., as compared with 37, 32, 19 and 7 per cent., respectively in the preceding year. Bengal had 32 per cent., Sind and Madras 14 per cent., each and Burma 13 per cent. (C)

MADRAS SURVEY AND SETTLEMENT, 1926-27.

During the year six survey parties were working and they were mainly engaged in the cadastral resurvey of the ryotwari areas in the districts under resurvey. The total outturn of the survey parties in work of this description was 1,688 square miles as compared with the forecast of 1,915 square miles and an outturn of 1,895 square miles in the year 1925-26. In addition an area of 37 square miles of disafforested land and of lands in which Government are interested in proprietary land irrigated by canals in the special villages was surveyed. The survey of 97 miles of roads, 2 miles of streets and 25 miles of boundaries of coffee estates. The outturn of Nos. I and V Parties was much below the forecast. The Board of Revenue has

explained that the chief reason for the short outturn was the reduction in the Budget for temporary establishment by a lakh of rupees, and that it was not until September 1926 that the Director of Survey was empowered to increase the establishment in certain grades within the budget allotment. Survey Party No. V was abolished on the 1st October 1927 and the question of abolishing another party is under consideration. Four settlement parties were working during the year under review. Re-settlement work was carried out in accordance with the simplified procedure sanctioned in connexion with the re-settlement of the East Godavari, West Godavari, Kistna, Malabar and South Kanara districts. The Inspecting Tahsildars appointed to strengthen the Revenue staff in all the districts of the Presidency to provide for the proper training of Revenue subordinates in survey and to ensure that the work of registering and recording changes which are sanctioned in the ordinary course of the revenue administration is properly done, worked throughout the year and there appears to have been a distinct improvement in the quality of the work of the Revenue subordinates on account of the work of inspection and scrutiny done by the Inspecting Tahsildars. There is room for considerable improvement in the maintenance of survey stones and more careful supervision should be exercised in connexion with the work of Revenue subordinates in respect of stone maintenance.

The post of Director of Land Records has been revived with effect from 1st April 1927. The reports from the Board of Revenue regarding the working of the scheme of subdivision fees and the maintenance of town and union surveys, are not yet forthcoming.

AGRICULTURE IN ASSAM.

The policy of collaboration with the Co-operative Department was pursued and the distribution of seeds through Co-operative Societies increased during the year ending 31st March 1927. An Advisory Board for development with separate sections for agriculture, industries and co-operation consisting of officials and non-officials elected by the Council was constituted during the year. The scheme for the establishment of a cattle-farm near Gauhati is developing with a view to increase the number of breeding cattle and to improve the type of draught-bullocks for cultivation work. The smallness of the average holding and the general poor condition of the cattle in Assam militated against both their usefulness and their popularity. Improved varieties of paddy were extensively demonstrated all over the provinces and the demand for sugar-cane "Setts" of improved varieties has increased all over the Province and the demand is met by the Government Farms supplemented by private growers, and the Director of Agriculture was able to offer the public the improvement of the sugar-cane for

sale on easier payments of credits by instalments. The growing of oranges in Assam is extending. Though assistance is given by Honorary Correspondents to the Department of Agriculture in popularising the improved seeds and implements supplied by the Department and a number of these have also carried out successful experiments with various crops on their own account, the scarcity of agricultural labour is an obstacle to successful farming by middle class people.

VEGETABLE PRODUCTS.

(By D. S. DUBEY.)

The Vegetable products are being imported into India in the form of vegetable ghee, vegetable fat, vegetable flour etc. It is only from 1st April 1927, that the Director-General of Commercial Intelligence and Statistics has begun to give separately the quantity and value of the imports of vegetable products in his monthly 'Accounts relating to the Sea-borne Trade and Navigation of British India.' Therefore the quantity and value of the imports of vegetable products during the three months only are given below.—

Month	Quantity imported	Value.
April 1927	13,069 Cwt	Rs. 6,42,557
May "	14,046 "	" 6,21,905
June "	16,950 "	" 6,99,591

The import of these vegetable products in the month of April, May and June, 1927, is given above.

With regard to ghee the situation has become so serious that now it is extremely difficult for a consumer to get pure ghee from any shopkeeper. No doubt it is the duty of Municipalities to prevent the adulteration of food stuffs in their areas. But the staff that they have employed for this purpose is wholly inadequate and they have failed miserably in checking the evil. As yet no steps have been taken by the Provincial Governments to prevent adulteration of food stuffs in rural areas. The vegetable products may not be containing animal fat and may be harmless in themselves. But they can not have all the qualities of pure ghee or flour with which they are mixed up. We would not have taken any notice of these imports, had these commodities been sold to the consumers in pure condition as vegetable products. But unfortunately, as stated above, these products are being used by retail shop-keepers to adulterate ghee and flour. Flour being a necessity of existence, its adulteration is sure to affect adversely vast majority of consumers.

