

FLORI TECH

In an era where technology is reshaping industries, Flori Tech, a pioneering agritech startup, is making significant strides in transforming modern farming practices. By integrating artificial intelligence (AI), Internet of Things (IoT), and data analytics, Flori Tech is revolutionizing the agricultural sector, enabling farmers to maximize yield, reduce waste, and adopt sustainable farming methods.

Flori Tech was founded with a singular mission: to bridge the gap between traditional farming and cutting-edge technology. The startup envisions an agricultural landscape where farmers, regardless of their scale of operations, can harness data-driven insights to make informed decisions. The company's goal is to empower farmers with smart, automated, and eco-friendly farming solutions, ensuring profitability while promoting environmental sustainability.

Flori Tech offers a suite of intelligent agricultural solutions tailored to modern-day challenges.

Using IoT-enabled sensors, Flori Tech's irrigation systems analyze soil moisture levels and climate conditions to optimize water usage. This reduces water waste, ensures proper hydration for crops, and enhances overall productivity. The startup employs AI-powered drones and satellite imaging to monitor crop health in real-time. By identifying issues such as pest infestations, nutrient deficiencies, and diseases, farmers can take proactive measures, preventing losses and improving yields. Flori Tech specializes in automated greenhouse systems that regulate temperature, humidity, and light exposure through AI-driven climate control. This not only enhances crop growth but also allows farmers to cultivate crops regardless of seasonal limitations. Using big data analytics, Flori Tech provides farmers with weather forecasts, soil health reports, and market price predictions. This helps farmers make strategic decisions regarding sowing, harvesting, and selling their produce. The startup focuses on organic and sustainable farming practices, developing eco-friendly bio-fertilizers and pest control solutions. Additionally, it promotes vertical farming and hydroponics, enabling urban farmers to grow food in limited spaces. Flori Tech's solutions are redefining the agricultural industry by addressing several challenges that farmers face today. With its innovative approach, the startup has already increased crop productivity by 30-50% for partner farmers using AI-based monitoring and predictive analytics. Reduced water consumption by up to 60% with smart irrigation techniques; Minimized pesticide usage through precise detection of pests and diseases; Provided financial security to farmers by offering insights into market trends and connecting them with potential buyers. The startup is not just benefiting large-scale farmers but also empowering smallholder farmers with affordable, easy-to-use tech solutions. Flori Tech is ensuring that farming remains profitable and sustainable for future generations.

Promotion of Rural Entrepreneurship

DR. BANARSI LAL

Entrepreneurship development is important for a country's progress as it augments economic and employment growth. Govt. is launching many schemes to start entrepreneurship in the rural areas. Setting up enterprise depends on one's capacity, which differs from person to person. Rural enterprises are the business entities which by means of effective use of local resources, promote revenue generation and act as the agents of social change at the grass root level. These entities not only play the significant role in the holistic development of the rural economy but also contribute to the economy of our nation. Agriculture forms the backbone of the Indian economy. In India about 70 per cent of population seeks employment in agricultural sector. Majority of the farmers in India are small, marginal and agricultural labourers and a number of them are either unemployed or underemployed. In India, total food grain production in 2022-23 was 330.50 million tonnes. India is the second largest producer of fruits and vegetables in the world after China and first in milk production in the world. India is also having largest cattle population in the world. These agricultural products are partially utilized by the food-processing industries. For example in India only two per cent of fruits and vegetables are processed as compared to 70 per cent in Brazil, 30 per cent in Thailand, 78 per cent in Philippines and 80 per cent in Malaysia. We lack proper storage and processing facilities due to which we have annual post-harvest fruit and vegetable losses of more than Rs. 2 lakh crores. We can reduce these losses by improving the transport facilities, storage and processing of agricultural products. If we look at the contribution of this sector to the total Gross Domestic Product (18 per cent), this percentage dependence on agriculture seems to be high and indicates to the intensity of disguised unemployment and under-employment in this sector. The employment opportunities in this sector have been declined due to the application of labour saving technology

declined public investment and lifting of quantitative restrictions on imports of agricultural products. Also the urban organised sector does not appear to be promising in absorbing growing workforce. This is evident from decline in the absolute number of jobs in public sector enterprises due to retrenchment and disinvestment policy. Although, urban informal sector is growing very fast and a large number of youths are absorbed by it but the exodus of rural workers in urban areas is creating a serious problem, to the carrying capacity of urban sector. Under these circumstances, the viable option for providing gainful employment to the growing rural workforce and to lessen the burden of manpower in agriculture seems to be in generating more employment in the rural-non farm sector.

