WEALTH & WELFARE

378/55

WITH WHICH IS INCORPORATED

'CO-OPERATOR,' COLOMBO

AN ALL-INDIA—CEYLON

(WELFARE WEEKLY)

(DEVOTED TO ECONOMIC, SOCIAL & WELFARE PROBLEMS)

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CONTENTS

It's easy enough to be pleasant
When life flows along like a song,
But the man worth while
Is the man who can smile,
When everything goes dead wrong.

To Our Subscribers—*Our subscribers are reminded to remit their subscriptions to the Hon. Managing Editor, Wealth & Welfare, Madras-Thyagarayanagar.*—Editor, W. & W.

EDITORIAL

The Positive Always Overpowers The Negative

This is an infallible law of nature.

You can change your vicious nature by cultivating healthy, virtuous qualities that remain dormant in every human heart.

If you want to overcome fear, mentally deny that you have fear and concentrate your attention on the opposite quality, the ideal of courage.

When courage is developed fear vanishes by itself.

You can acquire a liking for distasteful tasks and duties by cultivating a desire and taste for them.

You can establish new habits, new ideas, new ideals, and new tastes and new character.

This can be done only with the help of your subconscious mind.

Much of our sub-consciousness consists of submerged experiences, memories thrown into the background but recoverable.

We have to cultivate memory.

When we show symptoms of losing our memory, as we grow old, the first symptom is that we find it difficult to remember the names of persons.

The mind generally remembers through associations as the impressions become deep thereby.

We can remember well in our old age some passages that we read in schools and colleges, but we find it difficult to remember in the evening a passage that we read in the morning.

This is because the mind has lost its power of grasping ideas. The brain cells have degenerated.

Those who overwork mentally, who do not observe the rules of Brahmacharya and who are tormented by many cares, worries and anxieties, lose their power of memory soon.

Even in old age we can remember old events as there are associations with events.

The mental processes are not limited to the field of consciousness alone.

The field of subconscious mentation is of a much greater extent than that of conscious mentation.

Only ten percent of mental activities comes into the field of consciousness. Ninety per cent of the mental activities takes place in the subconscious mind.

At least ninety per cent of our mental life is subconscious. We must remember that our sub-conscious mind is our constant trustworthy companion and sincere friend.

When we have to sit and try a problem, and we fail, we walk round, try again and again fail. Suddenly an idea dawns on us that leads to the solution of the problem.

The sub-conscious processes were at work.

Whenever you have to do a thing give orders to your sub-conscious mind and this message is taken by our subconscious mind which works out and brings the solution to the surface of the conscious mind through the trap door in the sub-conscious mind.

Whichever problem is difficult for us must be entrusted to our trustworthy friend—subconscious mind when we go to bed. You are sure to get a clear answer in the morning when we get up.

Even in sleep the sub-conscious mind works incessantly without rest. It arranges, classifies, compares, sorts, all facts and works out a proper satisfactory solution.

With the help of our subsconscious mind we can change our vicious nature.

Sub-conscious mind is termed Chitta in Vedanta.

The functions of the Chitta are Smriti or Smarana, Dharana, attention and Anusandhana—enquiry or investigation.

When you repeat something, it is Chitta that does the Smarana. It does a lot of work. It turns out better work than the mind.

Let us not forget that mind is the cause of bondage and salvation of man. It is the mind that binds a man to this world; where there is no mind there is no bondage.

Mind imagines through indiscrimination and ignorance and becomes egoistic and the egoistic mind is the root of bondage.

It takes the responsibility upon itself for doing good or bad karmas and enjoying or suffering from their fruits.

The responsibility for karmas rests with the mind.

The mind has two aspects: one is discriminative and the other is imaginative.

Mind in its aspect of discrimination releases itself from the bondage and attains liberation.

In its aspect of imagination, it binds itself to the world. The mind is called the Inner Instrument or Antahkarana, as distinguished from outer instrument or the senses or Indriyas.

Antahkarana or mind is different in every individual. It is the mind (lower Manas) that creates differences, distinctions, duality and separateness. If this lower mind is destroyed by increasing the Sattva Upasana then we will feel oneness everywhere.

This needs continuous and strenuous efforts to control the mind.

