Dairying is an important source of subsidiary income to small and marginal farmers and agricultural labourers of Kerala. Being a balanced food, it is an essential part of the diet of the children and invalids. The changing food habits of the people have increased the demand for milk and milk products. As per the recommendations, the per capita consumption of milk will be 240 gm/day, which means that the 333 lakh people of Kerala needs 79.92 lakh litres of milk per day. It is estimated that the State’s production of milk during 2007 is only 58 lakh litres per day. The demand-production gap is nearly 22 lakh litres, which is being met by milk-import from neighbouring States by Milma as well as by private traders. Out of 58 lakh litres of milk produced within the State, the organized sector handles only 18 percent. The rest is marketed either directly by the producer or vendor in the unorganized sector.

The major factor affecting enhanced milk production in the State is the high cost of production compared to that of the neighbouring States. It is difficult to establish equilibrium between the procurement and selling prices without hurting both rural producers and urban consumers. The high cost of production calls for a higher price for the product, but
enhancing the selling price will affect the common man’s budget. Further it will result in the flooding of cheaper milk from neighbouring States that creates problem for our producers.

Milma was formed with a view to overcome the issues pertaining to milk production in the State. Now the Government has taken earnest steps to reorganize Milma to achieve the goals.

Nearly 3,000 primary cattle farmer’s societies were formed by the Dairy Department in the State. For establishing these societies the Government has spent an amount of Rs 20,000 to 30,000 for each society. It was the boon period for the cattle farmers of our State. Then three regional unions were constituted and the MILMA Federation was formed.

The main function of Milma is procuring milk from the Primary Cooperative Societies and its distribution. It is only a marketing process. Unfortunately, Milma has no role in production sector. Gradually Milma became a trader. When the State faced a shortage of milk, the Government has made a consortium of Dairy Department, Animal Husbandry Department, Kerala Feeds and Kerala Live Stock Development Board. The Government has taken earnest efforts to increase the production of milk so as to self-sufficiency.

Now Milma moves slowly to the production sector. The Government is planning to introduce subsidy for cattle feeds and give monitory assistance to the welfare fund to improve the status of cattle farmers.

The three tier system of dairy cooperatives in the State has definite role to play in the context for ensuring that the milk produced in the State is procured and either marketed or preserved in the form of milk powder to be utilized during the lean season. The Kerala Co-operative Milk Marketing Federation was unable to regulate the market as above. As it fails to procure the surplus milk during the flush season, the farmers are left with no other option but to withdraw from the sector rather than bearing huge loss.

The availability of milk at cheaper rates from Karnataka and Tamil Nadu federations prompted Milma to collect it, as it was profitable than local procurement. Now the decrease in production and conversion of bulk quantity to milk powder have led to a shortage of milk and price hike in the State. This has put Kerala Cooperative Milk Marketing Federation in a critical state that made it to incur heavy loss on account of bringing milk from distant places.

It is under these circumstances that the Government has agreed to hike the selling price of milk by Rupees two, with a condition that Rs 1.50 should be passed on to the farmer, of which one rupee should be given without verifying the SNF and Fat content.

The Government has implemented various schemes to increase milk production. These include programmes like Pasugramam, M.S.D.P, Vidharbha package (by inducting high yielding crossbred cows to the State), subsidies for promoting fodder cultivation, pedigree improvement through artificial insemination, calf feed subsidy, welfare fund scheme and other welfare activities for the dairy farmers.

The increasing demand for milk and milk products offers enough opportunity to the dairy farmers to get better price formilk. The Government is also planning to start High Tech Dairy Farms in Wayanad and Idukki districts to meet the increasing demand of milk with the co-operation of NRIs. Let us hope that the efforts of the Government for self-sufficiency in milk production will be fruitful in the near future.

The major factor affecting enhanced milk production in the State is the high cost of production compared to that of the neighbouring states.
In India dairying is in a state of transition with rapid development in milk production, processing and marketing benefiting rural milk producer and the under privileged urban consumer. Out of 210 million cattle and 75 million buffaloes more than 54 per cent of milk is from buffaloes; which constitute around 33 per cent of livestock population. In terms of economic accomplishment, milk is number one farm commodity towards contribution to national economy. India is currently the largest milk producing country in the world. With the implementation of GATT agreement livestock production and marketing have to be viewed in a global perspective. Sustained economic growth and rising domestic incomes are driving rapid growth in livestock product demand. Of the total households in rural areas about 73 per cent own livestock. Income from livestock sector accounts for 15-40 per cent of total farm household incomes. Small and marginal farmers account for 3/4th of this household, raising 56 per cent of bovine population. Dairy sector employs more than eight per cent of India’s labour force.

During the last four decades, Kerala witnessed spectacular growth in dairying. Though the State has none of the natural attributes to make it an ideal dairy zone, (the year round hot and humid climate, highland pressure, scarcity for fodder, high rain fall and consequent mineral depletion from soil) cattle development programme is very successful in transforming nearly 90 per cent unproductive cattle population to high yielding crossbreds with an average daily yield of 6.5 litres per animal. As a result milk production has increased from 2.2 lakh tonnes during 1963-64 to around 20.63 lakh tonnes in 2006, even though a marginal decline has occurred during the last five years.

Per capita consumption of milk per day
In the State is over 232 grams. Indian Council of Medical Research recommends 280 gms of milk per day. But the gap between requirement and availability of milk is getting narrowed. Decreasing cattle population is mainly due to increasing productivity of crossbred cattle. As productivity increases number of unproductive cattle get reduced. Increasing domestic demand for milk shows that per capita consumption of milk is getting increased. This is a major strength, which can be exploited through augmenting domestic milk production. In order to meet the increased demand for milk during lean season, the State is procuring milk from nearby States.

Recent shortage of milk and subsequent price rise for the milk marketed through Kerala State Milk Marketing Federation (Milma) reveals that cost of production of milk has increased substantially. But there is a huge demand for fluid milk in the State. If the availability of milk increases, per capita consumption of milk will steadily improve.

Even though Milma is the market leader of packed milk, it procures only around 12 per cent of the milk produced. Rest goes to the unorganised sector.

Recently the term 'sustainability' has been evolved slowly keeping pace with development of production activities and the size of the human population. Due to the increased quantity of milk and milk products required for the future and the rapid development of new technologies that can modify the production systems of animals, sustainable approach to dairy cattle production is more important. Recent reports from International Food Policy Research Institute, 2020 Global Food Outlook- trends, alternatives and choices projects that child malnutrition will decline by only 20 per cent over the next 20 years unless more aggressive measures are taken. Food and feed safety is a major concern all over the world. It will be even more important as world trade expands and as transportation between countries becomes easier.

The recent liberalisation of external trade in livestock products emphasises the importance of improving the efficiency of the domestic processing industry in order to remain competitive with imports.

Information and knowledge play critical role in the management of natural resources and sustainable development. During the last four decades planning for higher milk output was based only on scientific knowledge. There is now widespread acceptance of the worth of indigenous knowledge. It is also to be recognised that sustainable and environmentally sound agricultural production is a task to be achieved in partnership with different sectors of the society including governments, research institutions, farmer organizations, NGOs, industry and the media. Efforts should be accelerated to ensure scientific and development community through research-extension systems to adopt, tailor and to improve sustainable practices of indigenous technologies for wider diffusion. This should be coupled with scientific breeding, feeding, management and disease control measures. Cardinal rules of profitable dairying are to reduce in inter calving period and age at first calving.

Technologies and interventions

Even though Kerala has a breeding policy, many progressive dairy farmers suggest that they are not getting the required quantity of milk from the crossbred cows. Pure exotic breeds like Jersey and Holstein Frisian can be tried on an experimental basis in the hill track area. Case studies from Egypt, Korea and UAE suggest that pure exotic cattle breeds can be tried on an experimental basis.

During the past, production oriented programmes were given more importance without giving much emphasis to marketing. But production oriented programme coupled with marketing is the need of the hour. So a market led extension programme has to be evolved giving due weightage to rural marketing. During surplus season, farmers are unable to market the entire quantity of milk produced. Value addition is needed for increasing profit margin from dairying.

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mobile phone with camera plays a unique role. The TV reporter follows Krishnapriya starting from the site of Kalipuja. It is in fact the image of her husband in the mobile phone that helps Ajit to identify him. When the reporter is trapped in the red street, the clipping from the mobile phone paves the way for the rescue of hundreds of unfortunate hungry woman of Sonagachi along with Krishnapriya. The effective use of the new technological device may be treated as one of the highlights of ‘Calcutta News’.

‘Calcutta News’ has all the potential of a good film, which, unfortunately, the director has not exploited. His prime concern was commercial success. So he wanted to include all the ingredients of popular taste. The characterization of Ajit Thomas is in line with that of a typical hero. His entry to Sonagachi without taking any precaution is suicidal. Only a stereotyped hero can afford to such an operation. The introduction of the Black Magic practitioner seems to be out of place. What is the need of police investigation if one can elicit all information, for instance, of a murder from a Black Magic practitioner? How easy and quick would be our crime investigation process!

Dileep exhibits a high degree of maturity in presenting the character of Ajit Thomas.

He proves that he has outgrown from the conventional roles akin to ‘CID Moosa’. Meera Jasmin is in her fantastic performance. It is high time the popular cinema should dispensed with the stale characters like Samajam president and his wife played by Innocent and Bindu Panicker. Technically Calcutta News may be considered as Blessy’s best film.

S. Kumar could capture the nostalgia of the city in subtle, but humane frames. The camera angles, movements and the compositional elements executed fabulously coupled with fast editing style give an unusual dimension to the film.

Some stories are happening and some others are made. When stories are happening the spectators love them and such films are elevated to popular genre. This film falls under the second category, where, it seems that the story is made for Dileep and Meera Jasmin. Undoubtedly ‘Calcutta News’ is not a bad film. By now it has earned a top position among the films released so far in 2008. It gives the impression that Blessy is advancing in his film career with more promises to offer.

**Sustainable Dairying**

milk can be converted in to value added products like butter, ghee, curd, peda, ice cream, cheese etc. based on location specificity, demand and available technology.

Of the total cost involved in dairying more than 75 per cent is for feed alone. During the last three decades feed cost has increased 200 per cent in the state whereas cost of milk has been increased only by 50 per cent. More than 90 per cent of the raw materials needed for compounded cattle feed are coming from nearby States. In order to make the system sustainable, farmers need to follow scientific feeding and management strategies. Productivity enhancement programme has to be given more emphasis. Cultivation of fodder crops needs special attention. Dairy farmers having limited land availability can think of cultivating azolla at their homesteads. Azolla contains more than 25 per cent protein, which will improve milk production and fat content in milk. Compounded feed and adlibitum water should be given separately. All types of new technologies in feeding have to be followed to increase milk production. Bypass fat and protein feeds, probiotics, urea molasses block, chelated mineral mixtures, total mixed ration concept etc. can be effectively used to exploit production.

**Total Mixed Ration**

TMR concept developed by National Dairy Development Board, Sumul Dairy of Gujarat and Animal nutrition division of Sree Venkiteswara Veterinary University, Hyderabad is one of the new technologies in feeding. Scarcity of fodder is a main problem as far as Kerala is concerned. Under TMR system, concentrates and fibre are mixed as per the nutrient requirement of milch cows. TMR blocks are of two types with 14.5 Kg each. One for milch cows yielding up to 15 litres of milk per day and other for cows yielding up to 10 litres per day. While giving TMR blocks, there is no need for giving additional feed or fodder. Only adlibitum water is needed. Areas where land availability is limited for fodder cultivation feeding of TMR blocks can be tried, which will help to improve milk production and fat content in milk.

Cattle shed should be constructed in an eco friendly manner. Cattle shed with adequate ventilation improves production. Floor of the cattle shed should be made concrete. Cow comfort measures in the cattle shed will optimise milk production. Management measures based on climate, season, stage of lactation etc. has to be followed. Milking, reproductive and disease control management measures will make dairying more profitable. Teat dipping and dry cow therapy has to be regularly practiced in order to control the incidence of mastitis. Regular vaccination against Foot and mouth disease, Hemorrhagic Septicemia and other disease control measures will be followed. Vitamin-mineral supplements have to be given regularly. Postpartum deworming will help to improve production. Quality control measures like HACCP has to be followed from production to marketing. Clean milk production programme must be practiced in a regular manner.

Recently more entrepreneurs are interested to invest money in dairying. Recent trend is more towards commercial dairying in the State. Fully computerised high tech dairy farms have already been established in Maharashtra. Moreover there is enough potential for starting commercial dairy farms in the State under public private partnership.

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Milk is an essential vegetarian animal-origin beverage in every Indian household, be it rural or urban. Interestingly, non-substitutable liquid milk is used for varied products such as ghee, butter, curd, buttermilk, ice cream, sweets, lassie, cheese, chocolate etc. In ancient Indus civilization, people used to rear cattle. Cattle was prized possession and wealth of kingdoms in ancient history of Indian subcontinent. During battle and occupation, cattle were object of attraction to appropriate. In Lord Krishna’s Dwapara era, cow, milk and its products are closely portrayed with His life.

Kerala, with its about 20 lakh cattle population, has traversed long way progressively in dairy sector from its formation or even before. Main focus was from time of Operation Flood initiated in 1970. Co-operative movement in dairy sector has been inseparable characteristic after successful Anand Pattern in Gujarat from which strong brand name Amul evolved. Kerala has adopted Anand Pattern, a three tier structure consisting of village level primary co-operative societies, Regional Cooperative Milk Producers Union with cluster of districts instead of district unions and State level Milk Marketing Federation.