During the planning period, rural development strategy has shifted from growth oriented to welfare oriented and further to empowerment oriented. Our development strategy was based on trickle-down theory up to the Fourth Plan in which emphasis was laid on acceleration of growth on the presumption that its benefits would percolate down to the lowest strata of society. This top down approach could not prove effective in alleviating rural poverty. From the Fifth Plan, Government of India tilted its development strategy towards the welfare of downtrodden and underprivileged sections of rural society. Since then, a large number of self-employment programmes have been launched by the Government of India. One of the drawbacks of these programmes was that the group entrepreneurship was not followed in them. Development of Women and Children in Rural Areas (DWACRA) was the only programme which was based on the group approach, covering 10-15 poor rural women in a group. The major objective of DWACRA was to develop the income generating skills among the rural women. Training of Rural Youths for Self Employment (TRYSEM) was another self-employment programme. The major objective of which was to develop tech-

nical skills among rural youths. In 1999, Government of India started a new self-employment programme called as Swarnjayanti Gram Swarozgar Yojana (SGSY), which is based on group approach. Major objective of this programme is to establish a large number of rural enterprises. This is a holistic programme covering all aspects of self-employment, viz., organisation of the rural poor in to the Self-Help Groups (SHGs). It is credit-cum-subsidy programme. It involves the banks in the planning, preparation of projects; identification of clusters, infrastructure planning, capacity building and choice activity of SHGs. This programme also involves market intelligence, development of markets, consultancy services and institutional arrangements for marketing of the goods. Review of all these self-employment schemes indicates that the policy focus has been largely on poverty alleviation rather than on creation of income and wealth on sustainable basis through investment in productive employment generating activities. Beneficiaries of most of these schemes is poor and illiterate who lack necessary skills to run the activities. A big or medium enterprise can easily hire the workers with different skills. It is not possible in micro enterprise to have access to all these skills and due to lack of necessary skills, many of them could not survive. Thus, development of rural industries under group entrepreneurship can be a good option in this regard. Expansion of rural industrialisation can play a big role in abating distress migration from rural areas and stopping drain, thus reducing the pressure on urban civic services and boosting rural income and employment.

On the basis of demand and supply parameters, food industry in India can play a vital role in increasing rural income and employment through agricultural commercialisation, diversification and value addition. For promoting group entrepreneurship among the rural youths, there is need to identify the unemployed educated youths and organise them in groups for jointly taking up some

enterprising projects. Each group would have 5-10 rural youths trained in different skills. Such type of groups may also be involved with Swarnjayanti Swarozgar Yojana by involving the beneficiaries of the programme. Agro and non-agro based rural small scale industries can be established by involving the unemployed youths. These industries should be based on the locally available resources. The funds of these industries would be mobilised through bank loans and subsidy to the target groups. Gram Panchayats should be entrusted the responsibility of identifying the different type of unemployed workers willing to join the group. It has been observed that various small scale enterprises could not survive due to lack of market support. Their growth or decline depends on markets, access to technology, credit and skills. There are need to develop a suitable market mechanism for the products of these enterprises. The marketing structure of KVIC and other government outlets can be utilized. There is need to build brand equity for their products. Cooperative marketing institutions can also be used. Efforts from NABARD, other commercial banks, rural local government and Non-Governmental Organisations (NGOs) promote group entrepreneurship. Transfer of cost-effective technology and its constant up gradation is necessary for raising productivity; improving product quantity, competitiveness and increasing profitability of the enterprises. The fast growing urban informal sector is putting pressure on the carrying capacity of urban sector due to influx of workforce from rural areas. Development of group entrepreneurship among the rural youths will be a good alternative strategy for rural industrialisation. In order to create conducive environment for the promotion of group entrepreneurship in the rural areas, various interventions such as management of required inputs, finance, market mechanism, revitalizing the existing training infrastructure and use of modern technologies are essential.

(The writer is Chief Scientist & Head of KVK Reasi SKUAST-J).

