





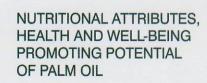








INNOVATIONS TO PLAY CENTRAL ROLE IN DEVELOPING FOOD INDUSTRY



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INDIA NEEDS TO ADOPT GM CROPS SOON TO INCREASE PRODUCTION AND LOWER COSTS, WHILE ENSURING SAFETY: EXPERTS

adoption genetically modified (GM) crops in India having hit a roadblock, Dr. Lalitha Gowda, who is the Chair of the Scientific Panel of GM-Foods, FSSAI and member of GEAC (Genetic Engineering Appraisal Committee) said any regulation that needs to be implemented has to be first safe for human and animal consumption.

She was participating in a panel discussion on 'Making livestockindustrycompetitive: way forward', organized jointly by the Karnataka Poultry Farmers and Breeders Association (KPFBA); the Compound Livestock Feed Manufacturers' Association of India (CLFMA); the Biotech Consortium India Ltd; and Animal Nutrition Society of India.

Thorough protocols need to be followed. Dr. Gowda said that there are well laid out protocols in line with Codex Standards and they take time, not just in India, but in the developed parts of the world. While agreeing that GM crops had benefits, she said they had to go through appraisals before going commercial. Regarding processed GM derivatives for feed, she said that a simplified considered procedure is sufficient as they are not living modified organisms.

Presently in India, only Bt Cotton is allowed as GM crop, while brinjal and mustard are awaiting approvals for quite



some time now.

Demand for protein will increase exponentially

Neeraj Kumar Srivastava, Chairman of Compound Livestock Feed Manufacturers Association of India (CLFMA) said India would be at the centre of increased meat demand and close to 50% meat is going to be produced in Asia, thus opening up enormous opportunities for the livestock sector. India is number one milk production and millets, number two in wheat and number four in broiler production, however, the protein demand and supply to the growing population is inadequate.

India, he said, needs 25 to 30 million metric tonnes of protein of which only about 47% is supplied through internal sources. As there are limitation in increasing yield of agricultural crops, he stressed for need for GM crops to increase productivity and meet demand. India's per

capita availability of livestock is low and it has one of the lowest protein consuming population. The demand for protein will continue to increase in view of the expanding middle class, with changing lifestyle patterns, urbanization and other consumer driven market Though trends. poultry numbers have grown more than 500 per cent in the last couple of years, there is need to increase output.

The input cost for livestock has significantly gone up and this, he said, is a matter of concern. While stating that there is urgent need to reduce input costs, he added that in 2020 feed production saw a degrowth of 6% and there was movement towards regaining volumes this year. Demand for feed is going to go up considerably. India added 4.5 mmt last year with feed production between 39 and 43 mmt, highest in the world. It is hoped to touch 55 mmt by 2026 and to meet this demand india

needed new technologies. To meet the increased protein demand there was need to increase productivity per acre and that GM crops was the best bet. "There are so many myths about GM crops which needs to be dispelled. The bottlenecks should be removed as GM crops will be of help to both farmers and the sector. The Government of India, he said, has been very supportive.

GM crops can overcome shortage of feed

Dr. K.C.Veeranna, Vice Chancellor, Karnataka Veterinary, Animal and Fisheries Sciences University said cost of production of livestock is going up every day as the major contributor is feed. The biggest challenge is to reduce cost of production and make products which are rich in protein easily available. In this background, only GM crops and derivatives could help overcome shortage of feed. Stating that fodder resources were limited as land available for fodder is decreasing, there was need to utilize technologies to meet animal nutrition needs.

Dr. S.Rajendra Prasad, Vice Chancellor, University Agricultural Science, Bangalore, said with India's population growing at a fast pace, it was urgent to focus on nutritional security of both human beings and animals. India produces 308 million metric tons of foodgrains and 329 mmt of vegetables and





PashudhanPraharee, a bi-lingual magazine dedicated to animal health care and livestock development, has honoured the Executive Secretary of the Karnataka Poultry Farmers and Breeders Association (KPFBA), Inayath Ulla Khan with the "Prof.G.Devegowda Poultry Science Excellence Award 2022".

The award has been instituted in recognition of his significant and outstanding contribution in the field of poultry sciences for the year 2022.

Inayath Ulla Khan was presented the award at a recent seminar on 'GM Crops and Animal Nutrition' in the presence of Prof.G.Devegowda who is considered as the 'Pitamaha' of poultry sciences, the President of KPFBA, Dr.Sushanth Rai, the Chairman of Compound Livestock Feed Manufacturers Association of India (CLFMA), Neeraj Srivastava, Dr.Vibha Ahuja, Chief General Manager, Biotech Consortium India Limitedand other dignitaries.

The citation read out by Dr. G. Gopal Reddy (Vice President, IVPI) listed out the relentless efforts Khan has been contributing to the sustainable growth of poultry sector, by networking with various institutions and experts; by organizing various sector related events through KPFBA; and connecting with government and government agencies for bringing about policy changes.