Milma is a well-versed brand name and
organization in Kerala as it signifies the Goodness Kerala wakes up. Its objective is to procure, process and market milk with assured and appropriate remuneration to dairy farmers and at reasonable price to consumers with the motto, ‘farmers’ prosperity through consumer satisfaction’. At the same time, Milma has also adopted role of development, extension, promotion, popularising dairying with manufacture and supply of cattle feed, provision of veterinary care and welfare schemes for farmers. Milma’s next goal post is to affirm delight of both farmers and consumers.

Milma with its 27 dairy plants, chilling plants and products factories with capacity of 12.9 lakh litres per day, two cattle feed plants with capacity of 600 MTs per day and one milk powder factory with an installed capacity of 10MT per day is a growing organisation with full support of seven lakh farmers grouped in about 2702 APCOS and 350 traditional societies.

Kerala dairy sector is at crossroad now due to ever increasing consumer demand of milk and non matching supply i.e., production and procurement of milk domestically with widening gap, leading to shortage of milk. Such is the scenario on variety of milk products. This has resulted in large quantity import of milk from other States. One factor is continual increase in population. Change in consumer behaviour and purchasing power is another factor. With abundance of tea and coffee plantation and production in Kerala, milk is common and preferred whitener. This is the story of demand. On supply and production side, with territorial expansion of urbanization, rural side, strong hold and base of dairying because of easy availability of fodder arising out of agriculture, is shrinking day by day resulting in serious squeeze to crowd out dairy animals and farmers. Dairying is inalienably dependent on agriculture whose by products and residues are main inputs for dairy in natural food chain system. If agriculture takes back bench, dairying will automatically recede at same pace.

Remedies and panacea are available if there is will. Dairying must be clubbed inseparably with agriculture in terms of facilities, subsidies, credit interest rate etc.

Dairying must be clubbed inseparably with agriculture in terms of facilities, subsidies, credit interest rate etc. Urban consumers have to follow path of Gandhian philosophy i.e., to produce at least a part of milk for one’s own consumption by own dairying in his backyard. Bottom-up approach instead of top to bottom with active involvement of farmers in policy planning and implementation will alleviate grievances of them. In 21st century, economy of scale and scope has been key factor in all business activities. Scaling up from one or two animal to mini dairy farm of 10 to 20 animals will leverage overhead cost for farmers. Further, with public private partnership, automated large-scale dairy farms are viable solutions. With economy of scope, as all terrains are not equally suitable for dairying, conducive areas need to be identified and focused for intensive dairying. Profitability and dignity of business and profession are key factors to allure new potential entrepreneurs. Such is to be infused in dairy sector to attract educated youth.

On animal front, new breeding practice to introduce Jersy and Holstein Freisan, in addition to existing Swiss-brown, Sunandhini and native Vechur breeds. This is inevitable to enhance milk yield. Increase in proportion of rough and tough buffalo is also a good proposition. Doorstep service delivery in veterinary care, artificial insemination etc. by concerned service departments is a must so that farmers find dairying most comfortable.

Kerala, being a consumer state, has to remodel itself to be producer at least in dairy sector so that the State achieves self-sufficiency in the years to come.

The writer is Managing Director, Milma
The continuous decline in the size of land holdings and the non-availability of family labour, coupled with further decline in the availability of feeding materials such as paddy straw within Kerala, have resulted in the stagnation of milk production.

V. Santhakumar

Livestock sector had undergone a rapid development in Kerala until the late eighties followed by a stagnation. The growth of milk production was helped by government intervention aided by Swiss Development Cooperation through the expansion of artificial insemination and other vet facilities throughout the State. However, an important factor that facilitated this growth was the availability of family labour, especially that of women, in households that have not-so-small sizes of land. This by itself indicates the reasons for the relative stagnation in the later period. The continuous decline in the size of land holdings and the non-availability of family labour (as women and younger members got educated and became involved in non-agricultural jobs), coupled with further decline in the availability of feeding materials such as paddy straw within Kerala, have resulted in the stagnation of milk production.
Relevant issues

1. What will happen if the price does not increase adequately? Scarcity of milk will rise in the cities and Milma may become financially unviable. There will develop a black market for milk in the cities. Some (including current dealers of Milk) may buy milk from Milma and resell at higher price.

2. There is a genuine increase in the cost of milk all over the country, as is evident from the near withdrawal of TN based operators who found it difficult to compete with Milma, which was forced to sell milk at low price by the State Government with a false hope that the losses in this regard would be compensated.

3. But there is the other side of the story. Since Milma is almost like a monopoly at least in the cities, its own cost may not be efficient. We do not know the real cost due to lack of adequate competition.

4. Stagnant prices at farmers’ level have discouraged milk production in Kerala. One way to increase milk production is to increase prices. Moreover, as mentioned earlier, milk production in Kerala has to move from households to medium sized ‘industrial cowsheds’. The cost advantages that household had in milk production earlier has disappeared in many places of Kerala.

5. We need to encourage competition in milk distribution. Allowing three regional units of Milma to sell anywhere in Kerala (with a regulated band of price) can be a good step. Allowing private players without government artificially keeping Milma’s prices down is another option. Government’s role should be limited to quality control. One can understand the need for a large organisation like Milma since there are problems in its absence, with regard to milk collection, processing etc. But installing a monopoly-like distributor with direct government control on fixation of prices is not the way out to help either consumers or producers.

However, the focus of government action continues to be the expansion of technology dissemination facilities, encouraging fodder cultivation etc. Given the stagnation in milk production due to socio-economic factors, further investments in technology extension should be based on the actual demand for services and it should not be in the hope that such expansion will lead automatically to a further increase in milk production.

Given the stagnation in milk production due to socio-economic factors, further investments in technology extension should be based on the actual demand for services and it should not be in the hope that such expansion will lead automatically to a further increase in milk production.

Rather than expansion, efforts should be made to enhance the efficiency of services, which have not improved much during the nineties. There may be scope for enhancing user charges for certain veterinary services as a way of resource generation and also to make the provision and utilisation of service more efficient and demand-oriented. Even today, about half of the veterinary services are provided at the doorstep of the farmers, which makes them to incur a significant expenditure and this indicates that many people are willing to pay for vet services. However, there will be certain services (like vaccination for contagious diseases) for which government investment is unavoidable.

Kerala has reached the limits of household or homestead based livestock activity. Though this may continue at this level or at a slowly declining pace, homestead production is unlikely to contribute to further growth of livestock sector in the State due to scale diseconomies that would encourage educated family labour to look for other occupations. Under these circumstances, the development of industrial-like or plantation-like animal husbandry, where a large number of cattle units are managed with capital-intensive technology and fewer (but more trained) labour is a possible way forward. However, this may be constrained by the general factors that operate in Kerala against the development of industrial or manufacturing activities and investment. Moreover, large-scale animal husbandry would also require larger pieces of land and there are constraints against the consolidation of landholdings in the State (such as high price, illegality of tenancy and to some extent settlement pattern and so on) in this regard.

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Dr V.S. Venugopal

Milk has been a part of our diet since time immemorial. Our scriptures are full of references on the importance and value of milk for human life. Milk has been described as amrit, having properties to help cure ailments and enhance the longevity and vitality of life. Milk being a rich source of nutrients also serves as an ideal media for microorganisms to grow in it leading to deterioration in its keeping quality. From the time milk leaves the udder till it reaches the consumer, everything it comes into contact is a potential source of contamination. Herein lies the importance of educating milk customers about the quality and safety aspects of milk and milk production.

Milk quality issues in Kerala

Quality issues in milk have been of public interest in Kerala, following the exposure of the poor quality of milk samples marketed within the State and the public health hazards posed to the consumer. Tests made on the samples taken from some of the branded milks available in the market revealed to be of substandard and hazardous quality containing among others, adulterants such as sugar, urea, vegetable oils, mineral oils, liquid soap etc. Even more dangerous has been the revelation that artificial milk made at very low prices have been mixed with natural milk by unscrupulous traders for reaping profits. Examination on the levels of pesticides, aflatoxins and antibiotic residues in milk samples sold across the State is not being carried out regularly.

As the purchasing power of the rural population increases, demand for milk and milk products are also set to increase and it is high time that both the organised and unorganised sector upgraded the quality of milk to provide hygienically safe milk and milk products to the consumers.

Consumer

Be Aware
adulterated raw milk with high bacterial count in villages and cities, which pose a definite health hazard for consumers. It is up to the milk customers in the State to realise their role and importance and undertake the social responsibility for exposing milk vendors resorting to illegal practices.

The milk pricing policy followed by cooperatives is still almost entirely decided by the fat and SNF content of milk with the bacteriological quality taking a backseat. It is high time that microbial quality linked price incentives introduced for milk received from dairy cooperatives.

Despite being a highly literate State, consumer awareness level among milk customers in Kerala is still very low. Government has to take a proactive role in increasing consumer awareness. Milk customers must play an active role to ensure fair deals and timely redressal of complaints. As in the case of any commodity, alert consumer is a safe consumer. As the purchasing power of the rural population increases, demand for milk and milk products are also set to increase and it is high time that both the organised and unorganised sector upgraded the quality of milk to provide hygienically safe milk and milk products to the consumers.

The writer is Senior Manager, Milma, Thiruvananthapuram

Points to be pinned

Fresh unadulterated milk of wholesome quality available from a nearby dairy farm should be the first choice for consumers.

Liquid milk, pasteurised and marketed by cooperatives with the drop symbol printed on the packet is the most hygienic and convenient way for customers to purchase quality milk.

Consumers are to be aware of the nutritional perceptions of various types of milk available in the market. The organised cooperative sector sells three types of milk - standardised milk, toned milk and double toned milk containing different fat levels to cater to different segments of the market.

Customers must note the date of packing and time of packing legibly printed on each packet for assuring the freshness of milk.

Customers to purchase only the required quantity of milk at a time and avoid storage as it could lead to quality deteriorations.

Customers to make sure that the milk sold at the retailer point are still cold and the cold chain is intact.

Pasteurised milk, though free of all pathogenic bacteria, is to be boiled before use on account of the high humidity and ambient temperature prevalent in our State.

In case of any abnormal smell, colour or consistency of milk, a small quantity of the milk i.e., 25 ml to be boiled separately. In case the milk clots, the entire quantity is to be discarded.

Loose milk suspected of adulteration with water or other substances could be brought and quality tested at the laboratories functioning under the dairy development department or at the quality control units at dairies.

Consumers to seek replacements for spoilt milk by approaching the retail outlets/consumer redressal cells attached to dairies.

Too many milk and milk product brands available in the market. Consumers must seek more information on the source of milk, quality and purity before purchase.

Tetra pack milk offers four months life for dairy products in unrefrigerated conditions and do not require addition of preservatives.

Consumers are not to be deceived by organic milk suppliers and to check for certification issued by an accredited agency before purchasing organic milk.

Consumer groups to undertake dairy plant visit and attend education programmes on consumer awareness.
Dairying in Kerala is undergoing rapid changes, with time and technology and is thus in a process of reinvention. Extension approaches need to adapt to these changes that are happening in the dairy sector. Although the philosophy of helping people to help themselves remains unchanged the nature and process of this help is undergoing fast changes. People are in a different setting - whether they are rural or urban - on a territory, time and technology basis.

Technology does not often come with complete information. For example, we have crossbred high yielding cows in Kerala. But the feeding, disease control and breeding aspect of these crossbred cows need to be learnt from the field situation.

The professionals need to work with the dairy entrepreneurs to identify their problems and find solutions. Often this is quite challenging, because the farmers rear cattle in a resource-low situation. Ask any dairy farmer, they respond by saying that the milk prices are not remunerative compared to the high cost (and sometimes low quality) of concentrate feeds. We do not have a feed cost - milk price ratio to decide pricing policy. Often the feed prices escalate while milk prices stay as such. In such situations, farmers invent their own cattle-rations. The professionals/extension workers need to understand that these Farmer–formulated rations are the viable solutions, not non adoption of technologies. The extension workers need to improvise on the practices that are being followed by the farmers.

After 1987, we see a decline in the number of livestock in Kerala. With increased number of crossbred cows, the milk production had shown improvement till 2000. Milk production declined in 2003-04 by 12.76 per cent to 21.11 lakh tones compared to the previous year, which is attributed mainly due to the cost disadvantages vis-à-vis neighboring states.

In a network society, veterinarians need to be exposed to the potentials of Information and Communication Technology (ICT) and its possible use in livestock development. Integrated knowledge is important for farmers’ practices and their logic needs to be taken into consideration before arriving at solutions. A practitioner who has assisted a client in making a quality decision should be considered as have done an extension work. Principles of communication, extension delivery methods and professional commitment manage the
possession of and production from a dairy animal. Possession offers security through a ‘capital’ and production offers sustainable daily cash income and improved health of the family. Government of India has facilitated the distribution of crossbred cows/buffaloes to different below poverty line (BPL) people through various Government and Non-Governmental Organisations. The challenge now is to raise the milk production of these cattle to a realistic level and gain a weightage to the concept of increased milk production at least on par with its asset value.

In line with the government policies, we may be seeing an emerging polarisation of dairying, with more number of farmers owning large herd size (which is in favour of mini dairy units), with a more industrial nature. The extension requirements, then of the livestock owners, owning one to two cows, largely women, who depend on this for subsistence will be different from those of the small herd-size to large herd-size owners. With lack of proper opportunities to build resources for maintaining a cross bred cow, it may be a vain effort on passing information to improve milk production. But, they need to survive, and would be satisfied with whatever little they can produce from the livestock in their conditions, realistically. Whereas the commodity approach of extension will work out for the small to large herd size owners for whom milk is a commodity in this global age and could market milk in terms of the present requirements of organic milk, low fat milk or value added milk products for a health conscious community of Kerala. Effective transfer of information on quality milk production and preventive and curative veterinary care is to gain more gravity in this phase.

