

JK Development in the Last Four Years: A Journey of Progress and Growth

Over the past four years, Jammu and Kashmir has witnessed significant development under the Prime Minister's Development Package (PMDP). With a focus on infrastructure, public welfare, and education, the region has made notable strides towards progress and prosperity.

PMDP: A Catalyst for Progress

The PMDP was launched with 53 projects & an investment of 58,477 Crores in JK, aimed at addressing various developmental needs. As of June 2018, only seven projects had been completed. However, the subsequent years saw remarkable progress and increased completion rates, indicating the commitment of the government towards the region's development. Infrastructure Development: One of the major achievements was the completion of the Qazigund Banihal Tunnel, a significant infrastructure project that has improved connectivity between the regions. Additionally, the ongoing work on the Ring Road in Jammu promises to further enhance transportation and ease congestion. Swachh Bharat Mission: JK demonstrated its dedication to cleanliness and sanitation under the Swachh Bharat Mission. Multiple projects were completed, contributing to improved hygiene, waste management, and overall public health. Flood Mitigation and Disaster Preparedness: Recognizing the need for mitigating floods and enhancing disaster preparedness, JK made substantial progress in completing Phase-I of the Jhelum Flood Mitigation Project. This initiative aimed to minimize the impact of floods and protect vulnerable areas, safeguarding lives and properties. Education and Innovation: An essential milestone was achieved with the functioning of IIT Jammu from its own campus. This educational institution holds promise for fostering innovation, research, and human capital development in the region. The Way Forward: With 32 projects completed as of May 2023, JK is well on its way towards achieving the goals set by the PMDP. Thirteen more projects are slated for completion by the end of 2023-24, and an additional eight projects are planned for beyond 2024. This indicates a continued focus on the region's progress and a commitment to its long-term growth. The last four years have witnessed significant development in Jammu and Kashmir, driven by the PMDP and a commitment to the welfare of the region's citizens. Through the completion of crucial infrastructure projects, emphasis on cleanliness, disaster mitigation efforts, and advancements in education, JK has taken strides towards becoming a region of growth, opportunities, and prosperity. The government's dedication to the development of the region bodes well for its future, promising continued progress and transformation in the years to come.

SHAKTI SHRINE OF SHRI BUDDHA AMARNATH JI

■ G.L KHAJURIA

"Lord of Lords thy existence is universally all around thou engulfed the poison and offered elixir to the humankind for their sustainability and sobriety. Thou cocoons unremittingly and enshrouds the auro around the planet (Mother earth) that maketh us befitling in and around with other foems of bioifies for poerteties. We foray thee to provide us enough strength enabling us to revere thee devotedly with true mind, body and soul. We also pledge to preserve and conserve all the natural resources thy bestowed to us all. And we also pray th thee most reverentially to protect us from all diversities and revere thy to contain thine fury against the misdeeds we have most oftenly committed over the past. This would be our last longing prayer to thee forever and ever.

