

On the other hand he also appeared to speed up expanding the isolation wards as there are flights shall take off from these countries to India.

Editorial

Friday, March 20, 2020

More seriousness needed to fight COVID-19

Number of fatalities due to COVID 19 today reaches 5, with an Italian succumbing at Fortis Hospital in Jaipur. Total affected person also reaches 219 at the time of filling this story and in the state of Manipur 3 more suspected case has been reported, one has been reportedly admitted at RIMS isolation ward and another two at JNIMS. As of now whether these suspected has been confirmed positive or not is not officially known. Interestingly, number of blood sample collected and which finally turn out to be negative is only 15:3 including the new one and the initial report confirmed that the deadly virus has not reached the state of Manipur. Official statement is based on their record and they have not mentioned anything about the number of blood sample tested so far.

With a central team, along with a representative of the WHO visited the state yesterday, and the Prime Minister Narendra Modi's special concern on this issue, the state government seems to accelerate the precautionary measures being taken up. Hours long meeting was convened at Manipur Secretariat conference and review the kind of precautionary measures being taken up by the state government. And today Chief Minister himself visited Khairamband Keithel Ina Market area to take stock of the situation there.

Earlier he had brief reporters about the measures to avoid coronavirus from reaching the state and what is more interesting is the appeal by the Opposition Leader Okram Ibobi Singh to take up extra precautionary measures to prevent the virus from spreading in the state.

India government seriousness to tackle the situation is well noted with its decision to ban all international flights from Sunday, March 22 for a week. The extreme step was taken to control the spread of COVID 19 from other countries. The seriousness of the union government should also be reflected to the state government and should take similar steps like the one taken up by the Union government. It is suggested to bar all road transport for a stipulated time until a solution is discovered to cure the disease. There is high chances that a patient carrying the virus may not show fever during their entry to our state. If a total lockdown is not possible anyone coming from infected states should be kept in quarantine for 14 days. We should treat Manipur as a mini India and take steps similar to what Union government has taken up.

Saying so it will be next to impossible to even think about dosing of the Khairamband Keithel if it can be done to some commercialized shopping malls. The government should make temporary installation of hand wash basins in and around the Khairamband Keithel area and spread awareness to people to have compulsory hand wash at the basins. Hand sanitizers should be distributed at the women vendors if possible.

While taking up these measures, the government should also think of those living on hand to mouth. All know that these people are left with no option but to come out to the market place for a day meal. Government should try to take up some special programme to make sure that Rice being distributed under the PDS be reached at their door so that they can stay at home as desire by the state government.

It is also important that passenger vehicles like diesel auto should be checked and bar from carrying passenger in limited numbers. Above all these government should clean the piled up garbage from crowded area as well as at other residential area. And a priority to test maximum people may be helpful.

When Chassad Blazed Our Hearts Burnt

By: Shongminthang Haokip, UAE

When Chassad blazed our hearts burnt
All churches, schools and households
Set aflame by insatiable human's greed
Firestorm ascend into the air far and high
Cries and prayers echoed across mountains
Instincts may urge to revenge but we don't
As heaven's witnessed is enough for us
For justice bringing in God's timing
Mothers weep inconsolable once more
As memories unfold 90's atrocities upon us
Heaven protects innocent lives this time
Merciful is His mighty hand, God of Israel
Every goods and chattels robbed
A grievous misdeeds of humanity
It pains even more to see innocent kids
Who doesn't deserved aren't spared either
Children find no more books and bags
But only tents and torments surrounds
Hoping to see their classroom and learn
As they play under the tent hopelessly
When Chassad blazed our hearts burnt
We mourn, we suffer and we loss
but we get stronger and find unity afresh
How good and pleasant it is when
brothers live together in unity!

NAME CORRECTION

I, the under signed Serina from do hereby declare that My name has been wrongly recorded as L.Serina Devi in my Aadhar Card No. 598211933516 the insurance policy of HDFC life Sampoon Samridhi plus policy No. 20199271, client ID -43629332. I declare that my name recorded wrongly be corrected as Serina from

Sd/-
Serina from

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Nano Technology In Bio Organic Fertilizer – Entry To Rainbow Revolution

By: Gitchandra Oinam

India has experienced both merits and demerits for using chemical fertilizer from the beginning of green revolution (1965). However, the founder of India's green revolution Mr. M.S. Swaminathan was aim at "Evergreen Revolution". This was a part of the large green revolution endeavor initiated by Mr. Norman Borlaug, an American agronomist, known as Father of Green Revolution, which leveraged agricultural researches and technology to increase agricultural productivity in the developing world. Mr. Norman Borlaug was credit with saving over a billion people from starvation especially in developing countries like India and finally he received Nobel prize in 1970 recognizing his work on green revolution. Despite of many effort made by MS Swaminathan for sustainable development especially using environmentally suitable agriculture, suitable food security and the preservation of bio diversity, which called an "evergreen revolution" could not achieved in his time because of chemical fertilizer. 60 p.c. of Indian farmers are still using chemical fertilizers and subsidised by government to increase yield, not nutritional value of the yield. Chemical fertilizer was introduced during the time India was remained under developed in bio organic technology. But today, Nano technology in bio organic fertilizer has been developed with the collaboration of foreign countries like Israel and started using in 14 states of India. Using Bio organic fertilizers will have 50 p.c. cost effective and 20 p.c. yield effective other than high nutritional value of the food grains and soil health.