Extension is a science of service of help, which includes clinical and non-clinical support. The strategy of extension is influenced by the stage of development of the society within the tri axis of time, technology and territory. The Veterinarians need to render assistance in quality decision-making by the livestock owners within an NBG Society, i.e., Networked, Biotechnological and Globalised Society. Many of the clinical decisions will not bear fruits if taken as ‘stand alone decisions’ - they are to be blended with appropriate production decisions with participation from the livestock owners. In this situation the goal must be to increase productivity per rupee invested rather than increasing the production.

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After 1987, we see a decline in the number of livestock in Kerala. With increased number of crossbred cows, the milk production had shown improvement till 2000. Milk production declined in 2003-04 by 12.76 per cent to 21.11 lakh tones compared to the previous year.
The milky way!
Let us go the milky way

In fact, we have no choice, we have got to go the milky way because we are part of the local galaxy of stars christened the milky way. Like any other galaxy, this one too is cruising through space at incredible speed and God knows where! The only consolation is it is a good going, as it is milky at least in its name. For any one who looks at it from a distance, it resembles an oblong stretch of spilt milk. Even those who look at its far parts from within itself get the same view. It is milk, milk everywhere but not a drop to drink!

It was my science teacher in school who first told me about the Milky Way. He said I could see part of the Milky Way if I looked at the sky on a black moon day during November-December. I did and saw it. The milky white stretch of millions of stars strewn across millions of square miles provide a fantastic sight.

It was during the same period that my grandfather told me the story of Kamadhenu, the holy cow that gave any amount of milk. So I thought the Milky Way was milk of K. Dhenu spilt all over!

Grandpa also described the way the ocean of milk was churned to yield unheard of products right from the deadliest of poisons to amrith - the medicine to defeat death forever. It was the strangest list of dairy products I ever heard of:

- Milk from the ocean of Vishnu prevails all over Hindu mythology. Lord Krishna, Vishnu’s avatara, looked after cows, loved them, protected them, maintained a special appetite for fresh butter. He could not resist stealing butter whenever he happened to see it anywhere.
- Man’s finest emotion is the milk of human kindness, meaning man loves milk more than he values kindness. In this context, milk is held higher than gold or precious stones. Milk, not any shiny metal or glittering stone, is supposed to make the difference between deadly desert and the oasis of life.
- The Holy Bible holds the milk of human kindness in high esteem. Milk is what flows freely in heaven, according to the Holy Qur’an. Almost all Hindu Gods are bathed every day in milk and then fed with delicacies prepared with milk. Lord Krishna’s palappayasam is unparalleled for its taste as well as sanctity.
- Milk products have influenced the languages of the world. We have the cream of milk to represent the best of everything. We are supposed to know which side of our bread is buttered. We are advised not to repent over spilt milk. When shocked, our faces turn as white as milk. Then, one may pretend innocence to the extent butter does not melt on one’s face!
- There is no agreement yet about whether human civilization started with man’s acquaintance with the cow or the dog. Some say everything began with hunting. Others doggedly maintain that milk and milk products marked the start. However, over the centuries, the ferociousness of the dog has been balanced by the meekness of the cow, at least to some extent. There are some who still doggedly rely on ferociousness and produce weapons of mass destruction. The utterly butterly solution, or let us say resolution, is yet to emerge. The buttermilk continues to be sour though the cow that gave the milk to produce it is dead and gone eons ago.

There is water in cow-given milk. Further addition is resented. There is a general dislike for anything watered down, especially truth. So justice is compared to the process of separating the extra water from natural milk. The proverbial hansa does it by routine. Give it watered milk and it drinks the milk and leaves the water behind. Judicial officers are supposed to do the same!

Ashok Kumar, the erstwhile bollywood star of repute never took milk. He maintained that milk is meant for infants and not for grown-ups. According to him, any one who robbed the infant of any portion of its natural food was a criminal.

No doubt, breast milk is the best of all. No one can do without it. Fortunate are those who get it in plenty. One therefore does not have to go far to find reasons for man’s love of milk. (If one gets a bottle instead at the start, one may probably become a bottle lover for life and reach the grave sooner?)

So let us go the milky way!

The author is a renowned writer in Malayalam
Dr Venugopal Arikeri

Majority of rural households depend on dairy farming for supplementary income in our State. Majority of livestock owning farmers are either small, marginal or even land less. In view of its suitability for combining with crop sub sector and sustainability as a household enterprise with the active involvement of women, dairy is emerging as a very popular supplementary avocation in the small farms.

Kerala accounts for 1.13 per cent of the total cattle population in the country. According to 2003 livestock census figures, the cattle population in the State was 21.22 lakh of which 17.35 lakh were crossbred. Milk is 170 gms/day (2005-06) against the national average of 229 gms/day (world average of 267 gm/day). It is also envisaged in the 11th Five Year Plan to step up milk production to 35 lakh metric tonnes from the present 20 lakh metric tonnes. Despite considerable increase in the proportion of high yielding crossbred cattle, increase in milk yield per animal per day remained low at six liters, compared to its potential of 8-10 liters due to the poor level of nutrition, health care and management practices.

The area under rice has come down by 50 per cent over the last two decades leading to a drastic reduction in the availability of straw for feeding cattle. The area covered under fodder cultivation also reduced to 1840 ha (2005-06) from the crossbred (82% of the total cattle population compared to 12.07% at National level.) This healthy trend indicates the success of cross-breeding programmes implemented in the State through artificial insemination techniques. The total milk production of the State slightly increased from the level of 20.25 lakh tones (2004-05) to 20.63 lakh tones in 2005-06 showing an increase of 1.9 percent. At the same time, at national level the milk production increased by 5.0 per cent during 2005-06. Kerala's contribution to national milk production declined to 2.1 per cent during 2005-06 from the level of 2.2 per cent in 2004-05. The per capita availability of level of 10,026 ha (1998-99). However, a positive feature is the growth in percentage of crossbred cattle.

Role of NABARD in Dairy Development

NABARD has entered into agreements with 15 Commercial Banks for co-financing, hi-tech / export oriented agriculture projects involving large financial outlays / sunrise technologies etc., thereby sharing the credit risks with partner banks. NABARD has decided to participate in co-financing arrangement with RRBs and Cooperative Banks also on a highly selective basis and with other institutions viz., NAFED, NCDC, NDDB etc., if a scheduled bank is involved in the arrangement.

Subsidy schemes operated by NABARD

Dairy / Poultry Venture Capital Fund is one of the major initiatives of NABARD for the entrepreneurs in this field. The main objectives of this scheme are to bring...
about structural changes in the unorganised sector, to help capital formation in the dairy and poultry sectors, to subsidise the cost of investment and to encourage the rural infrastructure.

Individuals/Groups, NGOs, public and private sector undertakings and cooperatives are entitled to get assistance.

Under this scheme, the individuals or groups selected are eligible to get interest-free loan of 50 per cent of the total cost of the project subject to certain ceilings. 40 per cent of the project cost is to be met from loan from banks at normal rates of interest. Only 10 per cent of the project cost is required to be brought by the promoter. In addition, up to 50 per cent of the interest on the loan taken from banks will be subsidised, subject to regular repayment of loan by the borrower.

The Ministry of Agriculture and Cooperation, Government of India, has launched a credit-linked back-ended subsidy "Scheme for Development/Strengthening of Agricultural Marketing Infrastructure, Grading and Standardisation" to improve the existing regulated agricultural marketing network as also to promote marketing network in the private and cooperative sector. Under this scheme, assistance will be given only on capital cost of the project. However, banks may finance other activities/working capital requirements of the farmer/entrepreneur. The subsidy shall be released through NABARD for projects sanctioned by the banks/financial institutions eligible for refinance from NABARD and through NCDC for projects financed by NCDC or by Cooperative Banks recognised by NCDC.

NABARD provides refinance support to banks against their investment credit in the rural sector viz., establishment of dairy farms, purchase of milking machines, calf rearing units, fodder production units, feed mixing plants, milk processing units etc. Investment credit leads to capital formation through asset creation.

This scheme is operational for the following type of ventures in the field of dairy sector:

For establishing small dairy units: 10 animal units with modern equipment (Buffalo and crossbred cows) for milk production - upto Rs three lakh. This scheme is applicable only in Non-Operation flood areas like Kozhikode, Kannur, Palakkad, Malappuram, Kasaragod and Wayanad districts.

For purchase of milking machines / Milkootters / Bulk cooling unit: (upto 2000 litres capacity) – maximum Rs 15 lakh.

Purchase of dairy processing equipment for manufacture of milk products – upto Rs 10 lakh

Establishment of dairy product transportation facilities and cold chain – upto Rs 20 lakh.

Cold storage facilities for milk and milk products – Rs 25 lakh

Establishment of private veterinary clinics – upto Rs two lakh for mobile and Rs 1.50 lakh for stationary clinics. (Only veterinary science graduates will be considered for assistance for this activity)

The functional infrastructure for handling of milk viz., collection, cleaning, grading, standardisation, SPS (Sanitary & Phytosanitary) measures and quality certification, labelling and packing, retailing and wholesaling, value addition facilities (without changing the product form) etc., (Milk collection centre, Automatic milk extracting unit, Chilling plant, Bulk chilling unit, Pasteurisation plant, Refrigerated van for collection/distribution) are eligible. Market user common facilities in the project area like offices, platforms for loading/unloading/
The kani vellari fruits, a spectacular treat for the eyes, are considered as a symbol of prosperity and find a place in the vishukkani, the auspicious first sight on the very first day of the Malayalam month, Medam.

are sown and after two weeks, thinning is done, retaining only three healthy seedlings and pulling out the rest. Spraying the seedlings with 200 ppm plant growth regulator Ethephon at two-leaf stage and four-leaf stage will induce more female flowers on the plant which in turn will lead to production of more fruits.

The fertilizer recommendation for this crop is 70 kg nitrogen, 25 kg phosphorus and 25 kg potash per hectare, apart from 20 to 25 tons of farmyard manure. Full quantity of farmyard manure, half dose of nitrogen and full doses of phosphorus and potash have to be applied as basal dose. Remaining half dose of nitrogen is to be applied as top dressing in two equal split doses at vining and full blooming stages. The crop is to be irrigated three to four days interval. Kani vellari plants are trailing in nature. There is no need for erecting any pandal or similar trailing structures. However, it is better to spread dried twigs or coconut leaves in the plant interspaces. Weeding, raking and earthing up are the other cultural operations to be taken up. Kani vellari is a quick growing crop and the fruits will be ready for harvesting from 45th day after sowing. Plant protection is relatively easy in this crop as pest and disease problem are not so severe, compared to other cucurbitaceous vegetables. The beetles attacking the small seedlings can be controlled by spraying organic pesticides and the downy mildew disease affecting the plants can be kept under check by maintaining field hygiene and if necessary by spraying fungicides.

NABARD provides

assembling, parking sheds, internal roads, boundary walls, drinking water, sanitation arrangements, weighing and mechanical handling equipment are eligible. Reefer vans, which are mobile refrigeration containers used for movement of perishable agricultural and allied commodities like milk, are eligible under the scheme. Individuals, group of farmers/growers/consumers, partnership/proprietary firms, NGOs, SHGs, companies, corporations, cooperatives, cooperative marketing federations, local bodies, APMCs and Marketing Boards in the entire country are eligible for assistance under this scheme.

NABARD’s approach to Dairy development

For the development of Dairy Sector in the State and to achieve self-sufficiency in milk production, the following strategies have been worked out by NABARD to be implemented in a phased manner.

(i) The total milk production in the State was 20.63 lakh tonnes in 2005-06 as against the demand of 24.13 lakh tonnes. The projected demand for milk by 2012-2013 is 33.72 lakh tonnes. The gap between demand and supply will be 13.09 lakh tonnes. To achieve self-sufficiency in milk production and to fill the gap in milk production in a phased manner, NABARD has worked out a detailed plan. To begin with, during the year 2008-09, about 2,44,000 milch animals are required to achieve the target of milk production. This would require a capital investment of Rs 461.16 crore during 2008-09. Assuming that 60% of these cases would require credit support from the banking sector, a term loan of Rs 276.70 crore is estimated for the year 2008-09.

(ii) Government of Kerala may also consider establishment of Cattle Breeding/Heifer Rearing Farms in all the districts for supply of good quality animals to the potential dairy farmers to support the programme in the long run.

(iii) Fodder cultivation may be encouraged as mixed crop in coconut plantation and other feasible areas to meet the additional fodder requirement for the proposed programme in coordination with the Kerala Agricultural University, Dairy Development Department, Department of Animal Husbandry and other agencies concerned.

The writer is Assistant General Manager, NABARD, Thrissur.

Statement about ownership and other particulars of Kerala Calling Monthly

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Sd/-

P Venugopal IAS
Publisher

March 2008
KERALA CALLING
37
Milk may be defined as the whole, fresh, clean, lateral secretion obtained by the complete milking of one or more healthy milch animals, excluding that obtained within 15 days before or five days after calving or such periods as may be necessary to render the milk practically colostrum-free and containing the minimum prescribed percentages of milk fat and milk-solid-not-fat. In India, the term ‘milk’ which unqualified, refers to cow or buffalo milk or a combination of the two.