Situated around 20-25 kms. far away from Poonch to its North-East is perched this 'sanctum' sanctumori of 'Buddha Amarnathji' barely, 7 2-3 kms downfoot hill of (Mandi village also nomenclaturised as 'Rajpur Mandi', alongside left bank of "Pulsata stream" As per a popular belief "Pulsata stream" is attributed to a sage by name 'Pulsata Rishi'; grandfather of 'Ravan' who had an arduous penace of the 'supreme Shiva" here at Mandi's foothills and obtained shiva's favours over the remote past.This 'sanctum sanctorum' is believed to be much of age than "Shri Amarnathji holy cave" and is reified to be beyond 2 lakh years back when the sacred "Shiva's" spot as discovered and all this elucidate on "Shiva's" existence which emulate its eninnence when we impel someone about the omnipotence of the Lord Shiva emitting heavenly fragrance to all his devotees throng for holy darshan irrespective of religion, caste, colour or creeds. As per an equally prominent legend, it has been reported that in remote past a queen by name 'Loran Chanderika' was an arduous devotee of 'Lord Shiva' and every time around the Year, she got used to holy 'Darshan' of the Lord 'Shri Amarnathji Cave' and on missing one 'Yatra, she went wild ignoring meals even to the extent of water, The 'Supreme Lord', the Shiva favoured and appeared in her dreams. And on the dawn of the next day, a saint appeared before her and assured to have His darshan of "Shri Amarnathji" in her own native place of Mandi itself. Astonishingly, on the day of full moonlight of 'Raksha Bandhan', the sage in a miraculous of manner with hilariousness, a huge Yatra in the form of holymance off-shooted from "Mandi" and its surrounds being led by the saint towards an unknown hill and while the holy mace reached the destined hill found a sacred spot when the sage went missing amongst the huge mace; where the queen was in the lead. It was a time of wonder of wonders when heavenly-like images emerged delightingly to the utmost surprise of all as if they are in heaven. Miraculously and with heavenly bliss never ever seened or thought be seend, this all was muzzy in its entirety rather a semblance of godlihood, This was 'Lord's Magnanimity" which thought, indeed, soother, our souls by the great grace of 'Shri Buddha Amarnathji' It is believed further that Darshah of Lord 'Har Har Mahadev' is not complete if this 'Sanctum Sanctorum' is not gone over for the blessings. The holy mace (Yatra) divulges on ' Shruvan Purnamashi' by puja and havan and the huge procession off-shoots afoot towards the spiritual spot enchanting Har; Har, Mahadev, enroutte, which, de facto, echoes the wafty clouds over the azure sky on the hills and this is being initiated by the what is locally spoken as the representatives of 'Akhara' and while on way to the 'Sanctum Sanctorum'; there is an imensive display of langers, stalls of multihued genre for the delighted devotee on their way to holy temple. The surrounds of the temple is having clustered 'bowies' and amongst those is one spoken in local parlance a Paap Nashi bowl which washes off all the sins. So, the devotees have a holy dip in the spring (Bowl) before proceeding for holy darshan of 'Supreme Shiva", pay obeisance and obtain blessings. An idol of 'Nandiganji' exists on spot adjoining the temple complex of "Lord Shiva", who too is worshipped with due reverence and devotion. In order to facilitate the incoming and out-going pilgrims, the local Shrine Parvandhak Committee in association with local and existing government agencies do make adequate arrangements for the food, lodging, medical services and their allies to make the pilgrimage comfortable, apart from law and order situation and security arrangements in these high peaked militancy scenario. This sacred temple (sanctum sanctorum) is of utmost importance of 'Shakti' and demands lot improvements by carrying out extensive/ intensive afforestation works and the forest deptt. shall have to pick up the thread. On the same analogy, the floriculture deptt. and other sister agencies need to be energize at their respective assignments to enhance the grandeur and glory of the area. Insofaras, the floriculture deptt. Is concerned, it needs raising of ornamental plants, the climbers, creepers, hedges and many more of its ilk in order to enhance pilgrims influx, apart from improving ecology and boosting tourism. The area do demands to be brought under 'Shrine Board' with due co-operation associating locals to ensure upgradation of the area. apart from laying out of sheltered-stop-overs, enroutte, the toilets and the viewpoints so on and so forth..... Conclusively, therefore I would like to add over here the everlasting words; 'Attachment is that which dwells on pleasure; Aversion is that which dwells out pain' "Yoga Sutra".

To hold your youth, energy and the spark; press the pause button in the aging clock!!

■ DR. SUNITA KUMARI



In view of the fact that all human beings do not age at the same speed, three different components of aging have been described to characterize an individual's age. The first component is chronological age, which means the number of years since birth, or the number of rotations the Earth has performed on its axis and around the sun since a person leaves his/her mother's womb. Chronological age cannot be altered by any means, and at the same time, it has the least to do with how we feel and function physiologically. In other words, an individual's functional capacity, well-being or mortality risk does not depend upon chronological age. The second component is psychological age which is a subjective experience of how old or young we feel. There is a common aphorism, "Old at eighteen and young at eighty" which means some people who are in their fifties or sixties may feel better than they did in their thirties. In prior times they may be unhappy in their lives, uncomfortable with their jobs and were not taking good care of themselves in terms of diet, exercise etc. But now they have started taking care of themselves, learned how to relax and enjoy life and their mental and physical well-being has significantly improved. Therefore, chronologically they may be older but psychologically they feel younger than they did during their previous years. The third and most important component is biological age which is a measurement of how well the systems of our body are doing their job physiologically. Biological age talks about overall health and indicates how rapidly or slowly a person is aging. Psychological age is closely linked to biological age. When the body is functioning in a more efficient, energetic manner, we experience as feeling livelier.