As the imports of vegetable products have given numerous chances to unscrupulous shop-keepers to adulterate ghee and flour in India, and as the machinery for preventing the adulteration of food stuffs in India has not been sufficiently developed, it is the obvious duty of the Government of India, in the interests of vast majority of consumers, to take immediate steps to prohibit the imports of the vegetable products into India.—(I. J. E.)

(Continued from page 4.) LAUGH AND LIVE LONG.

[JOHN HARVEY KELLOGG.]

Do we laugh because we are happy, or are we happy because we laugh?—Both. Laughter quickly comes to the surface when it starts from within, and quickly starts in when it comes from without.

No matter how it starts, laughter is always a mental and physical uplift. Laughter opens the windows of the soul and lets in sunshine to dissipate the mirk and shadows which fear and worry cultivate. Fear, anger, worry, dry up the springs of life; the saliva ceases to flow, the parched tongue cleaves to the roof of the mouth; the liver, stomach, every vital organ slows down its work or stops altogether. But laughter sets all the wheels agoing with a merry hum, and sends the blood coursing through the veins and arteries with a new impetus. The vocal outburst—ha! ha! ha! makes the diaphragm hop up and down on the stomach and liver, giving these faithful body servants a hearty nudge which aids digestion, squares the bile out of gall bladder and starts peristaltic waves all along the food canal. Laughter is a stimulant, a tonic, a great life booster.

Start every day with a hearty laugh.

If you have the blues laugh and forget them.

Be a millionaire of good cheer.—H. & H.

MANAGEMENT OF COWS.

Food and in disease, try for their remedies. The cow has become fully dependant in all matters on man and it is our duty to look after the animals who occupy the second place, next to mother, in feeding the babe and nourishing the youth and the old and the infirm. Mother's milk is nothing but her blood in another shape, and taking advantage of the weakness patent in animals, man deprive the calf from getting the full supply of milk from the mother, and steal the major portion of this 'blood' for his own use and thrive. Ignoring the difficulties attendant in tilling lands in sun and rain together

with the hard labour that it entails, the drawing of carts and heavy goods for man, the services of the bull are exploited in return of a mangerfull of straw and hay, twice a day. Not only that we lack in duty which we owe to these animals but in doing so we injure our own interests. The supply of milk is lessened in cows and in bulls loss of strength results.

It should be our prime duty to look after the comforts of these animals, try to improve their health and if possible take persistent care in improving their breed. It is not sufficient that we recognise a place for the cows in the healthy living of man and declare her to be a goddess, but that we ought to be mindful about the offerings we make for the propitiation of this deity.

The next duty is to look after the health of those whom we have deprived of all free movements and procure natural remedies. In disease, where simple remedies fail, competent veterinary doctors should be called in for treatment, and it is improper to leave the animal to its fate, simply because it cannot express its pain and sufferings.

In keeping cows, it is rather profitable to learn simple natural remedies, which our grandfathers and grandmothers used to know, and to try to cure simple diseases. In such cases many a difficult disease may be checked from making its appearance.

Proper care is necessary for keeping the animals' body free from filth and dirt. It is very often seen that the cow having to lie on the floor just where it has soiled

smears with the filth. It produces uneasiness in the animals and may affect the quantity of the milk and during milking a particle of the dirt may spoil the whole pail. In addition to this, filth may help propagation of many a contagious disease.

Small pests, sometimes of a larger size, are generally found on the animals' body. One of these pests, is sufficient to produce severe pain in the human body and there are many amongst us who have had the experience of the pain produced by a single insect sticking to the body and sometimes

producing sympathetic fever with high temperature. Veterinary surgeons say that these pests create a fever in cows just like Kala-azar, with all its bad effects. Great care has got to be taken of the hoofs of this animal because of their divided nature, which can give shelter to mud and other impurities. This should be specially the case with the animals who have got to stand or work for a long time in a muddy soil. A little care may prevent foot disease in the animal, which at times appear in a very contagious and virulent form. The floor of the cowshed should if possible be hard but not slippery, and without any filth and dirt getting accumulated there.

As in man so in cows, regular bath is absolutely necessary for keeping the health in order. Bath twice a month, will serve the purpose in other seasons but in summer this may be done more frequently.