### PFA Standard

<table>
<thead>
<tr>
<th>Species</th>
<th>Fat (%)</th>
<th>SNF (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cow milk</td>
<td>3.5</td>
<td>8.5</td>
</tr>
<tr>
<td>Buffalo milk</td>
<td>5.0</td>
<td>9.0</td>
</tr>
<tr>
<td>Goat milk</td>
<td>3.5</td>
<td>9.0</td>
</tr>
</tbody>
</table>

**Two-axis pricing and quality control of milk**

According to PFA Act, the minimum standards prescribed for cow milk are 3.5 per cent fat and 8.5 per cent SNF while
Chemical composition of milk of different species and prescribed PFA standard

<table>
<thead>
<tr>
<th>Species</th>
<th>Water %</th>
<th>Fat</th>
<th>Protein</th>
<th>Lactose</th>
<th>Ash</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cow</td>
<td>87.7</td>
<td>3.8</td>
<td>3.8</td>
<td>4.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Buffalo</td>
<td>86.0</td>
<td>5.0</td>
<td>3.9</td>
<td>5.2</td>
<td>0.8</td>
</tr>
<tr>
<td>Goat</td>
<td>87.0</td>
<td>4.0</td>
<td>3.5</td>
<td>4.7</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Milk can be graded according to the bacteriological quality. Milk obtained from a healthy cow contains some bacteria. Their number increases during rearing and handling depending on the cleanliness of these operations.

Besides compositional quality, determination of bacteriological quality is also an important factor for the quality control of milk. Milk can be graded according to the bacteriological quality. Milk obtained from a healthy cow contains some bacteria. Their number increases during rearing and handling depending on the cleanliness of these operations. It may further grow up depending on storage conditions. For human consumption, milk, both clean and safe, is highly desirable.

**Adulterants, preservatives and neutralisers**

In order to retain the freshness and quality of the raw milk, different types of adulterants and preservatives are used. Most commonly used preservatives are boric acid, formalin and hydrogen peroxide. Common adulterants added in milk are starch, sugar, coconut water, urea, sodium chloride, gelatine and glucose. Carbonates and bicarbonates are some of the added neutralisers. Usage of preservatives and adulterants in the milk can be detected by prescribed laboratory tests.

The writer is Quality Control Officer, Dept of Dairy Development, Government of Kerala.
Dr R. Radhika

Dairy science and Technology is one of the agriculture related courses having immense career potential in India and abroad. Moreover, there is ample scope for higher education and research in this sector. India being the largest milk producing country in the world, dairy science has better prospects in the country.

Graduate programmes in dairy science include B.Sc in Dairy science, Dairy science and Technology and B.Tech in Dairy Engineering. Students who completed plus two courses with Physics, Chemistry and Mathematics with 50 percent marks can apply for Dairy engineering courses. Biology is mandatory for B.Sc Dairying. Those who completed graduate programmes will be absorbed in private sector or public sector dairy plants, food processing units, Dairy science colleges, Banks, Retail management centres, etc. Nestle, Amul, Walls, National Dairy Development Board etc. are some of the leading firms in the dairy sector associated with value addition of milk. Dairy graduates can work as dairy extension officers in Dairy Department of the State.

Milk marketing federations in the country need dairy experts in the areas of dairy engineering and quality control. Dairy science graduates can do post graduate programmes in dairy cattle production, dairy microbiology, dairy chemistry, dairy farm management etc. Moreover they can work as consultants in leading dairy farms and dairy plants.

Veterinary graduates can specialise in dairy science and technology so that they can associate with the veterinary services, procurement and marketing of milk and milk products. As a sequel to globalisation, there is immense potential for export of milk and milk products. But strict quality control measures should be adhered to. In order to maintain quality of the products, leading dairy products firms and dairy plants will employ dairy microbiologists. Hi-tech dairies are coming up in the country. Fully computerised Chitale Dairy Farm of Pune is an example. They need qualified dairy technologists.

Dairy experts have got immense overseas career potential both in Middle East and developed countries. Many leading dairy plants in UAE require qualified dairy technologists. Globally there is enough market potential for milk chocolates and dairy products. Dairy science graduates can do post graduation and research from USA, UK and Canada. Dairy technology is the best course in New Zealand, Switzerland and Denmark.

Along with Agricultural and Veterinary graduates, Dairy Science and technology graduates can join for the four semester postgraduate programmes in Agri business and supply chain management of National Institute of Extension Management (MANAGE), Rajendra

Institutions conducting Postgraduate programmes in Dairy technology
- College of Dairy Science, Gujarat Agricultural University, Anand, Gujarat
- National Dairy Research Institute, Karnal, Haryana
- National Dairy Research Institute, Bangalore Campus
- University of Agricultural Sciences, GKVK campus, Hebbal, Bangalore

There is ample scope for higher education and research in this sector. India being the largest milk producing country in the world, dairy science has better prospects in the country.
Nagar, Hyderabad, which is having better career prospects than any other course in the country. They can also join for MBA in Rural Management at Institute of Rural Management, Anand, Gujarat or Indian Institutes of Management.

**Study Abroad**

Dairy science and technology graduates can do post graduation and research from abroad. USA, UK and Canada are the best destinations for universities conducting graduate programmes in dairy science and technology.

- College of Dairy science and technology, Kerala Agricultural University, Mannuthy, Thrissur-680 651
- College of Veterinary and Animal sciences, Sri Venkiteswara Veterinary University, Tirupathi, Andra Pradesh-517 502
- Veterinary College, Veterinary University, Hebbal, Bangalore
- Sanjay Gandhi Institute of Dairy Science and Technology, Bihar
- Dairy Science College, Gujarat Agricultural University, Anand, Gujarat
- National Dairy Research Institute, Karnal, Haryana
- Sanjay Gandhi Institute of Dairy Technology, Rajendra Agricultural University, Dhelwan, Lohiya Nagar, Patna-800 020

Veterinary graduates can specialise in dairy science and technology so that they can associate with the veterinary services, procurement and marketing of milk and milk products. As a sequel to globalisation, there is immense potential for export of milk and milk products.

higher education and research. Apart from these countries, Australia, New Zealand, Ireland and Switzerland, Singapore and Malaysia started recruiting students from the country.

Academic excellence, global edge in faculty and students, better facilities, resources and faculty, variety of options, flexible curricula, cutting edge technology, hands on training, better support services, financial assistance, challenging research opportunities and adaptation to different social environment are some of the major advantages. Good academic merit, individual capabilities including analytical skills, suitability to course and college and proficiency in English language are required for overseas education.

Proficiency in English language is one of the major pre-requisites for overseas education. Different

- TOEFL (Test of English as a Foreign Language) This test is required for international students whose mother tongue is not English. The multiple-choice format internet based test consists of four sections like listening, structure, reading and writing. TOEFL is considered mandatory by most of the U.S universities. Detailed information about the test can be had from the Website www.ets.org

- IELTS (International English Language Testing System) is widely recognized as an English language requirement test for higher education in United Kingdom, Australia, Austria, Canada, New Zealand and North America. IELTS is managed and developed by University of Cambridge Local Examinations Syndicate, British Council and IDP Education Australia. The test includes listening, academic reading, general training reading, academic writing, general training writing and speaking. For details visit the Website www.ieltsindia.com

- GRE (Graduate Record Examinations) is required for students enrolling for a masters or doctoral programme in USA. It has two independent tests - GRE General and GRE Subject. Dairy Science graduates require only GRE general test. US universities require this test as part of their entrance requirements. It is a computer-based test. It consists of verbal, quantitative and analytical writing tests. Website www.gre.org

The writer is Veterinary Surgeon, Animal Husbandry Department, Govt of Kerala
In India, agriculture accounts for 32 per cent of the national gross product. Rural Indian women are extensively involved in agricultural activities. About 70 per cent of the total working population of women are involved in this field. Nature and extent of their involvement differ with the variations in agro-production systems. The mode of female participation in agricultural production varies with the ownership of land of farm households. Their role ranges from managers to landless labourers. In overall farm production, women’s average contribution is estimated at 55 to 66 per cent of the total labour. Qualified women work as development personnel in the field of agriculture. The state agricultural universities as well as Central and State research institutes flaunt women agricultural scientists, but their number, compared to men, is very low.

Women as agricultural labourers

Majority of women workers (66.8 per cent) are employed in agricultural and allied industrial sectors, according to 1991 census. Women employed in this sector are 80.7 per cent, compared to 62.7 per cent for men. In rural areas, 89.5 per cent of total females employed are engaged in harvest technology, value added food products etc.

Crop Production

In the highly diversified Indian context, no simple gender division of labour exists with regard to crop production. In certain areas in India, women play key roles as seed selectors and in seedling production. Their knowledge on seeds and seed storage contribute to viability of agricultural diversity and production. As weeder, women contribute to crop management. Women prepare and apply green and farmyard manure. As integrated pest management practices are introduced, it could be expected that women’s work would increase due to more labour-intensive activities.

In addition to their role in crop production, women are gainfully employed in agri-based allied activities like dairying, animal husbandry, poultry, goatery, rabbitry, apiary, floriculture, horticulture, fruit preservation, post-harvest technology, value added food products etc.

Livestock

Livestock plays a multi-faceted role in providing draught power for the farm, manure for crops, energy for cooking and food for household consumption as well as the market. In animal husbandry, women have a multiple role. Their activities vary widely ranging from care of animals, grazing, fodder collection, cleaning of animal sheds, processing milk and livestock products. In livestock management, indoor jobs like milking, feeding, cleaning etc. are done by women in 90 per cent of families while management of animals and fodder production are done by men. Though women play a significant role in livestock management and production, women’s control over livestock and its products is negligible.

Fisheries

India is among the top ten fish producing countries in the world contributing about three percent to the world marine fish catch. About five million people in the coastal areas carry out fishing and allied activities for their livelihood. In
India, nature and extent of women’s participation in this sector varies across the States. Fish drying/curing, marketing, and hand braiding and net-mending are the main areas of women’s involvement in Tamil Nadu, Andhra Pradesh and Orissa. Women are also involved in shrimp processing in these States. In Andhra Pradesh, women are engaged in mollusca and shell collection on a seasonal basis along the coastline. Among the mangroves of Bhitarkanika on the Orissa coast, both women and men engage in fishing. Men cast nets while women and children catch fish with hands. In the fishing villages, both women and men who do not belong to the fishing community perform fish drying/curing. In coastal aquaculture, women are involved in prawn and seed collection to a very limited extent.

Women as conservators

From time immemorial, women used to act as conservators of natural resources. During the annals of evolution, when humans were hunter-gatherers, it was the women folk who evolved the first agriculture, by systematically planting the thrown away seeds. Over thousands of years, women still nurture everything associated with the household and even her neighbourhood, be it plants or animals or her living system itself.

Women play a key role in both land use and management. Women-headed movements for forest protection such as Chipko and Appiko deserve special mention. Women have also been the source of knowledge relating to conserving and maintaining the quality of water. Depleting water resources have impacted women severely in terms of longer walk and more work, as they are principal collectors of water.

Women professionals in agriculture

The spurt in the number of women professionals in agriculture and allied sectors is a recent phenomenon. With rapid changes in agriculture scenario on one hand due to globalisation, liberalisation, bio-technology, bio-engineering, WTO etc. the contribution of women scientists, extension workers, administrators etc. in development assumes new roles. The Indian Council of Agricultural Research has 30,000 scientists, extension scientists and teachers. Only about 20 per cent of this are women. Most of the departments related to Agriculture are male dominated in staffing pattern, approach and methodology.

Mobilisation of groups

The importance of organising women into Self Help Groups (SHGs) is an accepted method of empowerment. SHGs are an effective means through which women can build self-reliance, solidarity and confidence, as well as contribute to the overall development of their families and societies. Belonging to a group provides women with a sense of identity, status and security and also provides them access to credit and institutional support services which they otherwise would not have had as individuals. SHGs have bargaining power and the ability to make major decisions for their own development. The Kudumbasree movement initiated by the Kerala Government is an ideal example for this.

Harithasree, the lease land farming promoted by the State Poverty Eradication Mission, Kerala, through Kudumbasree has helped women farmers to stay on in agriculture for their livelihood. The number of Grama Panchayats involved in the Programme has increased to 914, with 19 more Panchayats getting involved, compared to the previous year, 2005. There are about 35,130 SHGs and 3,54,513 families involved in the Harithasree programme, covering an area of 23,160 ha during 2005-06.

While the Rashtriya Mahila Khosh project and the UPLSR project are using NGOs as facilitators to help in group formation, training, micro-credit, micro-finance, entreprenueriship development etc., in Kudumbasree programme, the officials and people’s representatives of local bodies are trained to perform these facilitating functions. Nobel Laureate Dr Muhammad Yunus in his well-read book ‘Banker to The Poor’ narrates the role of micro-credit financing through Grameen Banks in empowering women below poverty level to the status of women of confidence and well being.

The writers are with Kerala Agricultural University, Thrissur.
Kerala woman is the archetype of empowerment for her counterparts in the rest of the country. She is literate; she reads newspapers and periodicals regularly. She is lucky enough to go to college. She goes to work. Her earnings form a significant part of the State’s income. And to top it all, she is healthy and lives longer than the he in the State. No wonder, for economists and social scientists like Amartya Sen, she is the active agent, whose contribution propelled Kerala’s social achievements. For connoisseurs like M.F. Hussain, even the very essence of the State of Kerala is its nature and women. As Tharoor observes, “everywhere in his paintings of Kerala there is the emblematic figure of “Kalyanikutty”, his archetypal Kerala woman: even his series has been dubbed “Kalyanikuttyude Keralam” — “Kalyanikutty’s Kerala”. In each painting we see Kalyanikutty, striding confidently through the green, holding aloft the miniature elephants, which Hussain uses to symbolise the State, steering her little boat through a storm, holding her own at the marketplace, and simply — how simply! - reading.”

