

## STRENGTHENING GUARD IN BLUE WATERS

During past few years, it has been observed that where on one hand the Government is promoting India-made products through campaigns like Atmanirbhar Bharat besides decreasing dependency of the nation on articles imported from foreign countries, thereby saving the exchequer and providing a boost to economy of the nation. This initiative has also been introduced in defence sector, as it was observed that a huge among of country's wealth was spent over the sector for importing various types of things, right from weaponry to other miscellaneous items. This initiative has not only strengthened the defence sector but also ended the dependability of nation over several nations for various essential products. Recently, in a historic step, the fully country-made aircraft carrier Vikrant was dedicated to Navy by Prime Minister. In another major step, the fifth Stealth Frigate of P17A, being built at MDL was launched by Charu Singh, President NWWA (Western Region) who Onamed the ship "Taragiri". In compliance with notification issued by the Ministry of Home Affairs, Government of India declared a state-mourning. The event was limited to a Technical Launch as the event is tide dependent, any change in the schedule was not possible. Vice Admiral Ajendra Bahadur Singh, Flag Officer Commanding-in-Chief, Western Naval Command was the Chief Guest, VAdm Kiran Deshmukh Controller Warship Production and Acquisition other senior officers from the Indian Navy and MoD were amongst the dignitaries who witnessed the launch ceremony. The Warship Design Bureau (WDB) and the MDL teams having demonstrated multiple successful conventional launches in the past, have honed their expertise further and performed yet another pontoon assisted launch with panache. Following the launch, "Taragiri" will join its two sister ships at MDL for outfitting activities towards the run up for their delivery to Indian Navy. Seven P17A Frigates are under various stages of construction at MDL and GRSE. Indigenous construction of complex frontline ships such as Stealth Frigates has catapulted the nation to a higher pedestal in the arena of shipbuilding. It provides additional benefits such as economic development, employment generation for Indian Shipyards, their sub-contractors and ancillary industry. Further, 75 per cent of the orders of the Project 17A have been placed on indigenous firms including MSMEs, thus reinforcing the country's quest for 'Atmanirbhar Bharat'. Speaking on the occasion, Vice Admiral Ajendra Bahadur Singh, FOC-IN-C, Western Naval Command praised the efforts of Mazagon Dock Shipbuilders Limited, Warship Design Bureau and other Naval Teams in realizing the nation's quest for self-reliance with regard to warship building. He added that "Taragiri" will surely add to IN's forte as and when it makes its way into the blue waters.

## OFF 'D' CUFF WALKING ON THE PATH OF DEVOTION

If you want to walk on the path of Bhakti [ devotion ], then learn to keep your temperament cool. Learn and try to be simple, prevent yourself from doing cunning activities. Nowadays, people pretend to be more knowledgeable and learned than they actually are.

According to Manu, the greater a person is in his artificial behavior and attitude, the more restless he will be. Wealth brings such an addiction with it that the more you have the more is the craving to add to it. A person who does not have hunger or lust for anything is the richest of all. A simple and modest person with peace of mind is referred to as 'Saumya Saumya'. According to Maharishi Ved Vyas, Lord Krishna had three major attributes, which we all should try to adopt.

\*\*The first attribute is Happiness for Loyalty\*\*

If you want to walk on the path of Bhakti, don't let smile disappear from your face. If you encounter any problem, do not worry it. Smile and you will gather strength to face the problem. If you smile, your problem will not be a problem anymore, you will solve on its own. When clouds of sorrow envelope you and you find someone very dear approaching you, tears roll down your eyes.

So was the case when Draupadi saw Lord Krishna towards the end of the period when Pandavas were in exile. Krishna comforted Draupadi and advised her neither to think about the past nor to worry about the future. The best is to think about the present and gather your strength.

To this Draupadi remarked that it was easy for him to say all this because he himself had not seen sorrow. How could he understand her state of mind? Lord Krishna smiled and asked Draupadi how she could think that the person who had taken birth behind the four walls of a prison had seen less sorrow. The only difference was that he never treated sorrow as sorrow.