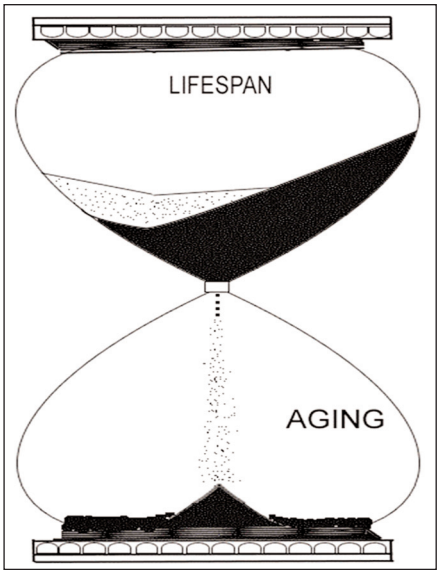
How and why behind the Aging Process (Theories of Aging)

Biological aging is a multifaceted complex process that leads to accumulation of diverse deleterious structural and functional changes at cellular level in all organs and organ systems. The aging process is mainly under genetic control but environmental factors definitely have an impact. The genes that control aging, do so by influencing the cell maintenance and repair. A huge number of theories have been proposed behind aging process, but the most accepted ones are:

Free Radical Damage Theory: According to this theory oxidative stress is one among the major cellular and molecular events that contributes to biological aging and decreased lifespan. Oxidative stress means an imbalance between oxidants and antioxidants, in favor of oxidants that leads to generation of tremendous amounts of free radicals. A free radical (also called as reactive oxygen species) is an oxygen molecule that is missing an electron (unpaired electron). These are extremely hungry molecules and in order to replace their missing electron they haphazardly knock out the electron from any nearby source like proteins, fats (lipids), or DNA molecules. Over the time they damage them and lead to mutations that are responsible for synthesis of abnormal proteins in the cells. Since proteins function as enzymes and hormones, and structural element as well. Therefore, synthesis of abnormal proteins leads to decreased/ defective functioning of cells ultimately leading to cellular aging, senescence, and decay.

Cellular levels of free radical damage increase with age and countless illnesses are linked to free radical damage. Cancer, heart disease, stroke, diabetes, arthritis, osteoporosis, inflammatory bowel disease, glaucoma, retinal degeneration, and Alzheimer's disease are few of them.

Telomere Shortening Theory: It explains biological aging at cellular level. Telomeres are cap like structures of DNA located at the ends of



chromosomes and they enhance the chromosomal stability by protecting their degradation. Telomeres naturally shorten due to the inherent limitations of the DNA replication process leading to a compromise in the cell's ability to replicate and function properly, ultimately leading to a state where cells no longer divide (replicative senescence). This telomere shortening is a natural part of aging process but it is influenced by various factors. For instance, lifestyle choices, such as smoking, poor diet, lack of exercise and chronic stress have been associated with accelerated telomere shortening, and hence accelerate the biological aging process.

Similar to above two detailed theories of aging, there are others namely; Caloric restriction theory, Inflammation theory (Inflamm-aging), Mitochondrial theory, Gene regulation theory, Disposable soma theory, Neuroendocrine theory etc. but the understanding to all these theories is complex interplay of multiple factors and still an area of active research.

Signs and Symptoms of Aging: Age related changes occur in all tissues of the body and affect the functioning of all body systems. Aging person can have greying/loss or thinning of hair; wrinkling of skin, and age spots. Greying of hair usually starts in thirties but sometimes we may find greying of hair at an early age and even in school going children (premature aging). There may be reduced muscle mass and strength, pain and stiffness in the joints, decreased bone density, decrease in vision, hearing loss, reduced metabolism, fatigue, change in sleep pattern, change in mood, and slow wound healing. It is essential to recognize that while these signs and symptoms are common with aging, they are not uniform for everyone and different individuals age at different rates. Therefore, a person can have biological age very different from the chronological age. Furthermore, advances in medical care and lifestyle intervention can help manage or delay these age-related changes and promote healthy aging.

How to narrow down the bore in the aging clock and have the ultimate combination of mature wisdom and youthful biology?