But really, frankly, how empowered is this empowerment of Kerala’s Kalyanikutty? Despite all the impressive Gender Development Indices, and Hussain’s and Sen’s convictions, apparently not much. Not when the incidence of domestic violence is as high as 62 percent. Not when women own only 17.16 percentage of the total area under operational holdings. And definitely not when the representation of women in the State assembly with 140 seats has never been more than a paltry 13.

What we see in the State is clearly a case of gender development paradox. Robin Jeffry in his work ‘Politics, Women and Well being’ elaborates on this phenomenon. He notes that, despite the role played by earnings of the women in Kerala’s economic development and the role their education played in social development there is a marked absence of women in the public spheres; especially in the political sphere. He also mentions the ridicule and insults women often have to face if at all they decide to enter the political arena.

To make sense of the situation and then arrive at a judgement on the empowered status of the State’s women, one has to understand what exactly the concept ‘empowerment’ comprised of. Empowerment can overall be defined as all those processes where women take control and ownership of their lives. And there are two components to this phenomenon - resources and agency. Here resources would mean ‘enabling factors’ like education, labour force participation, land rights etc that act as catalysts for empowerment and can foster an empowerment process rather than as part of empowerment itself. These factors by themselves do not capture empowerment in its truest sense but still many of us...
commit the mistake of judging our women’s empowerment just on the basis of the presence or absence of these resources. Herein lies the mistake and herein lies the clue to understand the gender paradox manifested in the State.

The second component, agency (the state of being in action or exerting power) along with the above mentioned resources, form an integral part of the concept of empowerment. It encompasses the ability to formulate strategic choices, and to control resources and decisions that affect important life outcomes. So we can say that we have completely met with the definition of empowerment only when the enabling factors are successful in mobilising this capability to define one’s goal and act upon it. And it is exactly in this area that the malice pertaining to Kerala women’s woes lie. In a nutshell, the empowerment of women in the State is half-baked.

The gendering of public spaces, the taboos associated with political participation, the trenchant conception of gender roles—all resulting from the strong patriarchal orientations of the Kerala society, which offers structural constraints for the operationalisation of women’s agency in the State.

Indeed that exactly is the success of patriarchy. The inequalities and deprivations born out of patriarchy are so well concealed in the garb of prescriptions of virtuosity and ensuring of protection that even we women become active proponents of these values. There is a prototype of the ‘proper woman’ in the popular imagination of the people here, which is rigorously safeguarded and perpetuated through the various institutions, media and all other popular discourses. This is the way Kerala wants its women to be. As long as one manages to remain within and enact the prescribed role, one is respected; even admired. But anybody not toeing the line, the society is ever ready to show you her place.

That is why when Madhavikkutty viewed about sex, she was immediately condemned by the various upholders of morality in the State as a loose woman; that is why Arundhati Roy says in her book that she was ‘everything Kerala society despised in a woman’—thin, curly haired, intelligent; that is why the quiet girl in half saree gets the hero while the one in jeans never gets him in the movie that you saw; that is why my daughter’s friend was admonished by other women in the bus for ‘over reacting’ when she slapped a man who had groped her.

Women themselves are active proponents of this oppression. And this oppression is accepted and allowed by consensus -and the wonder is that it is often even undetected! Clearly it is a case of cultural hegemony in operation. Now what is cultural hegemony? As conceived by Gramsci, the Marxian thinker, it is a process by which everyday practices and shared beliefs provide the foundation for complex systems of domination.

So the question arises, how do we dismantle this? Through a war of position. Again a Gramscian formulation, war of position is the strategy to enable change in a society where cultural hegemony is entrenched. In the context of class struggle, the war of position is essentially a culture war in which anti-capitalist elements seek to gain a dominant voice in mass media, mass organizations, and educational institutions to heighten class consciousness, teach revolutionary analysis and theory, and inspire revolutionary organization. According to him this was the only way one can fight the cultural hegemony of capitalism.

And in the context of patriarchy that we are talking on, with a slight modification of definition, the tactic has far reaching potential. Because, the broad framework of indoctrination and resultant oppression ‘by voluntary consent’ are same in both cases. What constitutes the basis of women’s oppression is the dominant ideology of patriarchy. And this ideology, just as the capitalist ideology, is perpetuated through the various institutions of the State. And hence a culture war that heightens the gender consciousness demystifies and deconstructs patriarchal prescriptions of norms and encourages critical analyses of the society and its practices are very much relevant. This is a long war to be persistently fought across the various civil society institutions - families, schools, media etc. Only through a conscious and active confrontation against the cultural hegemony of patriarchal structures can mobilise women’s agency effectively. Only with the mobilisation of women’s agency can the process of empowerment be completed.

So, as yet another women’s day passes, let all of us come to Kalyanikkutty’s positioning for this war against structures.

The writer is Feature Editor, Information and Public Relations Department, Government of Kerala.
The Govt is able to clear the arrears of social security pensions.

Monthly pensions of agricultural workers, fisheries, coir, cashew, handloom, reed, beedi, artisan, building construction etc. are increased to Rs 200 per month.

Workers involved in Clam collection would be given membership in Fisherman Welfare Fund Board and pension will be sanctioned.

A health insurance scheme for all families below poverty line, as approved by the Government of India. Rs 20 crore for this purpose.

Kerala Comprehensive Health Insurance Scheme. Rs 20 crore set apart for this purpose.

The mess allowance of students in Government and aided special schools will be enhanced from Rs 500 to Rs 750. The annual dress allowance is increased from Rs 500 to Rs 750.

The pension for physically challenged and mentally challenged are to be enhanced from Rs 160/- to Rs 200/-. An enhancement of Rs. 50 per month to the assistance given to children in orphanages.

A novel scheme shall be implemented in making use of the base kitchen in Kozhikkode Medical College Hospital. It is proposed to launch a scheme offering lunch to any one in need at Rs two a meal.

Rs 30 crore for Kudumbasree

‘Samagra’ scheme under Kudumbasree

Rs 50 crore for agriculture debt relief.

Rs two crore for Dairy farmers welfare fund.

Rs 10 crore being the additional amount for debt relief programme for the fishermen in areas outside the Tsunami area.

Rs five crore for the modernisation of Coir industry.

Rs 16 crore as one time assistance for Cashew corporation and Capex.
Writing off the tax arrears of KSRTC to the tune of Rs 700 crore and forgiving the interest and penal interest amounting to Rs 153 crore.

Rs 25 crore for KSRTC

The interest on loans drawn by the Kerala Water Authority to the tune of Rs 1006 crore will be written off.

The loan amount of Rs 839.60 crore given to Kerala Water Authority will be converted as an interest free fund.

Rs one crore for PVC pipe manufacturing factory at Chavara.

Rs five crore for Meenachal River valley project.

Rs 60 crore for Athirappilly project.

Rs 25.7 crore for Vizhinjam International Sea port Ltd

Rs 2.80 crore for construction of Azheekkal port.

Rs one crore for Kerala Maritime Institute at Manjeswaram.

Rs one crore is set apart for the hangar for the Rajiv Gandhi Centre for Civil Aviation.

Contractor's arrears for another two months will be disbursed before March 31st

An amount of Rs 50 lakh is set apart for the preliminary work to prepare tender documents for the flyover at Nagambadam in Kottayam on BOT basis.

Rs 15 crore for Tourism marketing.

Rs 20 crore for establishing trade fare authority.

642 vacancies in Arts and Science colleges will be filled up.

1700 posts of Higher Secondary teachers would be sanctioned before the new academic year and 400 posts will be created afresh in VHSE.

Rs 100/- enhanced on 'Prerak' allowance.

Rs 4.2 crore for establishing new I.T.Is.

Rs one crore each for constructing stadiums at Nedunkandam, Muvattupuzha and Alappuzha.

Rs two crore for Speciality Block at Kozhikode Medical College.

Rs seven crore for KSDP.

Rs five crore for the renovation of One Lakh Housing Scheme.

Rs five crore additional assistance for KILA.

Rs 30 crore for Attappady Development Project.

Rs 20 crore for Kozhikode City improvement Plan.

Rs 4.50 crore for Litter Free Kerala.

Rs 15 crore for Scheduled Tribes Rehabilitation programme.

Rs 10 crore for the implementation of Sachar Committee Recommendations.

Rs 2.25 crore for Gender awareness programme.

Rs five crore for the construction of building for Co-operative Engineering College, Ponnappa.

Rs three crore for NRI Welfare fund.

Rs five crore for Kerala Land Bank.

Rs five crore for the second phase of 'Corruption free Walayar' and a check post plaza at Walayar in 40 acre land.
Agriculture is still the backbone of many regions in Kerala. As Kerala’s agricultural sector is characterised with a pretty good percentage of small and marginal farmers, the announcement of farm loan waiver programmes in the Union Budget for 2008-09 will help a good number of small and marginal farmers across the State. Here special mention is to be made about districts like Wayanad, Malappuram etc. The farm loan waiver programmes will be helpful to 90 per cent of farmers in these districts.

As per the budget proposal, agricultural loans disbursed by the Scheduled Commercial Banks, Regional Rural Banks and Co-operative Credit Institutions up to March 2007 and overdue as on March 2007 will be covered by the Farm Loan Waiver Package. Again the proposal says, there will be a one-time settlement scheme for all loans overdue as on December 31, 2007 and for the unpaid portion if any, until February 29, 2008. Also, a rebate of 25 per cent will be given against the payment of the balance of 75 per cent. These announcements are very timely, as many of the lending institutions are forcing the farmers to re-schedule their loans.

The budget proposal to set up a Special Purpose Fund for re-plantation and rejuvenation for cardamom, tea and coffee will benefit the plantation sector of the State. Similarly, the proposal to introduce crop insurance scheme for ginger, turmeric, pepper and cardamom will be a blessing for the farmers of these sectors.

Though these proposals certainly give a new ray of hope for the State’s agricultural sector, more clarifications are needed whether the farm loan waiver facility is available for those who had already repaid their loans and have taken new loans in the State.

Through the proposal to implement area or problem-specific Special Development Plans for 90 minority concentrated districts in the country, the districts of Wayanad and Malappuram in Kerala will get double benefit from this budget. Various multi-faceted and special developments plans for poverty alleviation, education, health and provision of basic amenities will be implemented in these districts. If these announcements come true, Kerala will get benefited from the present union budget to an extent.
As Kerala is an important Consumer State, announcements like the withdrawal of Banking Cash Transaction Tax (BCTT), reduction in the prices of two-wheelers, cars and many other consumer items will be applauded by the Keralites.

Coming to the major attractive portion of the budget proposal, restructuring of the income tax slabs should be clapped enthusiastically. A rise in the income tax exemption limit to Rs.1,80,000 for women is praise worthy. This is a blessing to a State like Kerala, where a good percentage of women are employed or self employed and ready to go anywhere for job purposes.

Another positive part of the Union budget is the proposal to give tax relief to Senior Citizens above 65 years as Kerala faces serious problem of ageing. Not only their tax exemption limit has been raised to Rs 2.25 lakh from Rs 1.95 lakh but also two popular savings schemes have been included for income tax exemption.

As the coin has two sides, the Union budget has its own negative impact on certain sectors of the state’s economy. One such important drawback of the budget is the cut in the ration rice allotment to the State, which will result in to a hike in the price of rice. As Kerala is one of the prominent rice consuming states, any such step will worsen and aggravate the problem of shortage of rice leading to many socio-economic problems in the State.

Though the budget has taken certain measures to protect and promote the socio-economic conditions of the farmers through the farm loan waiver package, it has failed to address the basic issues in the farm sector. One of the main problems of the farming community is the lack of remunerative prices for their produce. If figures tell the truth, in Kerala alone, the farmers lose Rs 7600 crore annually due to the crash in the prices of agricultural produce, especially cash crops like coconut, pepper, tea, cardamom and coffee. Along with this, Union Finance Minister’s decision to follow a liberal import policy will affect the interests of the farmers.

One of the sectors which will be negatively hit by the Union budget is the construction sector. The construction sector in Kerala is very vibrant nowadays. The price hike in the building materials especially for cement will have an adverse effect on this sector, which has a huge employment generation capacity in the State.

To conclude, though the Union Finance Minister has taken some interest in promoting the welfare of farmers, minorities, women and other socially and economically marginalised groups in the country, still more is left to do with. For an industrially backward state like Kerala where land shortage is a big problem, steps should be taken to ensure availability of land for industrial purposes by formulating Land Bank.

Though the Union Finance Minister has taken some interest in promoting the welfare of farmers, minorities, women and other socially and economically marginalised groups in the country, still more is left to do with. For an industrially backward state like Kerala where land shortage is a big problem, steps should be taken to ensure availability of land for industrial purposes by formulating Land Bank.

The writer is Reader, Deptt. of Applied Economics, Cochin University of Science and Technology, Kochi.
Aravindan was one of the most individualistic and original filmmakers in Malayalam who got worldwide recognition with his limited output of feature films and short films made during his short span of life.

Aravindan was an established cartoonist with his serial, Small Men and the Big World published in the Mathrubhumi weekly before he ventured into filmmaking.

By the late sixties and early seventies, Malayalam cinema had already shed its theatrical hang-ups and matured into a more visual aesthetic. A strong film society movement led by the Chitralekha Film Society in Thiruvananthapuram was nurturing an audience for good cinema by screening international and Indian film classics. The Chitralekha Film Co-operative, an off-shoot of the film society, comprising graduates of the Film and Television Institute of India, started making documentaries and short films. Soon, they came out with their first feature film, Swayamvaram directed by Adoor Gopalakrishnan, malayalam cinema started getting national recognition.