The concept of green revolution and greater productivity was borne long ago after principles of population was developed (1789) by T.R. Malthus, an English scholar. His principles of population is directly related to production. Though Malthus theory of population has many criticisms, it has given a major turning point in controlling population and increasing productivity as well. Population increases in geometrical ratio i.e. 1, 2, 4, 8... and production increases in arithmetic ratio i.e. 1, 2, 3, 4... If or unless control in time. To bring an equilibrium point of welfare economy, planners has to think twice to control population growth and increase productivity as well. Though, India is still targeting zero population growth i.e. two children per couple norms, Indian population growth is 1.1 p.c. in 2017 and projected population of India is close to 1.37 billion in 2019. To meet the food requirement of high nutritional value of World Health Organization (WHO) standard, Indian agricultural sector has to tilt using new technology of bio organic fertilizer and organic pesticides. Presently, India is using measurement of production in terms of yield per acre, not nutritional value of yield per acre. This is the turning point for north eastern states introducing Brown Revolution, focusing on building soil ecology, thus enable local farmer to feed local communities, not just family. It does not require huge inputs of capital or high technology. The method can restore the land, and help it its food production that it is meant to produce.

Green Revolution in India is a period when agriculture was converted into an industrial system due to adoption of modern methods and technology such as



the use of high yield variety (HYV) seeds, tractors and other machineries, irrigation facilities, pesticides and chemical fertilizers. The green revolution within India led to an increase in food grain production and maximum use of chemical fertilizers, especially in the state of Punjab, Haryana, Uttar Pradesh, Andhra Pradesh and Tamil Nadu. 42 p.c. of India's districts are using 85 p.c. of its chemical fertilizers. Urea accounts for most of the consumption of nitrogen (N) i.e. 82 p.c. of the total consumption of fertilizers and DAP for most of that P2O5. Nitrogen (N), phosphorus (P) and potassium (K) are the big 3 primary nutrients in chemical fertilizers, and nitrogen considered to be the most important nutrient, and plants absorb more nitrogen than any other elements. Each Urea bag (50kg) cover upto 5000sq ft. This using rate may vary depending on the type of lawn we have and our targeted area.

Rainbow Revolution is one of the strategies to achieve the objectives of sustainable agricultural revolution, where equal focus is given on minimizing cost of production and increasing production, environment impact is also considering, and impact of fertilizers on consumers and soil health is taken into account. Everything that would take place due to excessive green revolution and reaction of using chemical fertilizers will be kept under consideration.

Rainbow revolution will not only work in cost effective and yield effective but it will also work on health related nutritional value of the food grains and soil health. 90 pc of our health problem is closely related with the food we consumed. Special train called cancer train is running from Punjab to Rajasthan only because of enormous use of chemical fertilizers and its side effect to health after consumption of food which contain chemical for a longer period of time. North east is highly prone for cancer because of food habits. Chemical fertilizer is toxic and it causes dangerous diseases like cancer and others. For example, breathing ammonium carbonate gas released by urea can irritate the nose, throat and lungs, causing a cough and difficulty in breathing. Long term exposure may cause lungs problems.

Inorganic fertilizers are not entirely composed of the nutrients needed by the plants. It also contains salts and other compounds which are not absorbed by the plants are left behind in the soil and build up over time. When salts are found in large amounts in the soils, these compounds can alter the chemistry of the soil that makes it less ideal for planting. It may even increase the pH level of the soil and make the land dead and barren if the pH level is more than 8. Today, Soil testing is required for proportionate use of fertilizer and better production.

As an example, the first step in making the Nitrogen contain in Urea (46%), available to plants is in converting it to either ammonia

(NH₃) or ammonium (NH₄⁺) and bicarbonate ions (HCO₃⁻). During the nitrification process, i.e. while oxidizing ammonia to nitrite, there is an increase in the no. of free hydrogen ions (H⁺) in the soil, which creates acidity. Additionally, when plants take up ammonium ions (NH₄⁺), they also release H⁺ into the soil. These chemicals promotes leaching i.e. more than 50% of the fertilizers we put into the soil goes wasted either through evaporation into the atmosphere or runoff with rain water or irrigation or goes deep down into the soil and not available to the plants. There is a high chance of over fertilization. Nitrogen contains in Urea is only 46 p.c. and the remaining 54 p.c. are salt which are toxic particles. It destroys ecosystem of the soil, contaminates ground and surface water, reducing the nutritional value in the crops and it generates greenhouse gases & air pollution and destroying our Mother Nature.