\*\*The second attribute is devotion.\*\*

The second attribute is that one should not lose one's balance of mind when

one encounters a problem. When problem comes on our head one after the other, we human beings have a tendency to say: "O Lord, why only me? What have I done?" Or, we start having depression out of fear and frustration and several unhealthy thoughts like revenge, suicide, etc. crowd our minds. We have to face problems firmly and boldly rather than sit and crib about them.

\*\*If you harm somebody, you cannot escape the harmful consequences of your deed for steadfastness.\*\*

The third attribute is that one should maintain one's poise and calm. One must not lose sweetness of voice. Do not sound bitter and rude to people nor should you be harsh in your words. Be polite.

Whatever you achieve, learn to share it with others. If you have been doing misdeeds in your life and have simultaneously been generous enough, you shall bear (Devotion the fruits of both. Also, treat others as you would like to be treated yourself. But always remember one thing: your actions are constantly being viewed and monitored by God.

Every person has to bear his share of sorrow. To save himself from the consequences of his misdeeds, he uses various products - stones, threads, metal pieces etc. But why? Do you think by doing all these, your share of sorrow will get reduced? Rather, if you have done something wrong, you should pray to God and ask for forgiveness and Devotion. Simultaneously, you should prepare yourself to face the consequences. Pray to God to give you the courage and strength to face difficulties and hurdles in life. What are happiness and sorrows? To my mind, the limit till which you can bear is happiness and when you cross the limit, you experience sorrow. Sorrow of the size of a mountain weighs like a piece of straw for those who have mental strength, who take things in their stride, who keep smiling and doing their duty while for those who lack these qualities

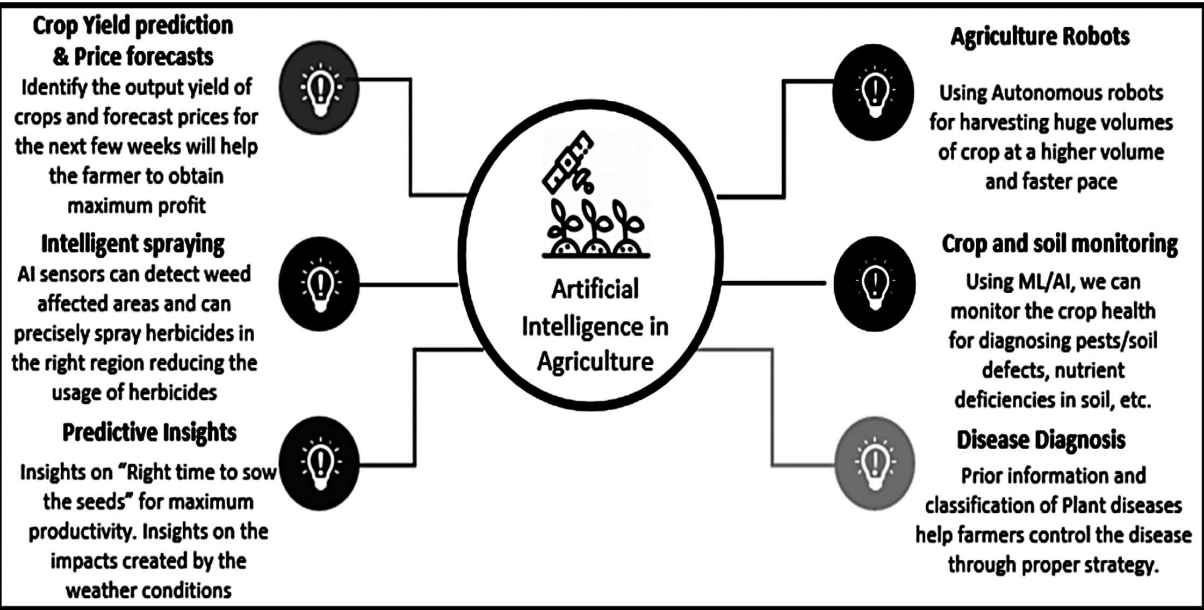
sorrow of the size of straw weighs like a mountain.