NOTES

THE COMPOSITION OF THE HUMAN BODY

Water	...	65 per cent
Protein	....	15 „
Fat	....	14 „
Salts	....	5 „
Other organic compounds	....	1 „
Total	...	100

An average man is made up of :—

Muscles	...	28,732 Grams
Fat	...	11,765 „
Bones	....	11,575 „
Blood	...	4,500 „
Liver	...	1,819 „
Brains	...	1,436 „
Stomach	...	1,364 „
Lungs	...	995 „
Kidneys	...	305 „
Heart	...	301 „
Glandular System	...	232 „
Spleen	...	163 „
Spinal Cord, nerve roots etc	...	100 „
Eyes	....	27 „
Total	...	63,314

HEALTH

NAMES OF BAZAAR MEDICINES

[Our readers are indebted to H. H. Swami Shivanandajee for the valuable information given in Home Remedies. Since very many enquiries are made about the names in regional languages, we give below the names in regional languages as published by H. H. Swami Shivanandajee.]

ASAFOETIDA

(Ferula Asafoetida)

Tamil. Perungkayam
Telugu. Inguva
Malayalam. Perungayam
Kanarese. Ingu
Hindi. Hing
Sanskrit. Hingu

ATI-VISHA

Tamil. Ati-vidayum
Telugu. Ati-vasa
Malayalam. Athi-vidayam
Kanarese. Bhangura
Hindi. Atis
Sanskrit. Ati-visha

BAEL

(Aegle Marmelos)

Tamil. Vilvam.
Telugu. Bilvamu
Malayalam. Kuvalan
Kanarese. Bela
Hindi. Bel
Sanskrit. Bilva

BALA

(Pavonia Zeylanica)

Tamil. Chittramutti
Telugu. Chittamutti
Malayalam. Karunthotti

BASTARD TEAK

(Butea Frondosa)

Tamil. Palasu, Purasu
Telugu. Moduga
Malayalam. Murukkamaram
Kanarese. Muttagamara
Hindi. Dhara
Sanskrit. Palash

BELERIE MYROBANS

(Terminalia Belerica)

Tamil. Thanikai, Thantrikai
Telugu. Thandra-kaya
Malayalam. Tannikai
Kanarese. Tanri-kayi
Hindi. Bhairah
Sanskrit. Vebeethaki

BHRINGARAJ

(Eclipta Prostata)

Tamil. Karisalan kanni
Telugu. Guntagali jaeru
Malayalam. Kanjunni
Kanarese. Kadige-garage
Hindi. Bungrah
Sanskrit. Bhringaraj, Kesaranja

BISHOPS WEED

(Ptychotes)

Tamil. Omam
Telugu. Omamu
Malayalam. Omum
Kanarese. Voma
Hindi. Ajvayan
Sanskrit. Yavani

BITTER GOURD

(Momerdica Charantia)

Tamil. Pakal
Telugu. Kakara
Malayalam. Paval
Kanarese. Hagala
Hindi. Karela
Sanskrit. Karavalli

BLACK PEPPER

(Piper Nigrum)

Tamil. Milagu
Telugu. Miryalu
Malayalam. Murumulaku
Kanarese. Menasu
Hindi. Kali-Mirch
Sanskrit. Maricha

BOTTLE GOURD

(Lagenaria Vulgaris)

Tamil. Churaikai
Telugu. Sorateega
Malayalam. Chura
Kanarese. Kahisore
Hindi. Lanki
Sanskrit. Alabu

BUTTERFLY PEA

(Clitoria ternatia)

Tamil. Kakkanam
Telugu. Dintana
Malayalam. Shangu-pushpam
Kanarese. Shanka-pushpa
Hindi. Aprajita
Sanskrit. Shanka-pushpa

CALTROPS (SMALL)

(Tribulus Terrestris)

Tamil. Nerunjil
Telugu. Palleru
Malayalam. Nerunji
Hindi. Gokhru
Sanskrit. Gokshura

CARDAMUM

Tamil. Elam
Telugu. Elakaya
Malayalam. Elattari
Kanarese. Elakki
Hindi. Elachi
Sanskrit. Ela

CHIRETTA

(Gentiana Kuruva)

Tamil. Nilavembu
Telugu. Nelavemu
Malayalam. Nilaveppa
Kanarese. Nelavepu
Hindi. Kiryat
Sanskrit. Kirtha-thikta

CHEBULIC MYROBALAM (INK-NUT)

(Terminalia chebula)

Tamil. Kadukkai
Telugu. Karak-kaya
Malayalam. Katukkai
Kanarese. Anile-kai
Hindi. Pile Hara
Sanskrit. Haritaka

CINNAMON

Tamil. Karuvapattai, Lavangapattai
Telugu. Lavanga-patta
Malayalam. Lavanga-patta
Kanarese. Dala-chinni
Hindi. Dar-chini
Sanskrit. Twak

CINNAMON LEAVES

Tamil. Lavangapattri
Telugu. Lavangapatri
Malayalam. Lavangapatri
Kanarese. Lavangapatra
Hindi. Tajput
Sanskrit. Lavangapatram

CLOVES

(Caryophyllum)