By fertilizer, we mean any material of natural or synthetic origin that is applied to soil or to plant tissues to supply one or more nutrients essential to the growth of plants. Organic fertilizers or manure are fertilizers prepared from the animal or plant wastes after properly decomposing the raw materials which may contain all necessary plant nutrients in small quantities.

Bio fertilizer are substances which contain living microorganisms, when applied to seeds, plant surfaces or soil, colonize the rhizosphere or the interior of the plant and promotes growth by increasing the supply or availability of primary nutrients to the host plant. Eg. bacteria, algae, fungi, etc. Atmospheric nitrogen cannot be used directly by plants. Certain bacteria in the soil trapped them and convert them into compounds which can be absorbed and used by plants. They are called nitrogen fixing bacteria or bio fertilizers (symbiotic and non-symbiotic). Symbiotic type of nitrogen fixing bacteria or bio fertilizer is form in a mutually beneficial association with the plants. The bacteria obtain food (nutrient) and shelter in the plant roots. And in return, they give a part of their fixed nitrogen to the plants. eg. Rhizobium. Plant growth promoting rhizo bacteria are microbes that stimulate plant growth by improving nutrient availability. They are also effective as bio pesticides and bio protectants. Eg. Pseudomonas sp & Bacillus sp. Non symbiotic type of bacteria or bio fertilizer is a type of living freely bacteria in the soil and these bacteria perform nitrogen fixation. Some of them like azotobacter and clostridium are saprophytic, i.e. living on organic remains while some of them are photosynthetic microorganisms. Phosphorous solubilizing bio fertilizer solubilizes the insoluble phosphates from various phosphate sources and makes them plant usable. It lowers soil pH by secreting organic acids and thus dissolve the bound

phosphates. Examples are bacillus megaterium, bacillus subtilis. Phosphorous mobilizing bio fertilizer stimulates the transfer of phosphorous ions and thus metabolic processes. Eg. Glomus spp. Bio fertilizers for Micro Nutrients are silicate and zinc solubilizer bacterial species and also degrade silicates and aluminium silicates. Eg. Bacillus spp.

Using nano technology in bio organic fertilizers has manifold advantages. These bio organic fertilizers are biodegradable, living and non living organism, non toxic materials as they are made from organic things and so do not contaminate air, water or soil. It maintains the pH level of the soil and promotes ecosystem of the soil and it also promotes beneficial microbes and hence increases the productivity as well as nutritional value of the crops. By using bio organic fertilizer, we improve the soil texture and water holding capacity of the soil and make the soil more friable hence the increasing problem of barren land is contained. There is very less chances of leaching and the requirement of organic fertilizers will be reducing as it will improve the soil texture. No greenhouse gas is released and does not cause any kind of disease to human beings.

Bio organic fertilizers are cost effective and yield effective. The price of bio organic fertilizers is only half of the price of chemical fertilizers per acre and yield production is also increased 20 pc. For example- Atharav bio organic agriculture product of AN84 liquid is costing only about Rs 200 per 180 ml. per acre is equivalent to 3 bags of Urea (150kg) per acre and govt. subsidised price of urea per bag is Rs 242 without GST and transport cost i.e. Rs 723 per acre. Using chemical fertilizers will not expand branches of the plant whereas bio organic fertilizers will produce many branches as an immediate effect. More branches mean more fruits or food grains. Farmers may get early result before harvesting. The crop value increases many times. Organic products are in highly demand in market and are sold at a very high price in comparison to the products of chemical fertilizers. Adding chemical fertilizers in your agricultural farm means giving doges of additive drug to farmers till complete addition, because doges of chemical fertilizers has to increase in consecutive years in the same field to produce more crops whereas bio organic fertilizers are curative measures to improve soils and increase production. Agricultural farm will reduce to use fertilizers if the farmers use bio organic fertilizers in their agricultural farm for the consecutive 8 & 9 years. Farmers shall try to substitute the existing harmful chemical fertilizers with environmentally friendly and non toxic bio organic fertilizers to live in harmony with nature and make a lasting improvement in our own patch of earth for generations to come. Realizing the benefits of bio organic fertilizers, Government of India is promoting the uses of bio organic fertilizers, taking into consideration for a non toxic and long lasting sustainable method of agriculture. It is the right time for all of us to be concerned about it for a healthy environment and a healthy and prosperous society. Era for using harmful chemical is come to an end by increasing research and new technology in the field of bio organic fertilizers. India's organic mission in agriculture will hopefully successful.