Forest therapy, exploring the healing power of forests

DR RAKESH VERMA

Forest therapy, known in Japan as *shinrin-yoku*, translates to "forest bathing." This practice emphasizes the importance of immersing oneself in natural environments to enhance mental and physical well-being. Originating in Japan during the 1980s, *shinrin-yoku* was introduced as a public health initiative aimed at promoting the benefits of spending time in forests. Research has since shown a broad range of psychological and physiological benefits associated with this practice, making it not just a cultural tradition but also an evidence-based therapeutic approach. *Shinrin-yoku* encompasses more than just a leisurely stroll through the woods. It is about engaging fully with nature through the senses. Participants are encouraged to observe natural beauty, such as the variety of greens in leaves and the intricate patterns of tree bark. Listen to the sounds of rustling leaves, chirping birds, and flowing water, promoting a tranquil atmosphere. Inhale the fresh forest air, which is rich in phytoncides—substances released by trees that possess health benefits. This sensory interaction is crucial; it aids in grounding individuals, fostering mindfulness, and promoting relaxation. Studies indicate that even short periods of forest immersion—about 20 to 30 minutes—can significantly decrease levels of cortisol, the body's primary stress hormone, while also improving mood and cognitive function.

The effects of *shinrin-yoku* extend beyond immediate relaxation. Engaging with nature has been associated with improved sleep quality, increased feelings of happiness, and stronger emotional regulation. This connection to the natural world serves as a gentle reminder of the calming power of the environment, encouraging individuals to slow down, reconnect, and rejuvenate their spirits amidst the chaos of modern life. Forest therapy stands as a bridge between ancient wisdom and contemporary science, reinforcing our intrinsic link to nature for holistic health and well-being. Scientific studies have increasingly supported the benefits of forest therapy, lending credibility to its therapeutic claims and underscoring its importance in contemporary health practices. Notably, a study published in the *International Journal of Environmental Research and Public Health* highlights the physiological and psychological impacts of spending time in nature. The research indicates that forest bathing can lead to a significant reduction in cortisol levels, which are typically elevated during stressful situations. Lowered cortisol levels are linked to decreased anxiety and enhanced overall well-being. Participants engaged in forest therapy showed a notable decrease in cortisol levels compared to those in urban settings. This decline translates directly to a reduction in stress and anxiety, allowing individuals to feel more relaxed and mentally balanced. The same study also documented that time spent in forests led to enhanced mood and cognitive function. Forest environments offer a respite from daily stresses and foster a sense of tranquility and contentment. Biodiverse forests are particularly effective for forest therapy due to their unique microclimates and enriched air quality. The presence of phytoncides—natural compounds emitted by trees—has been scientifically linked to immune system benefits and overall health enhancements. In contrast, urban parks, while beneficial, typically lack the level of biodiversity that makes forest environments so impactful on psychological health. While urban parks can offer a temporary escape from the hustle and bustle of city life, they often fail to provide the same depth of healing found in biodiverse forests. The psychological benefits of forest therapy extend beyond immediate experiences. Engaging fully with natural surroundings has shown to improve mindfulness, helping to cultivate a more profound sense of calm and focus. Furthermore, consistent interaction with nature supports emotional regulation, which is crucial for combating anxiety and depressive symptoms.

Research suggests that even brief, consistent exposure to forest environments—about two hours per week—can confer lasting psychological benefits. The evidence suggests that forest therapy not only nurtures the mind but also harmonizes the body, establishing a comprehensive approach to health and wellness. Spending time in natural environments offers substantial advantages for mental health, particularly in promoting mindfulness and alleviating symptoms of anxiety and depression. Experts in the field, such as Nitya Sethi, a counseling psychologist at Manasa Hospital, emphasize that nature can act as a potent antidote to the stresses of modern life. By encouraging mindfulness, the practice of forest therapy allows individuals to engage fully with their surroundings, leading to both psychological and emotional benefits. Mindfulness, the practice of being fully present in the moment, is significantly enhanced through immersion in nature. Natural settings encourage individuals to slow down and appreciate their environment, creating opportunities to observe subtle changes in light, listen to the varied sounds of wildlife, and become aware of the air's freshness. Sethi notes that when individuals immerse themselves in nature, they often experience reduced levels of anxiety and an improved capacity for emotional regulation. This shift in focus from racing thoughts to the beauty around them can help cultivate a profound sense of calm. Forest therapy can be particularly effective for those struggling with anxiety and depression. Research shows that spending time outdoors promotes the release of serotonin and dopamine, neurotransmitters that play crucial roles in mood regulation. Furthermore, engaging with nature has been linked to decreased levels of the stress hormone cortisol. For instance, Sethi highlights that just 20 to 30 minutes spent in a natural setting can drastically lower stress levels, offering substantial psychological relief. Natural environments provide a vital refuge from urban stressors. Places such as wildlife sanctuaries and botanical gardens offer serene escapes, allowing individuals to reconnect with their intrinsic sense of self. Sethi explains that exposure to greenery and diverse flora makes it easier for individuals to unwind and recharge emotionally. Practices like mindful walking include the elements of moving slowly through natural landscapes, engaging all five senses. Such activities intentionally nurture emotional well-being, supporting the management of stress and burnout.