Tamil. Krambhu
Telugu. Lavangulu
Malayalam. Karampu
Kanarese. Lavanga
Hindi. Long
Sanskrit. Lavangam

CLEARING NUT TREE

Tamil. Thettran
Telugu. Chilla-chettu
Malayalam. Tettamaram
Kanarese. Chalimara
Hindi. Nirmali
Sanskrit. Kataka

COLOEYNTH, FRUIT OF

Tamil. Artu-tumatti
Telugu. Etti-puchcha
Malayalam. Pei-kumatti
Kanarese. Hava-mekkekayi
Hindi. Indarjow
Sanskrit. Indra Varuni

CROTON

(Croton Tiglium)

Tamil. Nervalam
Telugu. Napalam
Malayalam. Nervalam
Kanarese. Japala Beeja
Hindi. Jamal gotta
Sanskrit. Danthi

CUMIN SEEDS

(Cuminum Cyminum)

Tamil. Chirakam
Telugu. Jilkarra
Malayalam. Jirakam
Kanarese. Jiriga
Hind. Zira
Sanskrit. Jirakam

DATES

(Phoenix Dactylifera)

Tamil. Perichchu
Telugu. Karjuramu
Malayalam. Perichcha
Kanarese. Kharjura
Hindi. Kajur
Sanskrit. Kharjjuram

DATURA

Tamil. Umattai
Telugu. Ummeth-tha
Malayalam. Ummath-tham
Kanarese. Ummatte-gida
Hindi. Dhatura
Sanskrit. Datura

DRIED GINGER

(Zingiber Officinales)

Tamil. Chukku
Telugu. Sonti
Malayalam. Chukka
Kanarese. Ona-shunti or
Hindi. Sonth (Sunti
Sanskrit. Nagaram

FENUGREEK

(Trigonella Foenum)

Tamil. Vendayam
Telugu. Menthulu
Malayalam. Venthyam
Hindi. Methi
Sanskrit. Methi

FIG

(Ficus Glomerata)

Tamil. Atti
Telugu. Atti
Malayalam. Atti
Kanarese. Atti
Hindi. Gular
Sanskrit. Udumbara

GALANGAL (SMALLER & BIGGER)

Tamil. Aratti
Telugu. Sanna-rashtramu, Thumpa-rashtramu
Malayalam. Aratha
Kanarese. Rasmi
Hindi. Khulamjan
Sanskrit. Rasna

GARDEN RADISH

(Raphanus Sativus)

Tamil. Mullangi
Telugu. Mullangi
Malayalam. Kankapal
Kanarese. Mullangi
Hindi. Muli
Sanskrit. Moolaka

GARLIC

(Allum Sativum)

Tamil. Vellulli, Vellaipoondu
Telugu. Thella-gadda
Malayalam. Vellulli
Kanarese. Belluli
Hindi. Lahsan
Sanskrit. Lasuna

GINGER

Tamil. Inji
Telugu. Allamu
Malayalam. Inji
Kanarese. Vona-sunthi
Hindi. Adrakh
Sanskrit. Draksha

GRAPES

(Vitis Vinifera)

Tamil. Thrakshi
Telugu. Draksha
Malayalam. Draksha
Kanarese. Draksha
Hindi. Munakha
Sanskrit. Draksha

HIMALAYAN RHUBARB

Tamil. Iravalchinni
Telugu. Nattu-revalchinni
Kanarese. Nat-reva-chinni
Hindi. Revand-chini
Sanskrit. Reval-chini

INDIAN ACONITE

(Aconitum Ferox)

Tamil. Nabhi
Telugu. Vatsanabhi
Kanarese. Vatsa-nabhi
Hindi. Bachhnag
Sanskrit. Vatsanabhi

INDIAN ALOES

(Aloe Perfoliata)

Tamil. Kartazhai
Telugu. Kalabunda
Malayalam. Kathu-vazha
Kanarese. Kathalai-gida
Hindi. Ghikauvar
Sanskrit. Kumari

INDIAN GOOSEBERRY

(Phyllanthus Emblica)

Tamil. Nelli
Telugu. Usirikai
Malayalam. Nellikai
Kanarese. Nellikai
Hindi. Amlika
Sanskrit. Amalaki

INDIAN HEMP

(Cannabis Sativa)

Telugu. Ganjah
Malayalam. Kanjah
Kanarese. Bhang
Hindi. Ganja
Sanskrit. Siddhapatri, Vijaya

INDIAN LADURNAM

(Purging Cassia)

Tamil. Sarakkonrai
Telugu. Rela-kayalu
Malayalam. Konna
Kanarase. Kakke
Hindi. Amaltas
Sanskrit. Aragvadham