Although Aravindan had no formal training in filmmaking, he was an avid watcher of classic films shown by film societies. A group of writers and intellectuals based in Kozhikode provided the launch pad for Aravindan's film career. In 1974, he made his directorial debut with Utharayanam, which fetched him a national award. From then on, there was no going back. Utharayanam was distributed by General Pictures of Kollam and that contact resulted in a fruitful combination of creativity and finance. Aravindan's subsequent films Kanchana Sita, Thampu, Kummaty, Esthappan and Pokkuveil were all produced by General Pictures. Aravindan's creative talent found its finest expression in all of these films.
Recognising the gap in feature filmmaking for him during that period, he concentrated on documentary and informational filmmaking. Then came a duo of own productions, Chidambaram and Oridathu. Doordarshan-funded Marattam, Unni and Vasthuhara came later. Aravindan’s film career was cut short by his untimely demise in 1991. With his limited output, however, he earned a name for himself as an avant-garde filmmaker in Malayalam along with other stalwarts like Adoor Gopalakrishnan.

**Aravindan’s films**

Utharayanam dealt with the existentialist dilemma of an unemployed youth in a small town in Kerala. His journey culminates in a forest where he encounters an old lady warming up to a bonfire and when he consigns his mask to the flames establishing a kind of rapport with the old woman.

Kanchana Sita is adapted from a play by C.N. Sreekanth Nair, which again is based on Valmiki Ramayana. Completely devoid of the glamour and mystique traditionally associated with such a theme, here the characters are tribals of Andhra Pradesh. Sita is conceived as Prakruthi and it is through the different manifestations of nature that Sita’s presence is felt in crucial moments in the film. The characters are humanised contrary to the traditional images of divine characters from Indian mythology depicted in our visual media.

Thampu tells the story of a small circus troupe arriving in a village near Thirunavaya and the brief relationships made between the performers and villagers in a semi-documentary tableau-like style. Initially, there is sufficient patronage from the public. But later when a temple festival ensues nearby, the crowd withers forcing the circus troupe to wind up and leave. Undercurrents of possible human relationships and its transient nature especially with regard to circus artists are gently touched here. Inability of the circus people to have any valid relationship with the village in which they perform and with the world in general is commented subtly.

By the inherent limitation in time span during which they perform at each place, contact is at best fleeting in nature.

Kummatty is perhaps one of the few attempts in modern Malayalam cinema that gets into the world of children and sees the world as they see it. Aravindan and his screenplay writer Kavalam Narayana Panicker have created a world of fable and myth absorbing and integrating into the film a lot of local cultural ethos. It gives us a fascinating account of a village boy who understands the value of freedom through a miracle performed by a Kummatty (bogeyman) and later releases his caged bird to freedom.

The enigma of Esthappan is unfolded through many stories about him told by different sections of people. These versions do not give us any clarity about the character that remains at the level of supernatural. What the film communicates by reflection is the traits of various people who talk about Esthappan and the social fabric of the village in general. The nature of local myth, at one part of village life and separated from it, is very gently conveyed. Esthappan emerges from Christian myth and becomes one with it in the end. Meanwhile, Aravindan has stated a little bit about the villagers in the fishing village and a little bit on human nature.

Pokkuveyil explores the disturbed psyche of a young poet with uncompromising patience. It experiments in film form by cutting visuals to suit an already laid out musical track in Hindustani style. Disturbing incidents affect a sensitive young man leading to his eventual breakdown necessitating psychiatric care. A melancholy mood pervades the film.

Chidambaram, based on a story by C.V. Sreeraman, examines sensuality, infidelity, trust and remorse in a complex web of human relationships against the picturesque settings of Munnar.

Oridathu depicts the brutal change caused to traditional village life by the arrival of modernity, in this case, that of electricity. Aravindan excels in caricature of a variety of rural folk, their simplicity and forthrightness exuding in stark contrast to the scheming and vile outsider from the south.

Marattam uses dance and choreography to give three interpretations of a murder. Infatuation with an artist’s performance and the blurring of fact and fantasy form the core of this magnificently rendered filmic ballet.

Unni, a relatively minor work of Aravindan, treats a love story between an American student and an Indian and the inevitable cultural void in such a relationship.

With Vasthuhara, Aravindan returns to an epic story of migration and the resulting dispossession of not only wealth but also of identity. The phenomenon of people being uprooted and forced to seek refuge in alien lands is commented upon by the plight of a few individuals coming in contact with each other transcending geographic distances.

**Style**

Stylistically, Aravindan’s cinema does not usually follow the dramatic progression of conventional story telling. Frames tend to communicate individually, instead of a series of frames unfolding in time. His characters are not delineated with precision. Most often they are types as amply evident in Thampu, one of his best films. His anthropological streak is evident in most of his early films. His quest for experimentation with form is demonstrated in Pokkuveyil and Marattam.

One can perceive a shift in his style from Chidambaram onwards when he follows a more logical narrative form. With the scale of filmmaking increasing and the resultant need for wider acceptance perhaps restrict filmmakers from experimenting and opt for a more easily communicative style.

Aravindan’s filmmaking is unique in that it is more in the nature of sculpting, chiselling out the form as he progresses, changing, modifying, absorbing and integrating, giving free reign to his imagination as he goes about filming. No doubt his cinema will remain a grand presence in the annals of Malayalam cinema.

The writer is Lecturer, Dept. of Communication & Journalism, University of Kerala, Thrivananthapuram.
Kani vellari
Vis(h)ual treat

Dr T.E. George

Kerala literally turns into golden yellow in April, when Vishu is celebrated with all gaiety and splendour. This is largely because of the golden yellow flowers of kanikonna and the golden yellow fruits of kani vellari seen in abundance across the length and breadth of the state during this season. The kani vellari fruits, a spectacular treat for the eyes, are considered as a symbol of prosperity and find a place in the vishukkani, the auspicious first sight on the very first day of the Malayalam month, Medam. Apart from its religious and social significance, Kani vellari, known as golden melon, oriental pickling melon or culinary melon in English and as Cucumis melo conomon botanically, is an important summer vegetable of Kerala. The fruits which contain moderate amount of vitamins and minerals are used in an array of traditional vegetarian dishes like pachadi, morucurry, koottucurry, aviyal, sambar and the like. The fruits possess cooling properties and are used as a skin moisturizer and digestive.

Kerala Agricultural University has developed three kani vellari varieties namely Mudicide, Saubhagya and Arunima. The variety Mudicide that has attractive, golden yellow coloured, medium sized cylindrical fruits are more preferred for vishukkani. While Saubhagya has got small golden yellow oblong fruits, Arunima has large deep yellow uniformly cylindrical fruits. All these three varieties are high yielding, ranging from 25 to 30 tons per hectare. In addition to these, a few local types, some with globular fruits and others with very long fruits are also being cultivated.

Kani vellari can be grown throughout the year under Kerala conditions. However, the ideal seasons for growing this vegetable are September - December and February - May. It is a direct sown crop and seeds are sown in either pits or furrows. The seed rate varies from 0.5 to 0.75 kg/ha depending upon the variety. Spacing recommended is two metre x 1.5 metre. In each pit, four to five seeds
The kani vellari fruits, a spectacular treat for the eyes, are considered as a symbol of prosperity and find a place in the vishukkani, the auspicious first sight on the very first day of the Malayalam month, Medam.

are sown and after two weeks, thinning is done, retaining only three healthy seedlings and pulling out the rest. Spraying the seedlings with 200 ppm plant growth regulator Ethephon at two-leaf stage and four-leaf stage will induce more female flowers on the plant which in turn will lead to production of more fruits.

The fertilizer recommendation for this crop is 70 kg nitrogen, 25 kg phosphorus and 25 kg potash per hectare, apart from 20 to 25 tons of farmyard manure. Full quantity of farmyard manure, half dose of nitrogen and full doses of phosphorus and potash have to be applied as basal dose. Remaining half dose of nitrogen is to be applied as top dressing in two equal split doses at vining and full blooming stages. The crop is to be irrigated three to four days interval. Kani vellari plants are trailing in nature. There is no need for erecting any pandal or similar trailing structures. However, it is better to spread dried twigs or coconut leaves in the plant interspaces. Weeding, raking and earthing up are the other cultural operations to be taken up. Kani vellari is a quick growing crop and the fruits will be ready for harvesting from 45th day after sowing. Plant protection is relatively easy in this crop as pest and disease problem are not so severe, compared to other cucurbiteaceous vegetables. The beetles attacking the small seedlings can be controlled by spraying organic pesticides and the downy mildew disease affecting the plants can be kept under check by maintaining field hygiene and if necessary by spraying fungicides.

NABARD’s approach to Dairy development

For the development of Dairy Sector in the State and to achieve self sufficiency in milk production, the following strategies have been worked out by NABARD to be implemented in a phased manner.

(i) The total milk production in the State was 20.63 lakh tonnes in 2005-06 as against the demand of 24.13 lakh tonnes. The projected demand for milk by 2012-2013 is 33.72 lakh tonnes. The gap between demand and supply will be 13.09 lakh tonnes. To achieve self sufficiency in milk production and to fill the gap in milk production in a phased manner, NABARD has worked out a detailed plan. To begin with, during the year 2008-09, about 2,44,000 milch animals are required to achieve the target of milk production. This would require a capital investment of Rs 461.16 crore during 2008-09. Assuming that 60% of these cases would require credit support from the banking sector, a term loan of Rs 276.70 crore is estimated for the year 2008-09.

(ii) Government of Kerala may also consider establishment of Cattle Breeding/Heifer Rearing Farms in all the districts for supply of good quality animals to the potential dairy farmers to support the programme in the long run.

(iii) Fodder cultivation may be encouraged as mixed crop in coconut plantation and other feasible areas to meet the additional fodder requirement for the proposed programme in coordination with the Kerala Agricultural University, Dairy Development Department, Department of Animal Husbandry and other agencies concerned.

The writer is Assistant General Manager, NABARD, Thiruvananthapuram

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Sd/-
P Venugopal IAS
Publisher

The writer is Professor & Head, Department of Olericulture, College of Horticulture, Kerala Agricultural University, Thrissur

KERALA CALLING 37

March 2008
Have you noticed different varieties of birds that visit our yards everyday? Just open your eyes, sharpen your ears and look around. The first sound that falls on your ears will be that of the crows. There, they will be crowing near the cowshed or on the branch of the tree beside the kitchen door. Stories are galore about this bird that lives very close to human beings. Some people expect guests if they hear crows making a particular noise. It is believed that the tail of the crow will be pointed towards the direction from which the guests would come! However, most of the Western countries consider the crowing of the bird as a bad sign.

There are two kinds of crows that we see usually in our yards. The crows that have grey shade in the neck is called House crow and the one with oil black colour is Jungle crow. Many people wrongly identify the former as female and the latter as male. The crows shed feathers and put on new ones frequently so that they always look young.

The Jungle crows play an important role in the posthumous rituals of the Hindus. They believe that their ancestors take the shape of the jungle crows and appear to enjoy the sacrificial rice that is offered to them by the relatives. If the crows do not appear they consider it as an evil omen. Some people believe that the crows never die. However, the crows that die after a contact with electric line are a common sight nowadays.

Have you ever thought how helpful these birds are to us? They perform the duty of the scavengers who clean the cities and villages. They consume the dirty and waste food materials. Crow is a clean bird, though they consume dirty materials. It is interesting to watch the crows bath themselves. They bath on the banks of lakes or streams by dipping in water several times, shaking the body and spreading the wings. After bath they comb feathers with beaks.

One crow should not claim the mate of another. The criminals, thieves and out laws are tried publicly and punished! The domestic affection between crows is remarkable. They unite against their enemy. If they get an excess amount of food, it will be shared among them. They also have the habit of storing the food for the future. The crows are cunning and wise also.

The crows usually build their nests in December and June. The nest is built using dried thin tree twigs arranged in a criss-cross manner. There will be two or three eggs in the nest. The parents look after the young ones together. Some times these wise birds commit big blunders by brooding on the eggs laid by the cuckoos in the crow’s nest. They realise their blunder only...
when the young ones put on the appearance of the cuckoo.

The crows make a variety of sounds. We haven’t yet made out the language of the crows completely. So it is difficult to cipher the various noises they make. They often choose the shortest route to fly from one place to another.

Some instances show that the crows hide their spite and revenge later. There are some people who were constantly attacked by crows for destroying their nests and hurting them. Some of us can call the crow by imitating their sound.

There is a story about the absence of crows in Lakshadweep. Once a Muslim chieftain was performing ablution before the Namaz when a crow excreted on him. He was angry and ordered them not to enter the place any more. After that, it is said that the crows in Lakshadweep left the island. Similarly, Kodaikanal in Tamil Nadu is a place without crows. Another place with low population of crows is Silent Valley. Plenty of birds were found in the Himalayan zones. Crow-nests were also found in Haridwar.

The crows have become illustrious through the works of many a great writers. The Russian writer, Ivan Bunil, who won Nobel Prize for literature in 1993, has written a charming story called ‘The Crow’. O.V. Vijayan has paid tribute to crows in his story, Kadaltheerathu. Listen to the words of Vyloppilly Sreedhara Menon, the beloved poet of Kerala who loved the crows: “When I grew up some birds flapped their wings through my poems. The crows still stay with me.”