While presently it is almost impossible to completely halt the aging process, but it can be influenced and slowed down. Various studies have shown that human aging clock is malleable. Although we cannot manipulate our chronological age, we can definitely manipulate the more important measures of our biological and psychological age. Here are some strategies to decelerate aging process: -

Balanced Diet: Take nutritious and balanced diet that contains fresh fruits and vegetables, whole grains, lean proteins, healthy fats, nuts and beans. A balanced diet contains abundant antioxidants that fight free radical damage to the cells in our body. Therefore, whatever the diet we may follow- vegan, vegetarian, non-vegetarian etc. it is very important to take these food items with special focus on antioxidant vitamins, A, C, and E

rich items for each and every meal in order to delay the aging process. Your diet should also include vitamin D rich foods (ensure adequate sun exposure as well). Vitamin D has been associated with modulation of telomere length. Make every effort to avoid processed and packaged food. At the same time reduce consumption of saturated fats and also restrict overall calorie intake. Reduction in caloric intake while maintaining intake of essential nutrients is the most evolutionarily conserved life extension strategy: A balanced diet (good mix of carbohydrates, proteins, and fats) will also result in sustained ideal body weight. Also, limit your salt intake and ensure daily intake of adequate amount of water.

EXERCISE: One of the critical needs of the body is to move. Regular physical exercise is one of the most important steps to narrow down the bore of the aging clock. "Use it or lose it" is directly applicable to our physical body. Exercise has multiple anti-aging benefits. Regular exercise increases telomere length and delays the development of neurodegenerative disorders and also elevates high-density lipoproteins which have anti-oxidant and anti-inflammatory properties, ultimately slowing down the aging process. Yogic exercises also reduce the oxidative stress and increase telomere length that helps slow down the aging process. In fact, yoga is simple, easily doable and costless means to reduce all human sufferings.

Practise Mindfulness (Meditate): When we are awake, most of the time our body is in fight-or-flight (stress) mode. The actual purpose of fight-or-flight response is to help a man survive in threatening situations but long-term consequences of activated stress response are cellular damage to the body and acceleration of aging process. Meditation is restful awareness and its purpose is ultimate relaxation. Heartful meditation makes our body and mind to enter in to a restful mode which is opposite of fight-or-flight mode. When we meditate deeply and enter in to the gap between the thoughts (thoughtless state), breathing slows and levels of stress hormone in the blood falls. Regular meditators have wide range of health benefits including less chances of hypertension, heart disease, anxiety, depression, and improvement in many of the biomarkers of aging. Their immune function also gets enhanced and they have reduced susceptibility to infections.

Have Adequate, Restful And Timely Sleep: Everything in the world moves through periods of activity and rest, including our physiology. Therefore, our body also needs a downtime to heal and rejuvenate itself. The world has day and night rhythm, as well as seasonal cycles. We should try to align our biological rhythms (sleep-wake cycle) with the rhythms of nature. Our bi-rhythms when not aligned with the nature leads to wear and tear in the body and mind leading to acceleration of the aging process just like a jet lag leads to concentration problems, mood disturbances, and digestive problems. Getting 7 to 9 hours of timely sleep can make a significant difference in with what speed we age.

Maintain a youthful enthusiastic mind: If our mind is old our body will reflect that. Many studies have shown that our biological age correlates better with psychological age rather than chronological age. A youthful mind is a mind that is constantly growing. As a popular saying goes, "People don't grow old, when they stop growing, they become old". Learn something new every day and keep stimulating your mind to grow every day. This way brain will continue creating new connections among its billions of neuronal cells. With every thought, every feeling and every sensation, our nervous system undergoes subtle changes in physiology and generates chemical messengers that regulate our body. These biochemical communicators continuously mold the molecules that comprise our cells, tissues and organs. We influence our health and well-being through the choices we make. Our mind and body are closely interwoven so that changes in one influence the other even in a fraction of a second. Our brain is an

extraordinary dynamic organ that is continuously reshaping itself. Our brain contains billions of neurons (brain cells) and each of these neurons has more than ten thousand connections with other neurons throughout the brain. These connections undergo constant transformation reflecting our moment to moment changing experiences. All experiences take place in the mind and our mind is extremely non stationary. So, it is clear that we need to enhance the way we think and feel. Through our understanding, by our interpretation and choices we can increase the quantity and quality of human life, adding both years to life and also life to our years.