INDIAN SARASAPRILLA

(Hemidesmus Indicus)

Tamil. Nannari
Kanarese. Sugandhapalada

Telugu. Sugandhi
Malayalam. Nannari
Hindi. Magrabu
Sanskrit. Sariba

INDIAN OR TINNEVELLY SENNA

(Cassia lanceolata)

Tamil. Nila-varai, Surtavarai
Telugu. Nela-tangedu
Malayalam. Nila- veka
Kanarese. Nela-varike
Hindi. Sunnamukti

INDIAN WATER CHESTNUT

(Trapa Bispinosa)

Tamil. Pannimonthan, Kizhangu
Telugu. Parigadda
Malayalam. Mullikkaya
Hindi. Singhara
Sanskrit. Sringatakka

JAMBUL

(Eugenia Jambulana)

Tamil. Naval
Telugu. Neradu
Malayalam. Gnaval
Kanarese. Naeralu
Hindi. Jaman
Sanskrit. Jambu

JEQUIRITY

(Glycyrrhizae Radix)

Tamil. Ati-maduram
Telugu. Ati-madhuramu
Malayalam. Ati-madhuram
Kanarse. Ati-madhura Mulatthi
Sanskrit. Yashti Madhukam

JEQUIRITY II

(Arbus precatorius)

Tamil Kundrimani
Telugu. Guri-ginja
Malayalam. Kunni-kuru
Kanarese. Gul-ganji
Hindi. Gunj
Sanskrit. Gunja

KANTA KARIKA

(Solanum Jacquini)

Tamil. Kandangathari
Telugu. Nela Mulaka-vakudu
Malayalam. Kantankaththiri
Kanarese. Nela-gulla
Hindi. Bhat-katai, Kateli
Sanskrit. Kanta Karika, Nideghika

KHADIRA-SARAM

(Uncaria Gambier)

Tamil. Kath-thak-kambu
Telugu. Kanchu
Malayalam. Katta
Kanarese. Kachu
Hindi. Kattha
Sanskrit. Khadira-saram

LINSEED

Tamil. Alisivirai
Telugu. Atasi
Kanarese. Alashi
Hindi. Alsi
Sanskrit. Atasi

LONG PEPPER

(Piper Longum ; Chavica Roxburghi)

Tamil. Thippili
Telugu. Pippilu
Malayalam. Thipilli
Kanarese. Hippili
Sanskrit. Pippali

LONG PEPPER, ROOT OF

Tamil. Thippili mulam
Telugu. Pippili-mulam
Malayalam. Kattu-thippili
Kanarese. Hippilu-beru
Hindi. Felfelai Moya
Sanskrit. Pippalee-moola

MAHABALA

(Pavonia odarata)

Tamil. Peramutti
Telugu. Padamuttava pulagamu
Malayalam no. Peramutti
Kanarese. Balarakkasigida
Hindi. Sugandu-vala
Sanskrit. Mahabala

MANY SPIKED FLACORTIA

(Flacourtia cotaphracta)

Tamil. Thalisa-paththiri
Telugu. Talispatram
Malayalam. Talisapatri
Kanarese. Talispatram
Hindi. Talispatra
Sanskrit. Talisapathra

MALABAR NUT

Tamil. Adatodai
Telugu. Addasaram
Malayalam. Ata-lotakam
Kanaresi. Adasagesappu
Hindi. Arusa
Sanskrit. Vasaka

MARGOSA TREE

(Melia Azadirachta)

Tamil. Vembu
Telugu. Vepa
Malayalam. Veppa
Kanarese. Bevina
Hindi. Nim
Sanskrit. Nimba

MINT

(Mentha Sativa)

Tamil. Puthina
Telugu. Pudina
Malayalam. Putiyina
Kanarese. Chetni-maragu
Hindi. Pudinah
Sanskrit. Pudina

MEENAKSHI

(Alternanthera Sessiles)

Tamil. Ponnangkani
Telugu. Ponnagantikura
Malayalam, Minankanni
Kanarese. Vanagone soppu
Sanskrt. Meenakshi, Mathsyakshi

MUDAR

(Calotropis Gigastea)

Tamil. Erukku
Telugu. Jilledu chettu
Malayalam. Erukka
Kanarese. Yakkeda-gida
Hindi. Ak, Akan, Akond
Sanskrit. Arka.