Engaging with trees: Hugging or simply leaning against a tree can evoke a comforting sense of connection, grounding individuals in the present moment. Describing nature: Journaling what one observes in a park or forest setting can enhance reflective practices, making feelings more manageable through written expression.

The overall takeaway is that forest therapy acts as a therapeutic mechanism, integrating the healing qualities of nature with psychological resilience and emotional health. Integrating forest therapy into your daily routine is straightforward and does not require access to vast forests. Here are practical tips to incorporate this enriching practice into your life. One of the simplest ways to experience the benefits of forest therapy is through mindful walking. When you take a walk, focus on your surroundings rather than your thoughts. Whether it's a local park, community garden, or tree-lined street, find an area surrounded by nature. Walk slowly, allowing yourself to fully absorb your environment. Pay attention to the sights, sounds, and smells. Notice how the sunlight filters through the leaves or the feeling of grass beneath your feet. This mindful approach enhances your connection with nature and promotes relaxation. Whichever activities you choose, aim for at least two hours per week interacting with nature. Prioritizing time in green spaces, even in smaller increments, can yield sustained psychological benefits.

In today's fast-paced work environment, stress and burnout have become increasingly common, impacting mental and physical well-being. Integrating forest therapy into workplace routines offers a promising approach to combat these challenges. Research indicates that exposure to nature can lead to significant physiological changes, promoting relaxation and enhancing overall productivity. Heart Rate and Blood Pressure: Studies reveal that spending time in natural environments can lower heart rate and blood pressure, creating a calming effect on the body. This is largely attributed to the presence of phytoncides in forest air and the overall reduction of stress hormones. For instance, one study found that employees exposed to green spaces showed a remarkable reduction in both heart rate and hypertension, which are key factors in preventing burnout. Forest therapy not only soothes the body but also stimulates cognitive function. Natural settings have been shown to boost attention capacity, enhance problem-solving skills, and foster creativity. This psychological rejuvenation allows individuals to approach tasks with renewed focus and clarity, significantly improving their performance at work.

Establishing a routine that includes regular doses of nature—whether by visiting parks, engaging in mindful walking, or simply taking deep breaths among greenery—can protect against stress and burnout. Consistent interaction with nature fosters a healthier work environment, ultimately leading to improved job satisfaction and emotional well-being. While the integration of forest therapy into wellness practices offers numerous benefits, it is important to acknowledge its limitations and considerations for effective use. Forest therapy is not a universal solution for everyone nor a replacement for professional medical interventions in cases of severe anxiety or depression. Forest therapy can serve as a valuable complement to traditional therapies, but it should not be viewed as a standalone treatment for serious mental health conditions. Professional assessments and clinical therapies, including medication and counseling, are essential for those facing severe emotional distress. It is critical to engage with healthcare providers to determine the best course of action based on individual needs. To derive substantial benefits from forest therapy, consistency is key. Research suggests that spending at least two hours per week in green spaces can yield sustained psychological benefits. However, the efficacy of forest therapy improves with regular practice. This doesn't necessitate long durations; even smaller, frequent doses of nature can enhance one's mental state.

Individual experiences with forest therapy can vary widely based on personal preferences and environmental factors. Tailoring the approach can significantly influence outcomes. For example, consider the following: Engaging in forest therapy is most beneficial within biodiverse, tranquil environments, as opposed to urban parks with higher noise and pollution levels. Individuals with mobility limitations or those living in urban areas may find it challenging to access expansive forests. Creating indoor green spaces through houseplants or community gardens can offer some of the benefits of nature therapy.

The insights shared in this article urge us to embrace the therapeutic power of nature. Each visit to a green space, each mindful moment spent among trees, and each interaction with the natural world can offer much-needed solace and adaptability in managing our mental and emotional health. As you navigate modern life's busyness, remember that nature awaits as a loyal companion ready to help you breathe, heal, and reconnect. The trees, the breeze, and the soothing sounds of water will always be there, willing to cocoon you in their gentle embrace—healing and uplifting you amidst the day-to-day chaos. Now is the time to start your journey toward incorporating forest therapy into your life for personal well-being and greater fulfillment.