The food of the animal is of course the most important part in cow keeping and needs most careful attention. It is better to give her meals to take at regular times and it is profitable to supply her with food before she is milked. Particular care should be taken to make the feeding utensils free from any disagreeable smell or else the cow will not take her food and this is sure to affect the quantity and quality of the milk. Experts say that cows which have got to chew something for the whole day or use the food already taken in chewing the cud, will supply a large quantity of milk, because the greater the salivation the larger the quantity of the milk. Of course, this cannot exceed her capacity.

Primary factor. Working bullocks need no extra exercise because they get enough of it. Cows may be allowed to graze and take exercise for a few hours each day and it is unwise to get her closed up in a cowshed without free movement of her limbs. Free exercise pure air and sun's rays are essentially necessary for sound health and it is sheer impudence to shut these Nature's gifts from the animals. We have got to find shelter for them during a heavy down pour or from the scorching rays of the sun.—H. & H.

MISCELLANEOUS.

CO-OPERATIVE FINANCE AND AGRICULTURE.†

By V. KRISHNA MENON, B. A.

I don't presume to be competent to deal with this subject exhaustively. My personal knowledge is limited to the small area of my co-operative activities. The ideas I have formed were derived from the working of societies in Malabar and it is possible that the conclusions I arrive at may not be generally applicable in all details to the varying state of development in the different parts of the Presidency. But I think, I am right in saying that there exists a general feeling of dissatisfaction in the minds of a large section of thinking public in the Presidency, that the

value of our achievement or rather the quality of our work leaves much to be desired. It is not my intention to belittle the importance of the selfless labour of an army of workers, both official and non-official. When we consider the difficulties that stand in the way of our progress, we have reason to look back with pride on the results obtained. It is really a matter for gratification that during the short period of two decades we have succeeded in organizing about 11,000 co-operative societies in the Presidency and admitted into them about 6,90,000 members. Certainly in point of volume of work done, we have no occasion for disappointment. But when we examine the quality of our work, when we ask

ourselves how far we have realised the primary object of the formation of co-operative societies in India, we begin to grow discontented. A real co-operator in India, wherever he may be, whatever he may do, cannot forget to ask himself; what have you done to mitigate the stagnation of the lower classes in India? What special efforts have you done to improve the lot of our poor agricultural brothers? Have you realised the multiplicity of their woes, the extent of their helplessness? Have you assisted them in producing more than what they did before? Have you induced them to take to better and more economic methods of raising their crops and preparing them for the markets? Have you protected

† Paper read at the M. A. S. U. Jubilee Conference July 1926.

them from a host of merciless traders and middlemen? Have you worked to improve their land, seed, manure and live stock? Have you assisted them to be economically independent, physically strong and mentally sound? The answer unfortunately is the same in all districts. We must confess we have yet to achieve all these. We have not even given prominence to this important aspect of our mission and much less tried to preach it to the public. Our workers have been mostly absorbed in the perfection of the rules, returns and by-laws. Our societies are merely money lending institutions, often not better than the institutions which we wish to supplant. I am aware that the record of good work we have done and the statistics prepared for measuring the value of our work, are not of a discouraging nature. The annual returns tell us that out of 11,000 societies in the Presidency, not less than 9,000 are agricultural and that the number of agricultural members of co-operative societies in the Presidency is 5 lakhs and it is twice as many as that of non-agricultural members. But a close examination of the working of these societies will reveal that the so-called agricultural societies are not agricultural in reality. Many members of agricultural societies borrow funds ostensibly for agricultural purposes and apply them otherwise. I don't mean to say this is the general rule. But my contention is that the figures in the returns do not represent the correct state of affairs. Anybody who has watched the working of co-operative societies in the interior cannot fail to be struck by the misuse of the co-operative money. Funds intended for agricultural improvement are very often not used for this purpose. Annual returns do not show and perhaps cannot show the seriousness of this danger. Financing co-operative banks are unwilling to expose these defects but have earnestly begun to think of remedial measures. Office bearers of societies, as a rule will not take the initiative for the correction of this evil practice, as they are responsible intentionally or otherwise for the growing evil. Poor members of societies, who are really the aggrieved party, have not been taught the privileges, duties and responsibilities and the result is that co-operative money in majority of cases, is not employed for the benefit of the agricultural classes. Tillers of soil have been from time immemorial a helpless class, easily exploited by richer, more intelligent and influential classes. It was to protect the agriculturists from these evil influences that Government created the co-operative department. It cannot be denied that some good work has been done. But it has not gone a long way to make the agriculturist an organized body able to withstand the powerful army of traders and middlemen, whose prosperity means ruin to helpless agriculturists. Whatever development is noticeable in recent times, has the defect of being partial or one-sided. Advancement of trade, extension of railways, increase of banking facilities and other advantages of modern civilization benefit traders more than the agriculturists. Increased activity of com-