NUTMEG

(Myristica Officinalis)

Tamil. Sathik-kai
Telugu. Jajikaya
Malayalam. Jatikkaya
Kanarese. Jajikayi
Hindi. Jae-phal
Sanskrit. Jati-palam

NUX VOMICA

(Strychnos Nux-Vomica)

Tamil. Yetti
Telugu. Mushti
Malayalam. Kanjiram
Kanarese. Mushti
Hindi. Kuchla
Sanskrit. Visha-mushti

OAK-GALLS

(Quecuo Infectoia)

Tamil. Machikkai
Telugu. Machikkaya
Malayalam. Masikkaya
Kanarese. Machi-kayi
Hindi. Mazhuphal
Sanskrit. Machika

OPIUM

Tamil. Abin
Telugu. Abhini
Malayalam. Apini
Kanarese. Aphimu
Hindi. Afyun
Sanskarit. Ahipehnam

OPIUM POPPY (Poppy Capsules)

(Papaveris Copsiclatoe)

Tamil. Kasakasa
Telugu. Gasagasalu
Malayalam. Kasha-kasha
Kanarese. Kasa-kasa
Hindi. Kash-kash
Sanskrit. Khas-khas

PIPER LANCEOLATE

(Scindapsus Officinalis)

Tamil. Anaitippali
Telugu. Gaja-pippallu
Malayalam. Anathippali
Kanarese. Dodda-hipalli
Hindi. Bari-pipli, Gaj-pipli
Sanskrit. Gaja-pipali

PRICKLY CHAFF

(Achyranthes Aspera)

Tamil. Nayuruvi
Telugu. Uttareni
Malayalam. Kadaladi
Kanarese. Uttaranee
Hindi. Chirchira
Sanskrit. Apamarga

PUNARNAVA

(Trianthema Decandra)

Tamil. Sattichcharanai
Telugu. Tella-ghalijeru
Malayalam. Tavizhama
Kanarese. Jafja-soppu
Sanskrit. Punarnava

RINGWORM SHRUB

(Cassia Alata)

Tamil. Vandu-kolli
Telugu. Shima-avisi
Malayalam. Shima-akati
Kanarese. Shimi-gida
Hindi. Dadmurdan
Sanskrit. Dadrughna

SERPENT CUCUMBER

(Trichosanthes anguina)

Tamil. Pudal
Telugu. Potla
Malayalam. Pudala
Kanarese. Padavala
Hindi. Chechenda
Sanskrit. Chinchindaha

SHATAVARI

(Asparagus Sarmentosus or, A. Racemosus)

Tamil. Thannir-vittan
Telugu. Pillipeechchara
Malayalam. Sataveri
Kanarese. Satmula
Hindi. Satavare
Sanskrit. Shatavari

SWEET BASIL

Tamil. Tiruneetrupachchai
Telugu. Vibudi-patri
Malayalam. Tirunitru-pachcha
Kanarese. Kamakasturi
Hindi. Sabzah
Sanskrit. Viswa Tulasi

SWEET-INDRA JAO

(Wrightia Tinctoria)

Tamil. Vetpalai
Telugu. Kodisha
Malayalam. Kutakppala
Hindi. Mitta Indra Java
Sanskrit. Indra Yava

SWEET-FLAG

(Acorus Calamus)

Tamil. Vasambu
Telugu. Vasa
Malayalam. Vayambu
Kanarese. Baja
Hindi. Bacha
Sanskrit. Lankesaha

TALL-PEPPER (Cubebs)

(Cubeba Officinalis)

Tamil. Val-milagu
Telugu. Toka-mirialu
Malayalam. Val-milaka
Kanarese. Gandha-menasu
Hindi. Kabab-chini
Sanskrit. Lankesaha

THYME-LEAVED GRATIOLA

(Herpestis Monniera)

Tamil. Nir-Brahmi
Telugu. Shambrani chettu
Malayalam. Nirbrahmi
Kanarese. Nir-Brahmi
Hindi. Barambhi
Sanskrit. Mandukaparni

VALERIAN ROOT

(Valerinae Rhizhoma)

Tamil. Jadamanji
Telugu. Jadamamsi
Malayalam. Manji
Hindi. Vilayati-jatamasi
Sankrit. Jatamamsi

VIDANGA

(Embelia Ribes)

Tamil. Vaivilangam
Telugu. Vayu-vilangamu
Malayalam. Vizhalari
Kanarese. Vayi-vulanga
Hindi. Bai-badang
Sanskrit. Vidanga

VISHNU GANDHA

(Evolvulus Alsinoides)

Tamil. Vishnu Kiranthi
Telugu. Vishnukranthi
Malayalam. Vishnu-kranti
Kanarese. Vishnu-kranti
Hindi. Shankapushti
Sanskrit. Vishnu-kranta
Vishnu-gandha

WALNUT

(Juglans Regia)