Khan is a native of Mandya, an Alma matter of St. Philomena's College Mysore and settled in Bangalore. He has pursued B.Sc in Computer Science from University of Mysore and MicroMasters in Business Management from IIM-Bangalore.

In his thanks giving address, Khan acknowledged the role played by different



President's and Committee Members of KPFBA in shaping his career, learning from each President the new skills. He recalled how during the Covid-19 lockdown and restrictions that followed, the KPFBA rallied to connect with government authorities to ensure that the poultry sector image was not tarnished as all kinds of rumours were floating at the onset of the pandemic. 'The poultry sector has many challenges and they can be resolved only through collective efforts, collaborative approach and that KPFBA is one of the platforms to bring about growth of the sector', Khan said.

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fruits, but this is going to be highly insufficient to meet the demands of growing nation.

Dispelling myths about safety of GM crops

Dr. Vibha Ahuja, Chief General Manager, Biotech Consortium India Limited, said it was necessary to permit the use of GM crops and its derivatives as it would help in increasing the availability of feed and feed ingredients in India. It is imperative to make available sufficient low cost and good quality feed for sustainable growth of poultry, dairy, aqua and other livestock sectors.

On the many myths that surrounded GM crops, Ms. Ahuja reiterated that reviews by major scientific bodies and regulatory agencies have confirmed that GM crops and the food derived from them are safe. The only difference between the GM crops and their non-GM counterparts is the proteins expressed by inserted genes. The safety of the consumption of these proteins is established based on biological properties and tests of digestibility, acute toxicity and allergencity. Once this is done and safety established compositional the equivalence confirms that the GM crop / food is similar to corresponding non-GM which has been used / consumed traditionally for generations and hence no long term effects are expected to be seen based on this history of safe human use.

Ms. Ahuja said that many countries were using GM crops and she wondered what the problem was to get it approved. The initial resistance came from Europe, both political and corporate. regulators Scientists, working constantly improving biosafety. India good regulatory has a

system. Inspite of all the good technologies in the country, there is polarized debate, driven by some activists, leading to delay in approval of GM crops.

Ms. Ahuja said that farmers urgently need technologies and India needs to act with regard to streamlining the approval process. We need to approach the government for tax exemption on GM products.

'More from less', not less from more' is going to be the mantra

P.S. Dr. Mahesh. Commissioner, Government of India and Director (I/C) of Central Poultry Development & Training Organisation Institute said the due to climate changes, the planet is challenged by demand of protein, demand of energy, demand of population etc. and that the era of less from more is over now and that we need to work on 'more from less', referring to land availability. Talking about GM, he wondered how people accepted milk from the cow which was eating Bt cottonseed, a GM derivative, but were not ready to accept any other GM products, calling for severe extension work.

India can export to Gulf having logistical location advantage

Mr. Naveen Pasuparthy, Treasurer, CLFMA of India said presently corn and soya have major inputs controlling poultry costs. Yield per acre of both crops is too low and GM is the only solution to increase yield as well as income for farmers. Excessive usage of pesticides, herbicides etc have been affecting genetic capabilities of animals which feed on such crops.

He said that there was

potential enormous exports if we could sufficient and cost effective available made inputs through GM technology. He talked about how India was just four hours away from Gulf and could supply easily, being logistically located hub, unlike Brazil and other South American countries which were supplying livestock to the Gulf and would be challenged by high fuel prices in the years to come.

M.S.Sheshshayee, Dr. Head, and Professor Crop Department of University Physiology, Sciences, of Agricultural Bengaluru said the mantra has been to produce more from less, more crop per drop, more grain per rain and use of GM Technologies can help in achieving the same. Talking about proteins, he said Indians get nearly 70% proteins from cereals but that is not sufficient and contribution of livestock is immense

Need to convince NGOs and educate farmers

Dr. Devegowda, President of Institution of Veterinarians of Poultry Industry (IVPI) said that there was urgent need to convince non-governmental organizations which are opposing GM crops and also educate the farmers on the benefits of GM. India needs GM to feed the growing population, both human and livestock.

Trade has to happen for quicker adoption of GM

Amit Sachdev, Regional Consultant, South Asia, US Grains Council, said trade needs to happen and mentioned that US and India had signed an agreement in 2021, allowing import of Alfalfa for the dairy industry. Underscoring the importance of GM crops, he said there

was no other go, but to adopt as they were safe, cheaper and was going to be easily available in the world market.

Calculating nutrient value leads to improved productivity

Susil Silva, Head, Animal Utilization, South Asia, US Soybean Export Council talked about "Nutrient Value Calculator" and explained key features of the tool and how it can be used for calculating nutritional value of feed and can contribute to improved productivity.

Dr. N.K.S.Gowda, Principal Scientist, ICAR-National Institute of Animal Nutrition and Physiology also spoke about nutritional value of animal feed.

Dr. Sushanth Rai, President, Karnataka Poultry Farmers & Breeders Association said the demand for animal feed for poultry, dairy etc is growing and that soaring prices affected the sector. India needs to import soybean by September to tide over feed crisis, while there is urgency to produce more and GM was the only answer.

