

-: NUTRITION AND FORTIFICATION **SEMINAR :-**

It is only recently that planners and researchers have realised that poverty and nutrition are interrelated and crucial to development or growth in GDP. Poverty is not an object that can be moved or displaced in the way one wants. It is intrinsically linked with factors of livelihood, opportunity for income, ownership of estates and availability of infrastructure for producing economic benefits. If ever one has seen the Bengal Famine in 1943, one would always thank the Indian Scientists for having achieved food self-sufficiency in the post green revolution phase. This production oriented approach has led the country to attain levels of food self-sufficiency, triggered by the slogan "Betting on the best Technology". Surpluses in agricultural production were achieved in a record time, while agricultural production reached peak levels and all agricultural lands got resumed for cultivation including those ones, situated in dispersed areas which were so far uncovered. The geographical region targeted schemes like waste lands, desert land and drought area schemes did also encourage cropping pattern in significant proportions for market returns. In this process, the local crops and their rotation process got disturbed and distorted since market profits and better yields of main food and cash crops only dominated the minds of farmers more than their food choices and habits or local adequacy factors. The marginal farmers got employed either as labourers or out of agricultural operations due to mechanization while earlier they were silent partners in share cropping deriving incomes for sustenance.

The liberalization process which started in 1990 has made more opportunities for income. Markets became central to human lives and increased indirectly the value of agricultural lands and encouraged non-agricultural activities to make incomes available to the poor and needy, otherwise than through agricultural occupations and address their needs of sustenance and livelihood. Schemes have been chalked out, like Food for work, Employment Guarantee Scheme, Pradhanmantri Gram Rojgar Yojana, Sampurana Gramin Rojagar Yojana etc. to address the needs of wage employment and improve food security of the people. These livelihood programmes are a sequel to the mandate contained in the directive principles expressed in Article 43 which aims at providing decent standards of living to people. The schemes of Targeted public distribution scheme, Grain bank scheme, Integrated child development services, Mid-day Meal Scheme (MDM)

have also emanated out of this, after a process of search for addressing the food security needs and nutritional levels of people and children who were vulnerable and critical to the country in terms of production and productivity. There has been therefore a transition from a single factor approach of production to multi-factor approaches of livelihood, nutrition, food security and Public distribution in addition to improving production scenario for self-sufficiency or even attaining surpluses. With this important shift having taken place in focus, there is a compelling need also to address the problems of macro and micro nutrients for nutrition levels. The short fall in nutritional levels can hamper food security as well as productivity of persons, in the same way seeds and fertilizers had affected the production in the earlier sixties. It is also an emerging fact that the law of decreasing returns has started manifesting in agriculture and simply adding fertilizers or providing irrigation cannot alone provide remedies in the agricultural sector to achieve desired outcomes of higher productivity.

So far as nutrients are concerned, as Dr. Gopalan has stated that they have to work in a manner of orchestra and not solo style so as to perform their roles in a life cycle manner covering different segments of population. The World Food Programme Report has pointed out that India has one third of world's underweight children and it has also the largest number of undernourished population. There is therefore an urgent calling for all of us, to chalk out a programme for food security with nutrition as the focus by integrating it with the existing programmes rather than chalking out a separate programme independent of them. The exiting programmes that are implemented in this context are Food for work, Food for education (MDM), Food for children and mothers (ICDS) and Food for hidden hunger and nutritional supplementation. All of us are aware of the sole truth that immunity and better health status are reachable through micronutrients. Out of the micro nutrient deficiencies, deficiencies in IDA (Anemia) VAD (Vitamin A Deficiency) and IDD (Iodine deficiency) are central and their deficiency at the initial stage may not be visible but in process of time, all these deficiencies affect most vulnerable groups viz. women, adolescents, infants and school age children. An estimate made by MI, an international agency has estimated economic loss due to such deficiencies at least @ 1 per cent of total GDP which comes to more than Rs. 28,000 crores caused by factors of health costs, treatment for illness, loss of productivity. In turn these deficiencies in micro nutrients as a spin-off also can hamper cognitive development and tell upon productivity of economy and health of population leading also to mortality. Around 6000 children