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Suresh Muthukulam

Glossy, dark green leaves and waxen flowers of glorious fragrance are the two unique features of Gardenia, the favourite landscape shrub. The genus Gardenia is believed to have been named after Alexander Garden, a physician in Charleston, South Carolina. It is also called ‘Cape Jasmine’, with evergreen nature, growing to a height of two to six feet, depending on the variety. The flower can be either single or double and up to four inches in diameter. There are over 200 species of gardenias, the important among them being gardenia jasminoides containing many cultivars; jasminoides is a native to China.

Gardenias can be grown both indoors and outdoors. In indoor, gardenia want full sun, but outdoors, it will be happier in partial shade. Even if they grow in a variety of soil conditions, they do best in well-drained soil high in organic matter. They are propagated by cuttings or grafting. Cuttings can be taken anytime during the year, but are most successful in June, July and August. Tip or midsection cuttings with wood, six to eight weeks old should be cut four to five inches long with at least two or three sets of leaves. Cuttings can be taken at or between nodes as they root from the cut end.

The cuttings can be rooted in a mixture of sand and leaf manure. It is better to mulch the plant base with two to three inches of wood chips, sawdust etc. to keep the soil moist, cool and weed free. Feed the plants every three weeks during the growing season with organic foods or any very diluted dose of fertiliser mixture like 18:18:18 or 19:19:19.

Be sure to prune older gardenia stems. This will encourage new growth as well as frequent blooming. Remember that pruning should be done just after the plant finishes a blooming phase.

Watering during dry periods is necessary for healthy gardenias since it largely controls the number of flower buds that remain on a plant to maturity. If possible drip irrigation is the best.

The genderia flowers are highly fragrant. They open over a long period of time, from May through July and make great cut flowers. If you want to enjoy the fragrance, plant in areas with good air circulation near patios or windows where the fragrance will be noticed. They can be used as screens, hedges, borders or ground covers. They also may be used as free-standing specimens or in mass plantings.

Some of the striking varieties are Golden Magic, Miami Supreme, Mystery, Veitchii, August Beauty etc.
when the young ones put on the appearance of the cuckoo.

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Some instances show that the crows hide their spite and revenge later. There are some people who were constantly attacked by crows for destroying their nests and hurting them. Some of us can call the crow by imitating their sound.

There is a story about the absence of crows in Lakshadweep. Once a Muslim chieftain was performing ablution before the Namaz when a crow excreted on him. He was angry and ordered them not to enter the place any more. After that, it is said that the crows in Lakshadweep left the island. Similarly, Kodaikanal in Tamil Nadu is a place without crows. Another place with low population of crows is Silent Valley. Plenty of birds were found in the Himalayan zones. Crow- nests were also found in Haridwar.

The crows have become illustrious through the works of many a great writers. The Russian writer, Ivan Bunil, who won Nobel Prize for literature in 1993, has written a charming story called ‘The Crow’. O.V. Vijayan has paid tribute to crows in his story, Kadaltheerathu. Listen to the words of Vyloppilly Sreedhara Menon, the beloved poet of Kerala who loved the crows: “When I grew up some birds flapped their wings through my poems. The crows still stay with me.”

Glossy, dark green leaves and waxen flowers of glorious fragrance are the two unique features of Gardenia, the favourite landscape shrub. The genus Gardenia is believed to have been named after Alexander Garden, a physician in Charleston, South Carolina. It is also called ‘Cape Jasmine’, with evergreen nature, growing to a height of two to six feet, depending on the variety. The flower can be either single or double and upto four inches in diametre. There are over 200 species of gardenias, the important among them being gardenia jasminoides containing many cultivars; jasminoides is a native to China.

Gardenias can be grown both indoors and outdoors. In indoor, gardenia want full sun, but outdoors, it will be happier in partial shade. Even if they grow in a variety of soil conditions, they do best in well-drained soil high in organic matter. They are propagated by cuttings or grafting. Cuttings can be taken anytime during the year, but are most successful in June, July and August. Tip or midsection cuttings with wood, six to eight weeks old should be cut four to five inches long with at least two or three sets of leaves. Cuttings can be taken at or between nodes as they root from the cut end.

The cuttings can be rooted in a mixture of sand and leaf manure. It is better to mulch the plant base with two to three inches of wood chips, sawdust etc. to keep the soil moist, cool and weed free. Feed the plants every three weeks during the growing season with organic foods or any very diluted dose of fertiliser mixture like 18:18:18 or 19:19:19. Be sure to prune older gardenia stems. This will encourage new growth as well as frequent blooming. Remember that pruning should be done just after the plant finishes a blooming phase.

Watering during dry periods is necessary for healthy gardenias since it largely controls the number of flower buds that remain on a plant to maturity. If possible drip irrigation is the best.

The genderia flowers are highly fragrant. They open over a long period of time, from May through July and make great cut flowers. If you want to enjoy the fragrance, plant in areas with good air circulation near patios or windows where the fragrance will be noticed. They can be used as screens, hedges, borders or ground covers. They also may be used as free-standing specimens or in mass plantings.

Some of the striking varieties are Golden Magic, Miami Supreme, Mystery, Veitchii, August Beauty etc.
Tapioca
Taste of the Table

Tapioca Chenda Muriyan

- Tapioca 3” pieces - half kg
- Salt to taste
- A pinch of turmeric powder

Cut tapioca lengthily and cut into 3” big pieces. Cook with turmeric and enough water. After a while strain the water and cook. This is to remove any impurities in tapioca. When it is well cooked, off the gas. Serve this with curd chutney.

Curd chutney:
- Half cup curd
- Two green chillies
- Half inch piece of ginger
- A sprig of curry leaf
- Salt to taste

Grind these ingredients (except curd) well and add curd.

Tapioca Thoran

- Chopped tapioca - 4 cups
- Salt to taste
- Turmeric powder - half table spoon

To grind coarsely: One and a half cup scraped coconut
- Red chilli powder - One table spoon
- Curry leaves – two sprigs
- Cumin seeds - ¼ table spoon
- Garlic - three pods
- Mustard seeds and urad dal - 1/4 table spoon each
- Dried red chilli – two numbers
- A sprig of curry leaf
- Oil - two table spoon

Method

Cook tapioca with salt, turmeric and enough water. Add the coarsely ground ingredients and stir. Fry the last four ingredients in hot oil. When mustard splutters, add the tapioca mixture to this and stir well. Serve hot.

Tapioca Vada

- One cup grated tapioca
- ¼ cup finely chopped carrot
- Oil to fry
- Two 1/4 cup finely chopped onion
- Two table spoon finely sliced green chillies
- One table spoon finely chopped ginger
- One red chilli, crushed
- A sprig of curry leaf
- Salt to taste
- ¼ table spoon chana dal powder (besan)

Mix together all ingredients except besan and sprinkle the besan slowly into the mixture. Mix well without using much pressure, shape the vegetable mixture into small vadas and fry in hot oil and serve with chutney.

Tapioca Upmav

- Tapioca (finely chopped) – four cups
- Salt to taste
- To grind coarsely: two green chillies
- Two cups scraped coconut
- Two numbers small onion
- Two sprigs curry leaves
- Two table spoon chopped ginger
- To fry: Two table spoon oil
- ¼ table spoon each of mustard seeds and urad dal
- One sprig of curry leaf
- One dried red chilli

Cook tapioca adding salt and enough water. Coarsely grind the ingredients and add to the cooked tapioca. Heat oil and fry the other ingredients. When it splutters transfer the upma to this. Mix well and serve hot.

Tapioca, the common place tuber of Kerala, now attains the status of class hotel delicacy.
For an average Indian, the Himalayas always enkindle a feeling of spirituality. A large number of pilgrim centres and mythical references are linked with this mountain eco-system. And, this is also a treasure trove for travellers and travel writers who mesmerise the readers with ornate words about the mystery of the Himalayas. This tendency is seen even in the ‘Kashi Yathra Rappotta’, which is considered as one of the first travelogues in Malayalam.

All, but one. The book, ‘Kizhakkan Himalayam Chila Doorakkazhchakal’, by C. Suseelkumar, an employee of Legislature Secretariat, Government of Kerala, is a different treat on the Himalayas. No flamboyant or pompous words were used in the book to ‘reveal’ the mystery of the Himalayas.

This book covers the author’s journey through the Western Himalayas with a team of eight. Most of the areas covered in this book are lesser known to Keralites, as they are places belong to Nepal and Bhutan.

The most important aspect of any place is the people who live there. The pulse of the people is the soul of any travelogue. The writer does justice to this concept in his book. In the chapter, Darjeeling, for example, there is an in depth description on the struggles in the minds of the expatriates of Tibet.

The author succeeds in giving a thumbnail of the Eastern Himalaya life in seven chapters. The first chapter describes the beginning of the journey from Gangtok to Nathula Pass. In the second chapter, he explains the history of Lamas Kanchenjanga vividly.

There are occasions a traveller may think to wind up the journey due to hard-hitting nature. Nature, especially in the Himalayas, sometimes shows unexpected changes in its tempo, leading the traveller to disappointment or even loss of life. In the chapter, “Experiences in Kanchenjanga,” the writer describes a landslide and hairbreadth escape from it. The days spent in the popular hill station, Darjeeling, is pictured in another chapter as the prelude for their journey towards Buxa Tiger Reserve and then to Bhutan.

The chapter, ‘In the land of Yak and Yati’, the writer attempts to give a logical explanation on the popular myth, Yati, the abominable snowman which is acting as a catalyst to Nepali tourism. The minute descriptions on Katmandu are sufficient to a reader to get a clear picture of this holy city. Then they visit to Pokhra, the second largest city in Nepal to proceed Annapoorna Mountain Ranges, one of which, Machapuchare – the twin mountain in the shape of a fish tail – is a visual treat. From Pokhra, they go to Bhairava-Lumbini and then concludes their journey at Gomukh in Uttar Kashi.

In a travelogue, the feelings of the writer are very important. The writer’s experiences and comments should follow the description of the places visited or stayed and the scenes saw. In this context, the writer seems to be a little bit reluctant in putting his experiences fully. This may be a draw back of this travelogue. But at the same time, this seems to be the strength of this book as the author keeps his equilibrium without falling into environmental extremism while favouring nature conservation.
Food Security
Issues Analysed

Dr Thomas Varghese

Most of the nations including India are facing acute crisis with respect to food security. The very fact that the Cabinet Committee on Economic Affairs (CCEA) of Government of India has approved a centrally sponsored National Food Security Mission is a clear evidence of the concern of Union Government over rising food grain crisis caused by increasing demand and stagnant production. It is a fact that the rate of agricultural growth in India has been hovering around a paltry 2.2 per cent over the past ten years. The more desperate situation is that the per capita food grain availability in the country is drastically lower than what it was ten years back. The dearth of food grains and pulses remains unaddressed in spite of widespread malnutrition or under nutrition among women and children in rural areas.

The planners, policy makers and political leaders at the Centre have been very vociferous about the rise in gross domestic product (GDP) achieved by India during the past few years. In reality, this growth is deceptive and belies the abject poverty faced by millions of Indian citizens. For long, the Government has been stressing the need to achieve four per cent annual growth in farm output but there is not much evidence of a well-designed strategy supported by an effective action plan. It is worth to recall the situation in 2003 and 2004, when the food grain...
production reached its peak of 213.19 million tonnes, which started slipping down and pegged at 209.17 million tonnes during 2006-07. As a result of this, during the last financial year, India imported 5.5 million tonnes of wheat from Australia, Canada and Ukraine at a handsome price of Rs 12,000/tonne. It is worth mentioning that the Minimum Support Price offered for wheat during that period was only Rs 7,500/tonne. This year, the situation has worsened further and the Union Government is constrained to import wheat at US $ 389/tonne, which works out to Rs16,000/tonne when the commodity reaches Mundra or Kandla port. To tackle this grave situation, the Government of India has increased the Minimum Support Price of wheat to Rs 1,000/qtl from the previous rate of Rs 750/- . The case of rice also gives a bleak picture with an annual production pegged around 90.13 million tonnes.

Now the Government of India banned the export of rice except the basmati variety. This step will adversely affect the food preference of more than two million non-resident Indians in the Middle-East and other foreign countries who are used to red and semi brown (matta) rice variety. Government has also increased the Minimum Support Price of rice by Rs. 50/- for a quintal raising the value to Rs 725/qtl for ‘A’ variety and Rs. 695/qtl for common variety. All these indicate the grave food situation faced by the country. However, none of the stakeholders in the food grain sector viz. farmers, processors, traders and consumers are happy with the current complex situation in the sector and each one has a complaint that relates to inputs, prices, markets or trade restrictions. Anyway, one set of people who are happy with the lack of progress in Indian agriculture is overseas suppliers of food grains. In this critical atmosphere, the launching of National Food Security Mission (NFSM), gives a ray of hope to the millions who go to sleep with empty stomach. It is aimed that agricultural production, food grains in particular is to be increased significantly to cater the rapidly expanding demand for food driven by rising income and demographic pressure. The Mission targets for enhancing production of rice by 10 million tonnes, wheat by eight million tonnes and pulses by two million tonnes over the next five years which coincides with the ongoing 11th five year plan.

However, on closer scrutiny, it is evident that these targets are far from adequate to meet the potential growth in domestic demand. Moreover, it has been pointed out that this Mission will be implemented in selected districts at a total outlay of Rs 25,000 crores and hence there is no guarantee that the country will soon become food secure due to several challenges confronted by the farm sector. It is worth mentioning that the Union Government has conveniently excluded Kerala State from this Mission, which has to be protested strongly. The intrinsic constraints of the Indian farm sector viz. fragmented land holdings, low level of input usage, rain fed farming, dearth of credit, lack of rural infrastructure, volatile markets and acute fall in prices have to be addressed urgently in a holistic approach.