India's Roadmap to Economic Power: Skills, Innovation & Self-Reliance

DR JAIPAL SINGH

Skill is the ability to do something well through learning, practice, and experience. Innovation is the process of creating new ideas, methods or products to improve the existing ones. Innovation comes from creativity and thinking differently to find better solutions. Strengthening both skill and innovation will drive technological advancements and fuel economic growth.

Countries having developed skills and urge to further enhance them as per demand of the market have made them technologically stronger and economically powerful in the world. These countries do not merely make claims but take action as per their will and requirement that shapes the world.

India too is moving on the path of progress since Independence but even then our country is lagging behind economic giants like the U.S., China, Japan, and Germany. As of 2024 (Wikipedia data), India holds the fifth-largest economy (\$4.27 trillion), behind the U.S. (\$30.34 trillion) and China (\$19.53 trillion). Russia, at 11th place, has a marginal (current) GDP of less than \$2.2 trillion.

Now, to bridge this huge gap, India has to prioritize its needs and goals. Needless to say, we had made a tremendous progress in every sector but yet fail to compete the exponential growth of economy of many leading countries of the world. It's a bitter truth. We must accept it and work hard, firstly, to attain self sufficiency and secondly to become a potential exporter in major sectors than importer in various sectors. This is feasible only if demand oriented new skills are identified, developed and incorporated for modernizing industries of different sectors.

India is far behind, in the advancement of many skills, innovations and technological developments, in most of the sectors. We must accept this hard reality. The reasons may be one or many, but the undeniable truth is that mastering diverse skills is the only way to navigate emerging geopolitical crises and compete in the global market for wealth and power.

A nation can become self-reliant only when its industries are competitive globally, ensuring profitability while maintaining innovation and expansion both nationally and internationally. So our foremost focus should be on skill development, innovation and enrichment in technology advancements as per the need.

Since India stands at a crucial juncture where quality skills, entrepreneurship, and the utilization of modern technology can transform industries into highly profitable ventures. By adopting time-saving, cost-effective and demand-oriented skills, businesses can develop and grow in the international market. The key lies in creating unique, attractive and high-quality products that appeal to consumers while ensuring affordability.

India can sustain long-term economic growth, create millions of jobs and strengthen its position as a leading global economy by nurturing an entrepreneurial mind set among youths, promoting financial literacy and making strate-

gic investments in infrastructure and digital transformation.

It is well said that a robust economy demands continuous innovations, ultra modern skills, industrial expansion and dedication of youth in strengthening India's global economy. The New Education Policy (NEP) 2020 is a crucial step in fostering skill-based learning, improving employability, and increasing global competitiveness. Strengthening research institutions and investing in cutting-edge technologies such as artificial intelligence, quantum computing, space exploration and local manufacturing will propel India's economic growth and global standing. Encouraging scientific research and technological advancements in sectors such as healthcare, infrastructure, and cybersecurity will further solidify India's economic position.

All our dreams shall become true if skill acquired by the individual is not for the sake of skill in papers only i.e. acquired skill must be real, purposeful and need of the hour.

A strong economy requires both a growing public sector and a dynamic private sector. Healthy competition, teamwork, and fair profits will drive national progress. Encouraging entrepreneurship and supporting small businesses will boost industrial output. Reducing reliance on imports will strengthen the economy. Investing in infrastructure, modern agriculture, and renewable energy will further improve economic stability.

A shift from a consumption-driven to a production-based economy is essential. Promoting local manufacturing, innovation hubs, and high-quality standards will help India compete globally. Strengthening vocational education, digital literacy, and financial inclusion will create a skilled workforce ready for global challenges. Adopting new technologies like block chain, automation, and green energy will modernize industries and enhance efficiency.

Heavy investment in research and development (R&D) will drive home grown innovations. Collaborating with global institutions and setting up advanced research centres will accelerate progress in defence, healthcare, and industrial automation. Expanding space exploration and defence production will reduce import dependence and strengthen scientific advancements. By focusing on technology, self-reliance and global trade, India can build a strong, sustainable, and competitive economy.

In Gist, India's economic strength lies in skill development, innovation, and self-reliance. By focusing on modern technology, entrepreneurship, and research, the nation can bridge economic gaps and compete globally. Strengthening industries, promoting local manufacturing, and reducing import dependence will drive sustainable growth. A skilled, tech-driven workforce, supported by education and R&D investments, will ensure long-term progress. With strategic planning and continuous innovation, India can emerge as a global economic powerhouse.

(The writer is Principal, SG GDC Doongi, Rajouri)