Practise Empathy and Love: Love is the essence of life and we can slow down our biological age through love. Love is as essential as food and water. Love is not just a psychological experience but it can transform our biology as well. Babies fail to develop normally if they are deprived of their mother's love (maternal deprivation syndrome). The experience of love has tremendous life supporting effects on our physiology. Scientific studies have shown that just by observing the acts of compassion our immunity is improved or enhanced. In an experiment done in Harvard University, it was found that college students increase the production of their salivary antibodies when watching a film of Mother Teresa comforting a child, where as their antibody levels were depressed when watching a war scene or horror movies. Every impulse of experience is transformed in to the chemistry and electricity of our body. There is no exercise better for the heart and mind than reaching down and lifting the people up. It is important that what thoughts we are feeding in to our mind because our thoughts create our beliefs and experiences. We have positive thoughts and negative thoughts too. We should nurture our mind with positive thoughts; kindness, empathy, compassion, peace, love, joy, humility, generosity etc. The more we feed our mind with positive thoughts, the more we are able to slow down the aging process.

Happiness: Don't forget to get the daily DOSE of happiness. DOSE refers to Dopamine, Oxytocin, Serotonin, and Endorphins respectively. These are 'feel good' hormones that produce happy and euphoric feelings, and take us away from fight or flight mode. Regular exercise, high fiber diet, spending time outdoors, healthy sleep habits, yoga and meditation, listening to music, hugging and physical touch with near and dear ones etc. boost the level of these feel-good hormones in our body and gives immense happiness.

Stop Smoking, Alcohol and Drugs: Smoking accelerates the aging process by dual mechanism, through production of oxygen free radicals (oxidative stress) in the smoke, and also through weakening of antioxidant defense system of the host. Alcohol affects the functioning of vital organs and makes them age faster. Heavy drinking is linked with cirrhosis (permanent damage to the liver) leading to loss of detoxification function. Intake of excessive alcohol increases free radicals in the body and also causes sleep disruption. Alcohol also depletes the body, of antioxidant vitamins, especially vitamin A. Even moderate drinking can lead to fatty liver disease. Therefore, no amount of alcohol is safe. Drug addiction and substance abuse also accelerate aging process and the mechanism is oxidative stress, excitotoxicity and mitochondrial dysfunction that leads to degeneration and death of neurons.

NOTE: Remember that while above strategies can help decelerate aging, the process is a natural part of life. Embrace healthy habits as part of overall lifestyle and focus on promoting physical, mental and emotional well-being. Each person's aging journey is unique, and maintaining a positive outlook, we can definitely add few more years of youth to our life and constitute to a more fulfilling and enjoyable aging process.

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Entrepreneurship Development in Dairy Farming

■ DR. BANARSI LAL

Milk is a great source of various nutrients required by the body such as calcium, magnesium, zinc, phosphorus, Iodine, iron, potassium, folates, vitaminA, vitaminD, Riboflavin, vitamin B12, fat etc. Milk has mere 1gm of fat in every 100 grams of milk. It contains sufficient amount of fiber and sugar. Milk provides instant energy to the body as it contains high quality proteins. Milk is an important liquid for everybody. Milk helps us to have a better health and to maintain it for achieving our goals of life. Milk helps to develop the body muscles and solves the problem of weakness in the body. Mother milk is also very essential for the children to keep them healthy and fit. Now-a-days people are trying to maintain their body by various types of exercises and Yoga. They are also consuming various types of weight gaining powders without thinking about their side effects. There is dire need to develop the awareness on the positive effects of the milk on our bodies so that we can achieve our goals in our lives. Now-a-days people eat many types of junk food but that can be harmful for the body. Milk contains every type of nutrients which make our body healthy and fit. Milk has many uses for the different people and various types of products can be made from it. India ranks first in milk production but the major production of milk is only from the certain pockets of the country. The Indian dairy sector with a large number of dairy farmers in rural areas has made a tremendous impact on the agrarian economy of the nation. India is the largest milk producer in the world, thus the role of dairy farmers is very important in dairy industry and development of the society. Economic development takes place when a society embraces and encourages entrepreneurial behavior: Livestock is emerging as an important sector in the economy of Union Territory of Jammu and Kashmir: This sector plays a significant role in the socio-economic development of J&K. In Jammu and Kashmir the number of animals per 1000 human beings are 882 while at national level this number is only 457 as per livestock census 2007. But even then the milk and milk production in J&K is low. In Jammu and Kashmir about 80% of population lives in the rural people and about 60% of the state's revenue is generated by the agriculture and animal husbandry sector. Dairy farming is a potential source of additional income for the rural people of J&K. The contribution of dairy sector to the national income is invaluable. This sector provides insurance against crop failures. This sector helps in increasing the crop production by providing the