below the age of 5 die every day, linked with this deficiency factor which means 4 deaths per minute is caused on account of nutrition deficiencies while 60% women in the productive age and pre-school children also have predominance of VAD factor leading to problems of vision, night blindness and respiratory infection. In the similar manner, Anemia - IDA contributes to weak brain and low mental capacity and retards growth. Anemia is like the tip while iron deficiency is a phenomena occurring in people who are twice the number of people having anemia. In addition to this IDD also affects 200 million people of which 70 million are goiter affected, lead to mental retardation while in pregnant mothers it can cause brain damage or dwarfing to children.

Persons associated with food discipline or involved in the planning process, cannot disregard the new concepts and trends that have emerged in recent days marked by manufacturing of health foods, ready to eat, functional and specialized food. The latest scenario is probiotic food and stored food. All these foods need to be essentially laced with desired proportions of micro nutrients which can per force assure health benefits to those people who consume such foods.

It is food security that is the ultimate goal which can bring down the effects of poverty and improve productivity. This is attainable by

- a) A production approach to attain surplus and self sufficiency through use of new technology
- b) Proper distribution which is related to factors of accessibility, affordability and equity as well as through procurement of coarse grains for local consumption so as to encourage such crop pattern and make people earn incomes other than good health.
- c) Nutritional security - This has three levels a) Long term approach of diversification in foods and dietary education b) nutritional supplementation at the cooking stage. 3) Fortification at the initial stage of production along with massive awareness for its consumption.

If all these factors are allowed to work in the right manner, it can check food insecurity and improve nutritional level. It has also been observed in various studies that people who are well off are also nutritionally deficient and consume foods containing little micronutrients down their food pipes. This is what is known as

hidden hunger phenomena, where human beings unknowingly take foods not nutrient, but getting energy and get into levels of immunity suppression and lose their productivity in the long run. The public distribution system is mainly meant for needy and poor people to carry home this nutritional mandate and has to act as outpost of distribution for fortified foods viz. edible oil which is fortified with Vitamins A and D like it has been done in Gujarat or wheat flour fortified with Iron and folic acid available in all counters of market and through Government Schemes for women, school children and infants. Linked closely with this, is also the factor of accessibility of distribution, affordability of the people as buyers and equity which is achieved thorough "Subsidization of grains to the targeted population".