Tamil. Akrottu
Hindi. Akhrot
Sanskrit. Akshotas

WHITE PUMPKIN

Tamil. Kaliyana pushi-nikkay
Telugu. Budidapu-gummadi
Malayalam. Kumpalam
Kanarese. Bude-kumbal-kayi
Hindi. Petha
Sanskrit. Kushmandam

WINTER CHERRY (Heat Pea)

(Cardiospermum halicacabum)

Tamil. Mudakkatran
Telugu. Budda boosara
Malayalam. Ulinja
Kanarese. Kanakai
Hindi. Kanphata
Sanskrit. Karnasphota

WINTER CHERRY II

(Withania Somnifera)

Tamil. Amukkurak-kizhangu
Telugu. Penneru-gaddha
Malayalam. Amuk-kuram
Kanarese. Sogade-beru
Hindi. Asyandh
Sanskrit. Aswagandha

YELLOW CHAMPA

(Michelia Champaca)

Tamil. Shanbagam
Telugu. Champakamu
Malayalam. Chamaka-pu
Kanarese. Sampagahuvvu
Hindi. Champa
Sanskrit. Champaka

MISCELLANEOUS

AAREY MILK TOWN: BOMBAY'S Rs. 4/- CRORE MILK SCHEME

BY N. C. NAG (in H. S.)

The area of the Milk Colony is one-fifth the area of the City of Bombay

In September last Mr. D. N. Khurody, Milk Commissioner to the Government of Bombay, gave an interesting and instructive talk on his Government's Rs. 4/- Crore Milk Scheme at the Calcutta Rotary Club. The talk was a story of how the milk problem of a big city like Bombay is being solved in a very efficient and extremely rapid manner and how they have passed from the stage of insanitary production, adulteration and bacterial contamination of milk, loss of milch stock and wastage of their invaluable products that was in the city only five years ago, to a stage of economical, modern and beautiful farms and plantations as is now at its 3000-acre Milk Colony at Aarey. It was also a story of the transplantation of the entire cattle population from the hell of disease-breeding and congested *khatals* of the city to the cattle's paradise into which the waste land of Aarey has now been transferred.

The Aarey Colony has more than 15,000 healthy cattle lodged within it and is having all the fruits of science and inventions readily at its service. Pure milk now flows in abundance from there to meet the requirement of about half the population of the city. The Govt. propose to expand the Scheme so as to cover the remaining half of the population within the next five years when they will also undertake production of milk powder, baby food and condensed milk. The Aarey Colony is said to be the biggest in Asia and one of the most modern in the world.

If man is a born philosopher, he is also a born farmer. So since I heard about this remarkable achievement of the Bombay Government, I came to cherish a desire to see it. The latent farmer's instinct within me and the fact that the West Bengal Government is also setting up 22 milk colonies in and around Haringhata, 24 miles from Calcutta, for the solution of the latter's similarly acute milk problem, provided the necessary incentive. And very soon an opportunity for visiting Aarey presented itself when I went to Bombay to attend the annual conference of the Indian Federation of Working Journalists. The Reception Committee, our hosts, which drew up a varied and attractive programme for our amusement and outing, very wisely included in it a visit to that Milk Colony.

On November 2, after the conclusion of the Conference a very pleasant drive by a Government bus covering a little more than an hour took us from St. Xavier's College Hostel, our temporary camp, to that cattle's paradise, 25 miles north of the city. Our bus meandered under the morning sun through the wide, clean and well-marked roads—fringed on both sides by magnificent buildings—and fascinating and comparatively sparsely-populated suburbs, at places fronting the sea beach.

On reaching there we found the Law Minister Sri Dinkerrao Desai, whose daring feat of imagination and lofty ideal of public service envisaged this gigantic Milk Scheme, waiting for us at a neat reception hall on a small hillock. Mrs. Desai, an elderly lady of venerable look, and Mr. Khurody, the man who has given shape to Sri Desai's scheme were also there with him. Sri Desai, a tall and handsome figure, with a sharp Roman nose set on a calm and beautifully chiselled face, and clad in spotless white Khaddar *dhoti* and *panjabi* and with a Gandhi cap on, appeared to be about 65. Mr. Khurody, a short-statured man of slightly heavy build, but remarkably active, looked like a dynamo of energy and seemed to have all information about production, distribution and consumption of milk on his fingertip.

They all received us cordially. The formalities over, Mr. Khurody took us to the Central Dairy and other places of interest in the Colony. This was followed by a grand feast given in honour of the visiting journalists by the honourable Minister in pure Indian style.