Food security in the global level is also facing acute crisis. The Food and Agricultural Organisation of the United Nations has been giving warnings about the rapidly deteriorating food supplies in many developing and under developed countries. They have predicted that out of 193 member countries of the United Nations about 30 countries will have to face massive starvation deaths, within a span of 25 years. In 50 countries, food deficit will be the rule.

With the advent of globalisation, liberalisation, privatisation and market economy, food security in many developing and under developed countries is in turmoil. Now big multi-national companies like Cargill, Monsanto and Wall mart control the supply and demand of food in the world. They have constituted contract farming, direct marketing as well large retail chains in many poor countries upsetting the socio-economic conditions of the rural poor. The major threat to global food security may be from the policy shift in developed countries that divert the cereals like wheat, corn and sugar for bio-ethanol production and oilseeds for bio-diesel.

As a result, many countries will face acute shortage for food supplies not only for humans but also for livestock. The country’s agricultural growth, stagnated at an annual average of 2.2 per cent, will continue to be so unless drastic measures are taken and implemented. It has warned that demand growth far outstripping production growth in recent years, food prices have become unaffordable for large sections of the populations that have remained excluded from the current growth process. High food prices are a major reason for the current high rate of inflation.

When the food security of India is at the verge of collapse, Kerala will be the most hard-hit. As against a total annual demand of 40 lakh tonnes of rice, Kerala’s production is only 6.36 lakh tonnes from a total area of 2.75 lakh hectares. However, on closer scrutiny, it is evident that these targets are far from adequate to meet the potential growth in domestic demand. Moreover, it has been pointed out that this Mission will be implemented in selected districts at a total outlay of Rs 25,000 crores and hence there is no guarantee that the country will soon become food secure. It is worth mentioning that the Union Government has conveniently excluded Kerala State from this Mission, which has to be protested strongly. The intrinsic constraints of the Indian farm sector viz. fragmented land holdings, low level of input usage, rain fed farming, dearth of credit, lack of rural infrastructure, volatile markets and acute fall in prices have to be addressed urgently in a holistic approach.

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When the food security of India is at the verge of collapse, Kerala will be the most hard-hit. As against a total annual demand of 40 lakh tonnes of rice, Kerala’s production is only 6.36 lakh tonnes from a total area of 2.75 lakh hectares. It may be recalled that 25 years back, the rice production in Kerala was around 14 lakh tonnes from a total area of nine lakh hectares. The drastic reduction in the area under rice in Kerala is taking place at an alarming rate, which will have serious repercussions not only on our food security but also on our drinking water scenario, environmental stability and socio-economic conditions. Kerala being the first State in India which introduced a progressive Land Reforms Policy, is now at the anvil of passing a bill to protect the paddy fields and wetlands of the State. Hope, this will pave way for tackling the agrarian crisis and food security for the State and become a model for the rest of India.

The writer is Chairman, Kerala State Agriculture Prices Board.
Larry Collins and Dominique Lapier, the international authors, loved to call Calcutta, the City of Joy. But it is interesting to note that the city of Calcutta is always a nostalgia to Keralites. The ever-busy streets, Hoogly river, Howrah bridge, trams, rikshaws, music, dance, theatre, literature and cinema of Calcutta evoke a feeling so close to our hearts. No doubt, this is the charm of ‘Calcutta News’, the latest film directed by Blessy. Even though there is nothing new in the story of the film, the treatment finds an unusual beauty with a different narrative strategy interspersed with shocking frames intended to spell out a social message.

Her so-called husband in the big city of Calcutta ditches Krishnapriya, a poor orphan village girl. Only later she realises that he is in the flesh trade business and had married her only to offer to some big boss. Her husband is murdered and Ajit Thomas, a TV reporter of Calcutta News appears as her saviour and he finally decides to marry her. Krishnapriya falls prey in the hands of sex racket mafia of Sonagachi, the notorious red light district of Calcutta. Ajit Thomas, at the end of a seemingly impossible risky operation frees Krishnapriya and a host of caged ladies with the aid of State Force and he is rewarded appropriately.

In spite of the fact that many of the segments of the film are highly illogical and unimaginative, the
mobile phone with camera plays a unique role. The TV reporter follows Krishnapriya starting from the site of Kalipuja. It is in fact the image of her husband in the mobile phone that helps Ajit to identify him. When the reporter is trapped in the red street, the clipping from the mobile phone paves the way for the rescue of hundreds of unfortunate hungry woman of Sonagachi along with Krishnapriya. The effective use of the new technological device may be treated as one of the highlights of ‘Calcutta News’.

‘Calcutta News’ has all the potential of a good film, which, unfortunately, the director has not exploited. His prime concern was commercial success. So he wanted to include all the ingredients of popular taste. The characterization of Ajit Thomas is in line with that of a typical hero. His entry to Sonagachi without taking any precaution is suicidal. Only a stereotyped hero can afford to such an operation. The introduction of the Black Magic practitioner seems to be out of place. What is the need of police investigation if one can elicit all information, for instance, of a murder from a Black Magic practitioner? How easy and quick would be our crime investigation process!

Dileep exhibits a high degree of maturity in presenting the character of Ajit Thomas.

He proves that he has outgrown from the conventional roles akin to ‘CID Moosa’. Meera Jasmin is in her fantastic performance. It is high time the popular cinema should dispense with the stale characters like Samajam president and his wife played by Innocent and Bindu Panicker. Technically Calcutta News may be considered as Blessy’s best film.

S. Kumar could capture the nostalgia of the city in subtle, but humane frames. The camera angles, movements and the compositional elements executed fabulously coupled with fast editing style give an unusual dimension to the film.

Some stories are happening and some others are made. When stories are happening the spectators love them and such films are elevated to popular genre. This film falls under the second category, where, it seems that the story is made for Dileep and Meera Jasmin. Undoubtedly ‘Calcutta News’ is not a bad film. By now it has earned a top position among the films released so far in 2008. It gives the impression that Blessy is advancing in his film career with more promises to offer.

### Sustainable Dairying

Milk can be converted in to value added products like butter, ghee, curd, peda, ice cream, cheese etc. based on location specificity, demand and available technology.

Of the total cost involved in dairying more than 75 per cent is for feed alone. During the last three decades feed cost has increased 200 per cent in the state whereas cost of milk has been increased only by 50 per cent. More than 90 per cent of the raw materials needed for compounded cattle feed are coming from nearby States. In order to make the system sustainable, farmers need to follow scientific feeding and management strategies. Productivity enhancement programme has to be given more emphasis. Cultivation of fodder crops needs special attention. Dairy farmers having limited land availability can think of cultivating azolla at their homesteads. Azolla contains more than 25 per cent protein, which will improve milk production and fat content in milk. Compounded feed and adlibitum water should be given separately. All types of new technologies in feeding have to be followed to increase milk production. Bypass fat and protein feeds, probiotics, urea molasses block, chelated mineral mixtures, total mixed ration concept etc. can be effectively used to exploit production.

**Total Mixed Ration**

TMR concept developed by National Dairy Development Board, Sumul Dairy of Gujarat and Animal nutrition division of Sree Venkiteswara Veterinary University, Hyderabad is one of the new technologies in feeding. Scarcity of fodder is a main problem as far as Kerala is concerned. Under TMR system, concentrates and fibre are mixed as per the nutrient requirement of milch cows. TMR blocks are of two types yielding up to 15 litres of milk per day and other for cows yielding up to 10 litres per day. While giving TMR blocks, there is no need for giving additional feed or fodder. Only adlibitum water is needed. Areas where land availability is limited for fodder cultivation feeding of TMR blocks can be tried, which will help to improve milk production and fat content in milk.

Cattle shed should be constructed in an eco friendly manner. Cattle shed with adequate ventilation improves production. Floor of the cattle shed should be made concrete. Cow comfort measures in the cattle shed will optimise milk production. Management measures based on climate, season, stage of lactation etc. has to be followed. Milking, reproductive and disease control management measures will make dairying more profitable. Teat dipping and dry cow therapy has to be regularly practiced in order to control the incidence of mastitis. Regular vaccination against Foot and mouth disease, Hemorrhagic Septicemia and other disease control measures will be followed. Vitamin-mineral supplements have to be given regularly. Postpartum deworming will help to improve production. Quality control measures like HACCP has to be followed from production to marketing. Clean milk production programme must be practiced in a regular manner.

Recently more entrepreneurs are interested to invest money in dairying. Recent trend is more towards commercial dairying in the State. Fully computerised high tech dairy farms have already been established in Maharashtra. Moreover there is enough potential for starting commercial dairy farms in the State under public private partnership.

The writer is Assistant Director, Animal Husbandry Department, Govt. of Kerala.
Theatre presentations from the North East

Photo: Dalu Parameswaran
Documentaries on Women Empowerment

To create awareness among the public about women empowerment, the State Women’s Commission has released a series of documentaries, radio spots and short films. P.K. Sreemathy Teacher, Minister for Social Welfare, has released the promotional materials in Thiruvananthapuram.

The documentaries concentrate on issues related to Domestic Violence (Protection to Women) Act, inter-state marriage racket, sexual abuse faced by women etc. Doordarshan and All India Radio will air the programmes. The documentaries were prepared for the Commission by Kerala State Film Development Corporation and C-Dit.

The Commission has also organised scores of seminars and workshops on various issues related to women.

Venu Nair receives National Award

Noted film maker, Venu Nair got National Tourism Special Award for his documentary about the myth behind Aranmula metal mirror. The award was handed over to him by Pranab Mukharjee, Minister for Foreign Affairs, at a ceremony held in New Delhi. Active in the medium of film and television since 1990, Venu Nair has created several short films for various departments of the State Government.

Agri Fair 2008

Agri Fair 2008 held at Marine Drive, Ernakulam during 20-24 February 2008 marked the culmination of district level farmers’ meets (Karshaka Sangamam) and 1068 Panchayat level Karshaka Adalats.

The five day Agri Fair show organised in Kochi recently was a feast to the visitors. Agricultural prosperity and potentiality of the State was showcased in the Marine Drive ground.

A good collection of fruits, vegetables, tubers, value added products, cut flowers, floral arrangements, collection of medicinal plants, Bonsai etc. attracted hundreds of people. Collection of 63 Paddy varities, 150 year old but only two feet long Banyan tree, coconut bunches, banana bunches, arecanut bunches, tubers etc. were the main attraction of the event. Seminars on various topics like Agricultural Land and Farmers in Kerala, Kerala and Coconut Farming, Opportunities of Agriculture Industries were also organised as a part of Agri Fair. Essay competition and quiz competition for college students were also held as part of the Fair.
Central Library becomes online

State-of-the-art facility has been introduced in the State Central Library in Thiruvananthapuram for its members. A member can now take, reserve and renew the books by the click of a mouse. One has to simply log on to www.statelibrary.kerala.gov.in. The facility was inaugurated recently by M. Vijayakumar, Minister for Law.

The online reservation facility and Radio Frequency Identification Technology (RFID) are said to be introduced for the first time in India. The member who visits the Library’s website will get ‘on shelf’ message, if the desired book is available in the library. If the book has been taken by some other members, ‘out’ message will be appeared on the screen. Now the member can reserve the book using the ID number.

Easy navigation of the website is the most member-friendly feature of the new initiative. One can browse under various categories like author, title, subject, place, publisher etc. You can also provide feedback to the library authorities through the website.

The children’s block in the library is equipped with the RFID facility. Being an electronic gadget, the tag of this system carries details of all the books attached with it. The tag can be accessed and the data can be retrieved using RFID reader. It is estimated that about 3.27 lakh books are available in the State Central Library.

The ISRO developed a new equipment for rescuing fishermen who are caught up in high seas during fishing. Search and Rescue Beacon can emanate unique rays, if a switch in the system is continuously pressed for 10 seconds. This will also function automatically, when comes in contact with water. The rays will be received by satellites and will be transmitted to the offices of Coast Guard in Mumbai and in Kerala. Number of the equipment, position and place of accident can be traced with the help of these messages. The device weighing 700 gm, functions with the help of global positioning system.

The ISRO handed over the know-how of the instrument to Keltron for large-scale production. S. Sarma, Minister for Fisheries, said that 5000 instruments will be manufactured and distributed across the state within one year.

Minister examined the working of the instrument in Kochi. S. Sathyanarayana, Group Director, VSSC and Capt. O.P Dua, Managing Director, Keltron accompanied.
Disclosing Land Identity

The initiatives made by the Department of Town and Country Planning can now drive away the elements involved in bogus land transactions. The state-of-the-art internet based GIS system incorporated in their web site can help you to find out whether a particular piece of land is earmarked for any developmental activities by the Government. The site has provision to key in the survey number and in no time, you will get the status of the land. This will help a prospective buyer to understand whether the land falls in the green belt or the safe zone. The project was launched by Kutty Ahammed Kutty MLA, former Minister for Local Self Government, in Thiruvananthapuram recently in the presence of Paloli Muhammed Kutty, Minister for Local Self Government.

The Department of Town and Country Planning has also made arrangements to display maps on the internet. The advantage of GIS maps compared to image is that they are interactive. They differentiate from an image in a sense that one can zoom in or zoom out without loosing clarity and specific points and areas on the map by invoking a simple search. Other features included in this website are layering, panning, provision for measurement of distances and areas. Zoning regulation of each scheme is also available on web, with the map interface.

Selected detailed town planning schemes from 14 districts have been incorporated in the website. The technology used is completely scalable and compatible with new technologies. Remaining maps will also be made online by next year.

The public can enjoy these facilities by visiting the website www.townplanning.kerala.gov.in and then clicking the link Web GIS.
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