

## DISADVANTAGES AND HEALTH THREATS GENERATED BY GENETICALLY MODIFIED EDIBLE ORGANISMS – A FARMERS VIEW



### Abstract:-

This is a descriptive article from observations and logical deductions of experience. How genetical modifications is performed is also being explained. The main purpose is to increase the yield and also to attract the consumers. Listing of edible plants and herbal plants are also described along with medicinal and nutritional plants. Genetical modification is a turmoil created among the well adopted primary and secondary producers. Many more disadvantages are also discussed in the view of farmers. Researchers are requested to probe the effect of these genetically modified organisms over human health. Health threats and disorder such as metabolic disorders and carcinogenic effects as stated by oncologists are also discussed. Health is to be considered as a prime point in genetical modifications. In any body system even a small genetical modification will alter the whole system of the body. Listing of disadvantage is not to criticize but to make the process really healthy by doing real researchers over the after math of the introduction of a new genetically modified organism.

### Keywords:

Genetical modifications, Primary and Secondary production, Metabolic disorders, carcinogenic effects.



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## INTRODUCTION

The main concept of this article is to bring out the disadvantages and health threats, expected to be generated by the genetically modified organisms which are mainly consumed as food. As far as the food habits of south India “food is medicine” and “medicine is food”. Age old south India remained a good shelter for “Rishis and Munivars”. Agasthiyar spelled out Annasasthra, Nala Maharaja contributed 'Nala Baham' which involved the process of cooking with the help of fire, where as Bheema Baham was created by the second of Panchapandavas dealt the valuable food which are natural and need not want fire or cooking. Today we have neglected all the standardized cooking processes of our elders and now we are getting diseased even at teens. All our commodities and groceries along with vegetables are indirectly poisoned and become a victim of ill health.

The introduction of genetically modified organisms have several objectives but its objectives failed to assure good health. This paper bring out the basic ideas about I includes different temple, farmers was disadvantages of and research.

### 1.2 IDEAS ARE GENETICALLY MODIFIED ORGANISMS.

It is the biological endeavor to see how they can go beyond the nature. 'Genes' are the fundamental basis of coding any morphological structure of any organism which can be either a plant or an animal. As we know genes play the role of producing 'goodness' or 'illness' in any organism. According to some biological genetical theory it is stated that 'one gene control one enzyme' in a living body. Another theory explains that the genes are the inherited potential of an organism. Each and every trait is governed by a gene or a group of genes. Hence it can logically the deducted or inducted that if a gene is modified physically or chemically the effect of that gene on the organism can be modified.

Scientists are very much concerned only with the food products of human beings they actually try to change every thing why not the whole Universe to favour human beings which is an attempt to create a turmoil against the nature.

### 1.3 DIFFERENT TYPES OF GENETICAL MODIFICATIONS

Removal of a particular gene or group of genes.

Addition of a synthesized gene or group of gene

Transplanting a gene or a set of genes from other species of organisms into another species.

In general these are practiced in genetical modifications. Even though it appears very simple it is not so easy to perform these operations. So much of difficulty is taken only to go against natural processes but not in coherence with it. Some times this process occurs naturally also that is why we have so many races in the particular species.

### 1.4 OBJECTIVES OF GENETICAL MODIFICATIONS

To neglect and avoid unwanted aspects of an organism

To conserve and foster wanted and desirable aspects of an organism

To get more production of eatable part of an organism

To minimize the unwanted parts growth which can not be used as food

To increase the 'shelf life' of a produce

To reduce the longevity of an organism

To increase the number and size of the organism

To alter the basic constituents of edible organisms i.e. to increase carbohydrate protein or fat levels along with minerals.

Attempts are going on to produce vitaminization of cereals and millets.

Some hormones like insulin are also planned to get produced by genetical modification

Always 'good and bad' go together so these objectives are very attractive and admirable but these are against nature.

Organism susceptible by genetical modifications

Plants.

Cereals : Paddy, Maize, Ragi and Wheat

Roots : Beet roots, Carrots, Potatoes, Ginger, Turmeric and several tubers like tapioca

Vegetables : Brinjal, Ladies Finger, Cabbages, Green leaves, Tomatoes, Gourds, Cucumbers, Melons etc.

Pulses : Grams & Nuts.