Mr. Khurody in the course of his informal talk also gave us a few interesting and helpful tips on the habit of drinking milk. For instance, when we were each given a bottle of cold milk to drink, one from amongst us, a dyspeptic like myself, asked if this cold drink would not be harmful. But he assured us if cold water or for matter of that, any other cold drink, was not harmful to health, then this cold pasteurised milk was also not harmful. Rather it was delicious and refreshing to drink cold milk in the hot season. Another important point to note, he said, was that milk should be drunk slowly and in small portions rather than gulped down in a hurry. Milk drunk slowly was digested more easily and children in particular should be taught to drink slowly. One way of ensuring slow drinking was to make them drink through a clean drinking straw.

The whole process of the transport of milk from the cattle's udder to the consumer's table is an interesting story and this was explained in detail by Mr. Khurody, while taking us round the different plants of the Central Dairy.

The Central Dairy is a magnificent three-storyed building on another hillock. All the milk produced at the Colony as also that obtained from outside but handled under the Milk Scheme is pasteurised and bottled here.

The Dairy consists of a modern plant for pasteurising milk and bottling it at the rate of 40,000 lbs. (500 mds.) per hour. It also has a section for preparing "toned" milk, and another section for dealing with "below grade" milk or "returned" milk. The Government Scheme at present handles about 3,750 maunds daily. With a capacity for 500 maunds per hour the plant runs for about 4 hours in the morning and for another four hours in the evening.

The Dairy starts receiving raw milk from the Colony and outside suppliers from about 7 a.m. in the morning and 7 p.m. in the evening. The hours of milking animals having been regularised, different lots of milk keep on arriving at the Dairy at the rate of approximately 500 maunds per hour. The smallest producer delivers 20 seers and the biggest, 60 maunds a day. On receipt of the milk the milk cans are examined for smell, appearance, visible dirt, etc., and only those cans, the contents of which satisfy a minimum standard of purity, are accepted. In the receiving section 8 trucks of raw milk can be unloaded simultaneously and it has a double arrangement for receiving and tipping milk in the weighing bowls. Samples in duplicate are drawn from the weigh bowls, representing each lot of milk taken in for determining the quality according to which payment is made. The milk is then pumped to the process plant through a stainless steel pump. After the milk has thus been received, weighed and sampled, the empty cans are washed, steam-sterilised and dried at the rate of 1,200 per hour in the two can-washing machines. The cleaned cans are then returned to suppliers. The cans are however Government property. There are four clarifiers to remove all invisible dirt, etc. from the milk before it passes on to the 3,000-gallon (375 maunds) storage or balancing tank.

Pasteurisation

In pasteurising milk, nothing is added to it nor anything removed. It is purely a process of subjecting milk to heat and cold treatment under controlled conditions. By heating milk to the required temperature, and retaining it at that temperature for the required length of time, and cooling it immediately thereafter to the required temperature, not only its life in liquid condition is increased, but it is also rendered safe of all disease germs. There are two pasteurisers at the Dairy, each with a capacity for turning out 2,000 gallons (250 maunds) per hour, with their respective control panels. The pasteurisers are fitted with a special device known as the "Flow Diversion

Valve," which prevents any subtemperature (under-heated) milk from passing over to the cooling section. From pasteurisers the milk goes to the storage tanks of which there are 6, with a capacity for 2,000 gallons (250 maunds) each. The storage tanks are also of stainless steel and insulated. After each run of milk, the plant is flushed with water. Suitable detergents are circulated through it in the same way as milk. Each part of the plant is dismantled and each pipe of fitting is thoroughly cleaned. They are further steam-sterilised in special sterilising chests before re-assembling, after which the plant is again flushed with hot water before fresh milk is run through. Every consignment of raw milk is tested for fat content, solids-not-fat, acidity etc. Frequent tests are also made to see that the can washers, bottle washers and the pasteurising plants are all functioning properly. Pasteurised milk is again tested at the Dairy's Chemical Laboratory to ensure absolute purity.

For distribution three sizes of bottles, viz., ¼ seer, ½ seer and 1 seer have been adopted. There are 4 bottle washing machines, each with a capacity to wash and sterilise 12,000 bottles per hour irrespective of size. No brushes are used. Washing is done by soaking the bottles in detergents, spraying them at high pressure with jets of detergents and hot water, both inside and outside. The bottles take about 20 minutes to come out of the machine during which time they constantly undergo the cleaning operations. Clean bottles then travel on conveyors to the bottle-filling machines. Empty crates are also washed and cleaned and travel over conveyors to the same machines. There are 8 bottle-filling machines, each capable of filling 70 to 100 bottles per minute, according to size. They are vacuum-operated and fill exactly to the required capacity. They will not fill a broken or chipped bottle. These machines also make caps out of aluminium strip and seal them on to the bottles. Each cap is "coded" so that it is possible to find out on which date and on which machine a particular bottle was washed and filled. Pasteurised milk is retained at as low a temperature as possible, till it is taken out of the Dairy. A large cold-store and an airlock have been provided for the purpose. Milk is taken out of the cold store just before distribution hours. The cold store is insulated on all sides. Temperature of about 40°F. is maintained in the cold-store by a special plant supplied by Air Conditioning Corporation, which has also installed other plants there.