drag power; organic manure and cash income on a regular basis. Although India ranked first in milk production but the productivity of milk in hilly areas of J&K is very less. Maximum milk is produced in certain parts of Union Territory of J&K. Lack of technological dairy information sources is one of the reasons of low milk production for the farmers of hilly areas. The major occupation of the rural people of J&K is agriculture and livestock rearing is the major source of income and employment. Agriculture and allied sectors contribute about 38% to J&K gross domestic product of which 11% is contributed by the livestock. Dairy sector not only generates income and employment among the farmers but also supplements the varied nutritional requirements of the individual. Livestock rearing is an integral part of rural J&K. It has been observed that livestock population in Jammu and Kashmir has increased over the years. Milk production in Jammu and Kashmir is steadily increasing. One of the major bottlenecks in low production in dairy sector is Jammu and Kashmir's diversified climate e.g. temperate climate in Kashmir region and humid sub-tropical climate in Jammu region. Small size of land holding is another hurdle for limited milk production in J&K as it does not produce much fodder production because of lack of modern technologies in small farms. Department of Animal Husbandry of J&K and SKUAST-Jammu and Kashmir are providing the technological guidelines to the farmers and also providing the frozen semen of pedigree bulls to the veterinary dispensaries. India is the largest cattle producer in the world and has large animal diversity and is first in buffalo while second in goat production in the world. 13 per cent of world's cattle population and 57 per cent of world's buffalo population is found in India. Buffaloes contribution towards the milk production in J&K is lesser (0.27%) as compared to the national average (1.84%). Buffaloes breeding programmes can be taken in the Union Territory of Jammu and Kashmir: There is dire need of cross breed and Jersey bulls in J&K to improve the cattle breed. The emphasis should be given on the use of advanced breeding tools to increase the breeding bulls for expansion of artificial expansion in J&K. Clinical animal health services with capacity building for superspeciality and advanced medicinal interventions need to be developed. Animal diseases and parasites need to be managed according to the different agro-climatic zones in J&K. Focus should be given on important diseases like foot and mouth disease, mastitis, tuberculosis, metabolic disorders etc. for the safety of animals. Imbalanced

animal diet in dairy animals affects their production, reproduction and health. Area specific dairy mineral mixture should be given to the dairy farmers to fulfill the diet of dairy animals. The efforts for the improvement of breed of animals are wasted without proper nutrition. The annual fodder need of J&K is deficit by 60%. From the last one decade the area under fodder in J&K is stagnant.

Majority of livestock rearers in J&K are small and landless farmers who have very limited sources of fodder: Feed and fodder are the main factors for the reduction of dairy development in J&K. Fodder availability especially in the off-season is really a great problem for the dairy farmers. There is need to promote feed and fodder resources in J&K. There is need to promote scientific techniques for hay and silage making. Training on scientific cultivation of fodder should be imparted to the farmers and improved/hybrid seed of different fodder crops should be timely provided to the dairy farmers. Cost-effective nutritious feed should be made by the researchers. Promotions of Urea Molasses Multinutrient Blocks (UMBBs) have shown excellent results for the production and reproduction in dairy sector: Research should made in conversion of agricultural products into cattle feed. In hilly terrains still there are certain habitations which lack road connectivity. There is need to develop the infrastructure of dairy plants especially in the hilly areas so that milk collection can be increased. Also there is need to have bulk coolers, refrigeration systems and also to develop the organized markets in the rural areas which further can help in rural development. The focus should be given on small dairy farmers who lack availability of nutritious feed, timely institutional credits, fodder availability in off seasons of the year; timely quality veterinary care etc. Superior breeds of animals should be made available in the rural areas of J&K. The rural areas can purchase the superior breeds of animals if institutional credit is provided to them. There is need to have proper linkage between the scientist, extension workers and dairy farmers. The research in livestock production should be according to the socio-economic conditions of the farmers. Dairy technologies should be made by the scientists according to the socio-economic, size of dairy farm, market approach of the farmers and also the agro-ecological conditions of the region. Let us thank our dairy farmers who bring us the goodness of milk in different forms.

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