Medicinal Plants :- Hibiscus and Amla

Fruits : Grapes, Apples, Sappota and Berries

These are only representations of plant kingdom which are genetically modified. Similarly some of the fish, prawn, oysters, mussels and fowls are also under consideration of genetical modification.

### 1.5 FARMERS VIEW ABOUT GENETICALLY MODIFIED ORGANISMS

Yield of course is greater but the plants needs much nitrogen, phosphorus, potassium and minerals which are highly costly nowadays.  
 Seeds we cannot use from the precious crops. These collected seeds will not even germinate.  
 Seeds we have to give higher cost. This leads to a higher expense on investment.  
 Pesticides and fungicides are also inevitable in growing these crops.  
 Production is boosted but the price is very less at selling points which affects the profit level.  
 By-products are very rough and the cattle avoid these materials which are fodders.  
 Newly modified vegetables are hard to sell, people hesitate to buy for example Pink colour Cabbage.  
 Taste in general is also very poor in some crops for example Cucumber which are generically modified get lesser marketing segment than the small traditional variety.  
 Genetically modified millets are very hard to eat at homes but it is used only for fodders and powdering them. For example Maize and Kambu.  
 Genetically modified tomatoes have very thick cuticle as plastic which affect the digestive system. These can not be digested by the human digestive system when consumed.  
 These crops are reported to absorb more vital parts of the soil and deplete the soil for the next crop. Re deposit of manures is inevitable and it is expensive.

### 1.6 DISADVANTAGES AND HEALTH THREATS FROM GENETICALLY MODIFIED ORGANISMS.

Due to excess absorption of nitrogen from the soil these crops are highly fertile which attracts in seeds, pests and fungus; in-turn one is expected to use pesticide and fungicides which are intruding the eatable part and reach the human system and stay there itself, since liver is not capable of metabolizing these complicated poisons and toxins it gets affected, whole body gets several problems such as indigestion, osteoporosis, carcinoma, tumors, fibroids etc.

Of course these genetically modified vegetables and meats have incorporated lot of urea, uric acid, calcium and other minerals also. Excess of anything makes nothing. These over enrichment becomes challenges to all the endocrines and ectocrines. The body system have to work a lot to metabolize and to execute these over loads of urea, uric acids, unwanted amino acids, minerals and vitamins also.

Hypercalcaemia, hypervitaminosis becomes a challenge for the human systems.

Some strange amino acids which are not identified and accepted by the human body struggles a lot to keep the body safe.

Genetical modification is ahead to produce vitaminised rice and cereals along with high level of protein and fats. cereals naturally incorporate B1, and carbohydrates along with minerals to suit the human body system. This genetical modification leads to over workloads by implementing such a process

Proper knowledge gained about the traditional vegetables and meats are challenged by these so called genetically modified organisms. Mainly many of the medicinal properties are specified in some traditional medicinal plants for example Rose, Hibiscus, Lotus etc.

Identification of plants itself is hard since. Its external morphology is entirely altered by the process of genetical modification.

### 1.7 AREAS FOR RESEARCH ABOUT GENETICALLY MODIFIED ORGANISMS.

Studies should be in such a way the food constituents of a newly launched organism is deliberately announced.

Studies should be in such a way that the after effects of genetically modified organisms over the consumers are to be studied and make it to reach the humanities.

Some of the researchers try to produce 'insulin' generating plants which may be a great challenge to the challengers. A longitudinal and transverse researches are suggested before it reaches the hands of the human kind.

The Biologists, Bio-chemists and Biotechnologists should see that the original traditional plants are well studied and a 'DNA mapping' is to be conserved for future.

Any research should have the centroid only as the welfare of human being as well as animals welfare. In no way we are expected to alter or abolish the natural qualities of any lives which are the gifts of nature to the universe. Plants and animals live in synchronized state. This well adjustment should not tampered by the genetical modifiers.

### 1.8 CONCLUSION

The word disadvantage actually incorporate the word advantage. Hence these are not to criticize the scientists but to make them a better 'strategists' to combat the future demands. Actually the green revolution, blue revolution, brown revolution and white revolutions are successful. These endeavour are to add on feathers to the modern scientific researches, not to criticize the rarest attempts. Allow all traditional

flora and fauna to live naturally. Let all these genetically modified be in the laboratory not in the “motherland”.

#### **1.9 REFERENCE**

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