When the milk is thus made ready for market special insulated vans take about 45 minutes by road to bring it to the 700 distributing centres in the city.

Cattle Strength

At Aarey there are at present 30 dairy farm units and 115 licensees with 110 heads as average cattle strength per licensee. The average daily production of milk is 3750 mds. It must be noted here that unlike Calcutta, Bombay prefers buffalo's milk.

Besides Aarey there are three other milk estates owned by the Government, namely, Wagle, Palghar and Anand. Only a few days ago (Nov. 15th) President Rajendra Prasad laid the foundation of a new dairy at Anand. The Aarey estate consists of 3,167 acres of land, Wagle, 310 acres, Palghar, 3000 acres and Anand, 36 acres. Land cultivated under irrigated fodder at Aarey is 470 acres. The annual turn-over at Aarey is Rs. 6,30,00,000 and at Anand Rs. 80,00,000. The number of staff—from highly qualified specialists and engineers down to the menials—employed at these estates is 5590. There are at present 300 producers' families living at Aarey. Sri Desai, who also holds the portfolio of Education, is very keen on the education of their children. We were told, a school is soon going to be started at the colony for the purpose.

Workers have been provided with a dormitary, change and wash-up rooms and an electric laundry for washing their uniform. There is a canteen for workers, staff members and visitors. An office building, with a co-operative bank and a strong room, a clock and observation tower, has been constructed to house the various sections of the Milk Department. There is a separate pump house and reservoir, attached to the Dairy, with a capacity to hold water upto two days' requirement.

Like Calcutta and other big cities in India, formerly Bombay was full of insanitary *khatals* where cattle used to live without any exercise or grazing for eight months at stretch before they went dry. Approximately 1,000 heads were kept per acre of stable space. Freshly calved animals—some of them the very best that India can produce—were brought from distant breeding regions to replace the dry ones which were mostly sold away for slaughter. A large number of calves used to die every year as there were no arrangements for their proper rearing. Manure was rarely removed from the stables, but was liquified and run into underground sewers. Thousands of tons of valuable manure thus used to run through underground sewers into the sea every year. In the suburbs the manure was dumped just outside the stables. The surroundings of the stables were littered with manure and filth. The milk pails were scrubbed and rinsed with the same earth and manure lying around.

But now the city has been made clean of all these insanitary stables. There are, of course, still a few in the suburbs, but they are going to be liquidated soon. The cattle population has been shifted to the farm units dotted all over the colony. Each unit is complete in itself, namely, it has milking sheds, calf pens, dry stock sheds, calving lines, bull pens, veterinary dispensary, grain godown, hay godown, servants' quarters, supervisors' quarters, owner's quarters, and other essential buildings. An occupation charge is recovered from the colonists. It is Rs. 16 per producer. The producers' cattle in each unit are worth about 5 lakhs of rupees.

Proud Producers

The scheme is a combination of private enterprise and State effort. The cattle and the attendants belong to the producers, but they are to sell their milk to the Government. They are also required to observe strict cleanliness and they are given every facility for it. Veterinary aid is given free of charge and some of the finest cattle of the country have now a chance of having a longer life-span. The attendants and owners now take pride in their cattle and profession.

Each farm unit is provided with a number of trailers in which the producers dump manure and litter. It is then taken to the fields or manure pits. Similarly urine and wash-water, which were formerly wasted in the city stables, are taken on to the land, making it possible to grow nutritious green fodder throughout the year. Fodder is sold to the producers at a cheap rate. Recovery is made from their weekly milk bills. Young calves are taken over and reared by the Government. They are now looked after better than before. With care and attention they are growing into thrifty and useful animals. There is a special calf-rearing unit to accommodate 1200 calves.

Apart from producing wholesome milk, the Scheme affords ideal educational facilities. Students and research workers from all over Africa and Asia come here for training and investigation in everything connected with the keeping of a large number of commercial cattle and handling their milk through a modern dairy. At the time of our visit students and Government officials from 18 countries, from Egypt to Phillippines, were there, undergoing training for three weeks.

India which boasts of having a third of the world's cattle population produces no more than a 20th of the world's milk output. If all other principal cities follow the lead given by Bombay and adopt modernised methods of cattle rearing and dairying, there is no reason why she should not be able to produce the same quantity of milk with half the present cattle population.

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