-Dr Archika Didi

# Artificial Intelligence for future farming

■ PROF MANISH KR SHARMA & SHAVI GUPTA

Artificial Intelligence is extending its footprints in almost every nook and corner of the scientific research whereby its tremendous calibre and path breaking operational driver has exposed almost every arena to a new light. Generally speaking, Artificial Intelligence is a new and robust substitute to almost every conventional method which otherwise lacks expertise to resolve, handle and tackle the situations in possible adequate manner. It has the potential to revolutionize and metamorphose science and technology to new attire. Amid use and deployment of Artificial Intelligence in almost every arena, how can someone forget to mention the essence of Artificial Intelligence in the field of Agriculture? Precisely speaking, more than one half of the population of India directly depends upon farming



and agriculture as their core livelihood in as much as the matter does not limit to the factum of livelihood only but it obviously feeds a nation for its survival. Even the global population is increasing tremendously and with this increase the demand of food and employment is also increasing. According to the United Nations Food and Agriculture Organization, the world population will expand by another 2.1 billion in 2050, but land surface under cultivation will contribute to only 4.2 percent of the total land surface at that time. As we know that agriculture faces multiple challenges like high dependence on monsoon, resource intensiveness - heavy use of resources (water, inorganic fertilisers and pesticides), degradation of land and loss of soil fertility, and low per hectare yield, among others. To overcome the aforesaid challenges in agriculture this is the time to opt for precision farming using Artificial Intelligence methods in order to meet the shooting demands of the expanding population. Since Artificial Intelligence methods support decision-making systems in agriculture, helps in optimizing storage and transport processes, and make it possible to predict the costs incurred depending on the chosen direction of management. So, in the field of agriculture we need more effective farming methods which can be achieved by utilizing recent technical developments and solutions to present farming bottlenecks.

Artificial Intelligence in agriculture has brought an agriculture revolution. Artificial Intelligence can be used in the field of agriculture for challenges such as for right time of sowing, irrigation, weeding, spraying, harvesting with the help of sensors and other means embedded in robots and drones. Direct deployment of Artificial Intelligence or Machine Intelligence within the farming sector may be the acme of a paradigm change in how farming is now performed. Artificial Intelligence having one of its prodigious & desperate character has its remarkable influence in squaring up the aforesaid challenges in the agriculture and even

tends to take the same to inexplicable heights. In other words, Artificial intelligence in agriculture is not only helping farmers to automate their farming but also shifts to precise cultivation for higher crop yield and better quality while using fewer resources. So, Artificial Intelligence can play a catalytic role in creating awareness and also increases the knowledge and efficiency of a farmer. This will help in improving the crop yield from various factors like the climate changes, population growth, employment issues and food security problems. In this context, Artificial Intelligence can give rise to precision farming which is all about "Right Place, Right Time and Right Products". Even a number of start-ups have been launched based on Artificial intelligence in the field of agriculture like Blue River Technology, FarmBot, Prospera, Pasa, OneSoil, Cropin and many more.

Weather is a paramount challenge as it plays a very important role in agriculture and it is difficult for the farmers to take the right decision for harvesting, sowing seeds, and soil preparation due to climate change. But with the help of Artificial intelligence, weather forecast data helps the farmers to have information on weather analysis, and accordingly, they can plan for the type of crop to grow, seeds to sow, and harvesting of the crop. When the crop is harvested at right time then with the help of price forecasting, farmers can get a better idea about the price of crops for the next few weeks, which can help them to get maximum profit. By implementing such practice helps to make a smart decision on time. After weather forecasting the preparation of soil is very important before sowing the seeds. The preparation of soil depends on various factors like water content, nutrients present in soil and pH of soil. For preparing the soil, the farmers have to consider two main factors namely soil management and irrigation management. Because soil and irrigation management are critical issues in the arena of agriculture as these two factors leads quality degradation of a crop. In soil management, AI techniques are widely used to detect and adjust soil parameters that provide a favourable environment for agricultural growth. To manage the soil properly there is an agricultural start-up InCeres which has developed an app that can predict soil quality and fertility based on soil application and nutrient uptake. The analysis is based on data on the chemical composition of the soil, weather conditions, crop types, and satellite images showing plant growth rates. Irrigation is one of the most labour-intensive processes in farming. To subjugate the problem of irrigation, Artificial Intelligence can train machines that are aware of historical weather pattern, soil quality and kind of crops to be grown, so that machines can automate irrigation and increase overall yield. Since, nearly

70 percent of the world's fresh water resource is utilized for irrigation so, automation irrigation through Artificial Intelligence can conserve water and benefit farmers in managing their water problems.