mercial banks system of forward contracts for the supply of produce and making advances on standing crops, fixing terms ruinous to the producer deprive him of his legitimate share of the increased value of produce. Co-operative institutions have not succeeded to any appreciable extent in affording the necessary protection as they have not acquired sufficient knowledge or experience in the business of selling the produce for their members in an advantageous manner. We have need for a large number of thinkers and workers to devote their attention to this branch of co-operation. The task we have to perform is very great. Many of us have not even realised that our primary duty is to go to the rescue of the agriculturist. We have so far merely prepared the ground for earnest work. We cannot say that we have travelled far along the path of co-operative development. I would even say that our pace has been slow and some times uncertain and erratic. We have to examine the circumstances which regulate our progress and prescribe measures suitable to our peculiar circumstances. We have a large number of poor and ignorant people bound down by superstition and to a large extent enslaved by social tyranny. We have extensive land possessed by a class of people who will neither work it themselves nor afford facilities to those that cannot but till it. We have a number of co-operative societies and sufficient funds for financing them. But we have an insufficient number of really good office bearers to run them in the best interest of the agriculturists. We have a co-operative department ever willing to advance the interests of co-operation in the Presidency. But their knowledge of agricultural requirements is limited. We have an agricultural department ever ready to help the people with advice. But to a great extent they lack financial capacity to demonstrate the value of their advice. Co-operative societies have funds but do not know how to use them. Co-operative department has great responsibility but wants more knowledge. Agricultural department has knowledge but wants more financial responsibility. I request you, gentlemen, not to be offended with my remarks. We are really in a confused state. It is quite essential that we should create a better organization for directing the forces for the production of better results and quicker progress.

Our main object to-day is to suggest a better organization calculated to work more efficiently. There is no use of putting forth suggestions involving large expenditure of money. Demands on public purse are large and varied and diversity of opinion on public questions are bewildering. I therefore, propose to confine myself to suggestions that can be carried out without additional expenditure. Among my suggestions, I give the first place to the necessity of propaganda—a persistent, systematic and organized attempt to teach rural people principles of co-operation and how co-operative funds can help to promote agriculture. Some of my hearers may question the necessity

of propaganda at this stage of our development. Many a time I had occasion to meet members of co-operative societies who did not distinguish co-operative funds from Government funds. Most of the evils we see now in the working of the co-operative societies can be rectified by spreading the knowledge of co-operative principles among the people. Agencies exist among co-operative institutions for undertaking this work. But they have not sufficient funds for the discharge of their duties. It is quite possible for the government to divert some funds for strengthening the hands of those agencies. The Apex Bank and the Central Banks have to earmark annually funds exclusively for this purpose.

The second suggestion I wish to place before you is to bring the two Government departments of Co-operation and Agriculture closer to each other. I suppose you are aware that the suggestion has appeared in the Press many a time. I do not want to enter into the merits of this suggestion. I merely propose that steps be taken for bringing these departments closer. Any radical change in the system of administration would take a long time to be effected and the change I advocate is only a readjustment of duties of officers to facilitate mutual help. That these two departments are connected and their working in consultation with each other would produce better results have already been recognised. Recent circulars issued by the Registrar of Co-operative societies requiring local unions to invite agricultural officers to their periodical meetings and making Deputy Directors of Agriculture ex-officio members of District Federations are steps calculated to bring about this result. I would suggest to you that we ought to go a step further. There are many ways of creating a healthy change. I draw your attention to the method of financing rural societies adopted in some districts and I leave you to decide whether the change I advocate would be beneficial or not. A rural society according to the practice prepares a loan application, forwards it to the local union or the Assistant Registrar for recommendation. These agencies generally do not possess detailed information regarding the requirements of the society. They do not go into the details, but merely see whether the society is working in a satisfactory manner and whether it has sufficient borrowing power and has cleared the dues to the District Bank. Panchayatdars of societies do not give preference to agricultural loans, but merely see to the nature of the security offered and the reliability of the borrower. Very often persons friendly with the Panchayatdars get preference and the requirements of the poor agricultural members of the societies are ignored partly or wholly. When the application reaches the financing Bank, members of Executive Committee who, in majority of cases do not possess intimate knowledge of the working of the society passes the loan on the strength of the recommendations received and the result is that even in the best of societies poor agricultural members do