Prof. G. Devegowda Poultry Science Excellence Award to Inayath Ulla Khan

On the occasion, Inayath UllaKhan, Executive Secretary, KPFBA was conferred with the Prof. G. Devegowda Poultry Science Excellence Award 2022 instituted by Pashudhan Praharee. Mr. Khan was honored for the yeomen service he has rendered to the poultry sector in general and KPFBA in particular.

Mr. Khan proposed a vote of thanks.

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EATING EGGS HAD ILL-EFFECTS AND CAN LEAD TO LIFESTYLE DISORDER

NIMHANS, Bengaluru, Vs. IVPI and KPFBA



The Institution of Veterinarians of Poultry Industry (IVPI) and the Karnataka Poultry Farmer's and Breeder's Association (KPFBA) have vehemently opposed the recommendation of a NEP (National Education Policy) panellist from Karnataka to the NEP that 'eating eggs had ill-effects and can lead to lifestyle disorder'.

Dismissing this recommendation of Dr. K.John Vijay Sagar, Professor and Head, Department of Child and Adolescent Psychiatry, NIMHANS, Bengaluru, the two organisations (IVPI and KPFBA) have said that his recommendation is not based on any scientific evidence. Humans have been consuming eggs and poultry meat since the dawn of human time.

The President of IVPI, Dr. G. Devegowda said on the contrary consumption of eggs has many benefits. "Eggs are a nutritional powerhouse that contribute to health and well-being at every age and life stage, providing critical nutrients including protein, choline, riboflavin (vitamin B2), vitamin B12, biotin (B7), pantothenic acid (B5), iodine and selenium, which are valuable for supporting muscle and bone health, brain development and more."

NITI Aayog recommendations

Dr. Devegowda who is considered the fountainhead of knowledge about the poultry sector said, "As consumption of eggs has several benefits, the apex government think tank of the country, NITI Aayog, is working on a proposal aimed at improving India's low nutrition ranking and centered on the idea that the

government subsidizes protein-rich food, including eggs, fish, chicken and meat, possibly through its system. This is likely to be part of Niti Aayog's 15-year Vision Document."

He further added that the entire veterinarian community, many of whom have done and are doing pioneering researchworkinthefieldofpoultrysciences, disapproved these recommendations and urge the government to take strict action to such motivated statements which may lead to unfound misconceptions.

Dr. B.Sushanth Rai, President of KPFBA, terming the recommendation by the NIMHANS expert as 'complete falsehood' said chicken, eggs and fish are eaten the world over as it is excellent lowcalorie and low-fat source of high quality protein that provides important nutrients throughout ones lives - from pregnancy through later years. "It is affordable, easily digestible and good for diabetic patients too. Chicken is the most consumed meat worldwide. Eggs produced in our country are exported too."

RegardingCholesterol,Dr.Devegowda said that egg contains 185 mg of cholesterol and it is found mainly in animal products such as milk, butter, ghee, meat, shrimp and so on. Breast milk (mother's milk) is also a rich source of cholesterol.

"Cholesterol Limit was removed from 2015-2020 Dietary Guidelines. The US government has accepted that 'cholesterol' is not a nutrient of concern. 'Doing a U-turn' on their warnings to stay away







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from high-cholesterol foods since the 1970s to avoid heart disease and clogged arteries. The main causes of heart diseases are stress, sugar, trans-fats, obesity, and inflammation.

Why the cholesterol limit was removed?

Only 20% comes from food. When we eat more foods rich in cholesterol, our bodies make less. The majority of the cholesterol is produced by liver. Our brain is primarily made up from cholesterol. It is essential for nerve cells to function. Cholesterol is the basis for the production of all the steroid hormones, including oestrogen, testosterone, and corticosteroids and also required for vitamin D synthesis and fat digestion through production of bile salts."

Dr. Devegowda added that an analysis of the national health data revealed that 80% of Indian men and 70% of Indian women have non-vegetarian food. "Considering the current scenario in the country, one would easily be misled to believe that India is dominated by vegetarians. However, that is not the case. Only a portion of the country - the Northern states - make up for most of the vegetarians of the country, while the Southern and North-eastern states are predominantly non-vegetarian, with people consuming different types of meat, fish, and eggs."

Protein insufficiency in India: Using eggs in fight against hunger and malnutrition Dr. Devegowda further added, "In





India today, reports indicate that 68% of the population are protein deficient. Protein deficiency starts at a very young age and is seen at alarming rate in school going children. As per Govt of India statistics: 36% children below 5 years are underweight and 38% are stunted. Children and adults with protein deficiency succumb more easily to infections. Every meal should have adequate amount of protein, vitamins, minerals and other nutrients. Eggs are good for all age groups, especially for children and nourishing mother. According to the Indian Dietician Association eating only vegetarian diet will not meet our daily protein requirements."

Dr. Sushant Rai said, 'This Unscientific and biased reports led to the drop in chicken and egg consumption, which had a cascading effect leading to huge losses to the small and marginal farmers. According to the information more than 30% of the poultry farmers have stopped poultry farming owing to these malicious reports & rumours.'

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