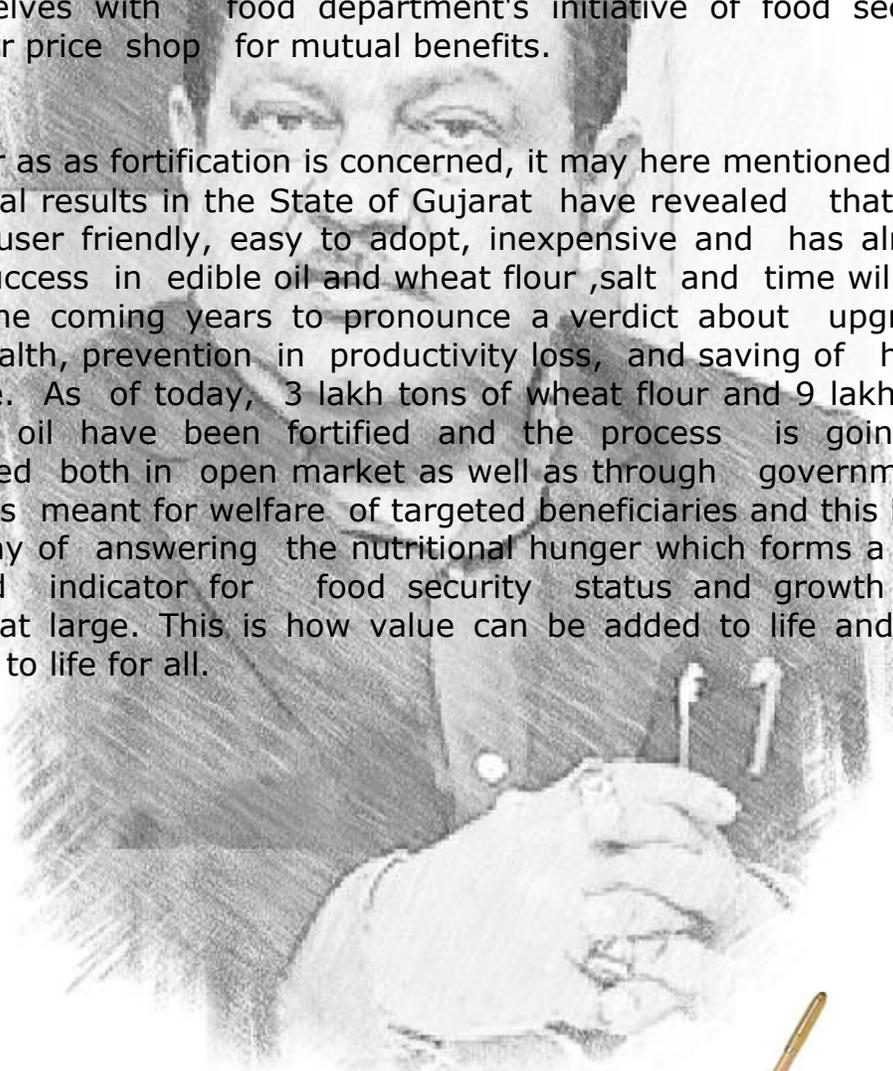
The accessibility factor is again linked with things like infrastructure, roads, location of shops and availability of food grains at a particular time period. The factor of affordability is linked with factors of livelihood and wage employment, schemes of employment as well as with improvements in agriculture through soil management, new technology etc. The factory of equity is linked with right selection of beneficiaries so that the loss or diversion factor can be eliminated and this may be done at the village level by constituting a food security committee which must also have the mandate of reviewing deleting, informing and proposing the names of food insecure persons by assuring equity in the PDS to reach them without any break or disruption.

Fortification a new concept which has come out of labs has to convert this programme into mass scale by introducing awareness promotion programmes, by which people can convert their nutritional awareness into demands for fortified products that can be marketed rampantly. This can also take place by involving the Panchyati Raj institutions and the gramsabha which can be the focal point and get involved in programme for food security and nutrition availability.

The grain banks which are also a part of the Governmental scheme can help to redeem problems of the hungry pockets and such grain banks need to be also launched at the local level by the food security committee which also needs to be given the possession of few common village lands, so that they can cover these beneficiaries of grain banks to cultivate, reduce, store and consume the produces. Such Grain banks can also take up the work of community seed banks and promote corpus fund so as to make itself autonomous and get out of the shackles of Governmental intervention at the local

level. It is at this stage one needs to target the FPS located at the village level which work as counters for food security, so that they can get upgraded and sustainable so as to remain away from activities of diversion and leakages and do a job of excellence and become multifunctional stores, a one stop shop for all business or goods satisfying the demands for all goods and services at the cutting edge level. This experiment has done headway progress in the State of Gujarat but in the long run it needs to be further improved so as to make it a total success story for food security. Such shops also can be administered by Self Help Groups and this is where the Rural Development Department has to promote Self Help Groups to link themselves with food department's initiative of food security through fair price shop for mutual benefits.

So far as as fortification is concerned, it may here mentioned that the practical results in the State of Gujarat have revealed that this process is user friendly, easy to adopt, inexpensive and has already proved a success in edible oil and wheat flour, salt and time will only reveal in the coming years to pronounce a verdict about upgraded levels of health, prevention in productivity loss, and saving of health expenditure. As of today, 3 lakh tons of wheat flour and 9 lakh tons of edible oil have been fortified and the process is going on uninterrupted both in open market as well as through governmental programmes meant for welfare of targeted beneficiaries and this is the simplest way of answering the nutritional hunger which forms a basic factor and indicator for food security status and growth of population at large. This is how value can be added to life and give more years to life for all.



- SK Manda