For overall crop management, Remote Sensing one of the foremost techniques of Artificial Intelligence is used. Remote Sensing techniques along with hyper spectral imaging and 3D laser scanning are essential to build crop metrics across thousands of acres. It has the potential to bring in a revolutionary change in terms of how farmlands are monitored by farmers both from time and effort perspective. This technology will also be used to monitor crops along their entire lifecycle including report generation in case of anomalies.

For good yield of a crop, Artificial Intelligence helps to determine the quality of crop which widely depends on the type of soil and nutrition of the soil. But with the increasing rate of deforestation, the soil quality is degrading day by day, and it is hard to determine it. To resolve this issue, Artificial Intelligence has come up with a new application called Plantix. It was developed by PEAT to identify the deficiencies in soil, including plant pests and diseases. With the help of this application, farmers can get an idea to use better fertilizer which can improve the harvest quality. In this app, AI's image recognition technology is used by which farmers can capture the images of plants and get information about the quality of crop.

In addition to the other challenges in the field of agriculture, weeds consist one of the major threats to all agricultural activities and also affect the crop yield. To tackle this concern, Artificial Intelligence helps in decreasing the weeds on the farm as it manages weeds by implementing computer vision, robotics, and machine learning which gathers data to keep a check on the weed thereby helping the farmers to spray chemicals only where the weeds are present and reduce the usage of the chemical spraying an entire field. Ultimately, it reduces the weeds efficiently and also reduce use of herbicide in the field comparatively the volume of chemicals normally sprayed. Hortibot is one of the examples used for removing weeds from the farm. In conjunction with other challenges faced by farmers, crop diseases are also a major source of concern for farmers. Detection of disease in a crop can be achieved through Artificial intelligence using the concept of image sensing and analysis to make sure that the plant leaf images are segmented into surface areas like background, diseased area, and non-diseased area of the leaf. The infected or diseased area is then harvested and sent to the laboratory for further diagnosis. It also helps in pest identification, nutrient deficiency recognition and more. However, besides the satisfaction drawn by the AI in plethora of fields, its application as a tool is another crucial aspect to be pondered upon. The challenges neutralized by the Artificial intelligence are indeed co-terminus with the challenges posed by Artificial intelligence vis-à-vis its operation and sufficient expertise required to drive the same for obtaining procedural results. In other words, possessing the qualitative aptitude to deploy and use the Artificial intelligence is purely a distinctive and parallel subject which needs equal attention in as much as a vehicle without its driver is no less a fiction. Moreover, since Artificial intelligence has attributed sincerely to the progressive research and opened new doors for innovation, a multi-dimensional approach as to its different aspects is a core mantra for its effective and robust implementation. Furthermore, imparting skills & knowledge to take advantage of AI is the need of hour which shall, besides replacing traditional methods, help in capacity building and derive best of the results and utility. Artificial Intelligence is a catalyst having tremendous capability to throttle the technological pace, however its planned & organized application at par with emotional intelligence would be a decisive factor to procure the desirable outcomes.

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## YOUR COLUMN Ensuing festive season

Dear Editor,

In coming days, there is a flurry of festivals. Every year it starts from the month of August, which lasts till the end of December. That is, two quarters of the financial year are related to this time and these quarters can register good profits, if the per capita purchasing capacity and consumption capacity are at the highest level during this period. This festive season sees an increase in the profits of almost all companies every year, mainly auto, FMCG, electronics, garments, sweets and gold-silver purchases. Recently, in a survey of the purchasing power of consumers conducted by CMIE, it was found that in July, Indian investors and consumers increased their purchasing power and have expressed a lot of confidence in the capacity and the figures are showing that in the last four months, a growth rate of around 6.7 percent has been registered, which is a turnaround in the economy after the corona epidemic according to the growth rate of the Indian economy can be seen as a giveaway indicator. This growth rate in the last five months was attractive only in the month of February, when it recorded five per cent. After that, it is 3.7 per cent in March, 3 per cent in April, 0.8 percent in May and only one per cent. It was registered in the month of June. The interesting fact in this context is that the main support for this growth rate in July has come from the rural sector, which stood at 7.3 per cent during this period, while it was only 4.8 per cent in the urban area. The reason for this is clear. The unemployment rate is high in the urban area and the post-COVID economic strength has not yet come among the people, as the annual wage increase has been estimated around five to six percent during this period. The rural area became more efficient during this period because the monsoon is mid and till the month of September. It is maintaining its momentum well in South India, whose positive impact is visible on the agriculture sector. The government has increased the Minimum Support Price (MSP) for the agriculture sector from four to eight per cent for monsoon-based Kharif crops. The MGNREGA figures are also explaining the rural economic development situation in a different way. In the month of July of the current financial year, about 2.04 crore villagers were dependent on MGNREGA, compared to 3.16 crore during the previous month. Availability of monsoon and other employment opportunities Due to this, in the month of July and beyond, the dependence of rural people on MGNREGA has reduced and other resources have become available to them for their economic life cycle, which has become a good basis of economic progress for the Indian economy. It is very important for a developing country like India to maintain a steady increase in the economic growth rate. We have come so far in this that now the only option is to keep our momentum going. Otherwise it has many adverse effects, including selling in the stock market by foreign investors. Now it is necessary that the government should control the rate of inflation, otherwise it may have an adverse effect on the purchasing power of the common person during the festive season and as a result of which the GDP figures may also decrease. According to global reports, for the last three months, the international crude oil prices have not seen the sharp rise it was in the months of February-March after the troubles started in Russia and Ukraine. But the prices of petrol, diesel and LPG are still high in the Indian domestic market. The opposite effect is being seen on all types of inflation, from food items to kitchen items and the cost of transportation is mainly included. If the government tries to control inflation at the domestic level, it is possible that the purchasing power of the Indian consumer will record its highest level in the coming festive days and economic growth will get a new impetus.

Vijay.

## PROGRESSING J&K State Health Agency sets target to cover around 97 lakh souls under AB-PM-JAY-SEHAT scheme SHA launches 'Gaon Gaon Ayushman' to reach out to last mile villages

The State Health Agency has started the Jammu and Kashmir Gold Card campaign to target registering of 97 lakh souls under the 'Ayushman Bharat SEHAT Scheme' launched by the Government of India which has revolutionized the health sector across Jammu and Kashmir. With this scheme, lakhs of poor people who can't afford treatment at hospitals can now receive advanced treatment for their health conditions at all the empanelled hospitals across the country.

Under this scheme, more than 76,52,064 persons (78.74 per cent) have been registered making them eligible for free and quality treatment in empanelled hospitals of the country. According to official figures, among 25,05,626 targeted families, 22,51,116 (89.84 per cent) families with at least one family member are verified. Notably, Shopian, Kulgam and Ganderbal districts have achieved 100 percent saturation under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY) SEHAT scheme. These districts achieved the milestone due to continuous efforts by District Administration and special registration drives organized by the State Health Agency (SHA) aimed to cover all families under AB-PMJAY SEHAT scheme. The AB PM-JAY SEHAT scheme is the world's largest health insurance scheme fully financed by the government and provides a cover of Rs 5 lakh per family per year for secondary and tertiary care hospitalization. AB PM-JAY SEHAT Scheme in Jammu and Kashmir provides health insurance cover of Rs 5 lakh per family per year to all the residents at empanelled hospitals. The scheme covers up to three days of pre-hospitalization and fifteen days of post-hospitalization expenses including diagnostics and medicines. SHA recently launched a citizen friendly facility for citizens to avail Golden cards in their comfort of their homes. The citizens can visit the website [setu.pnjay.gov.in](http://setu.pnjay.gov.in) and register themselves and their families with details of ration card issued by the Food and Supply Department, J&K, and download their Golden cards.

Earlier, SHA rolled out ambitious door-to-door exercise to achieve 100 percent saturation under the Ayushman Bharat PMJAY SEHAT scheme. AB-PMJAY SEHAT Scheme has become a ray of hope for poor families who couldn't afford health treatment at prestigious and well known medical institutes of the country. Recently, a special initiative was launched for women and their families associated with JKRLM to provide them free treatment. Under the initiative of 'Gaon Gaon Ayushman', State Health Agency (SHA) has also started to reach out to last mile villages which remain cut off from the rest of the world due to adverse weather conditions so as to percolate the benefits of the scheme down to every beneficiary.