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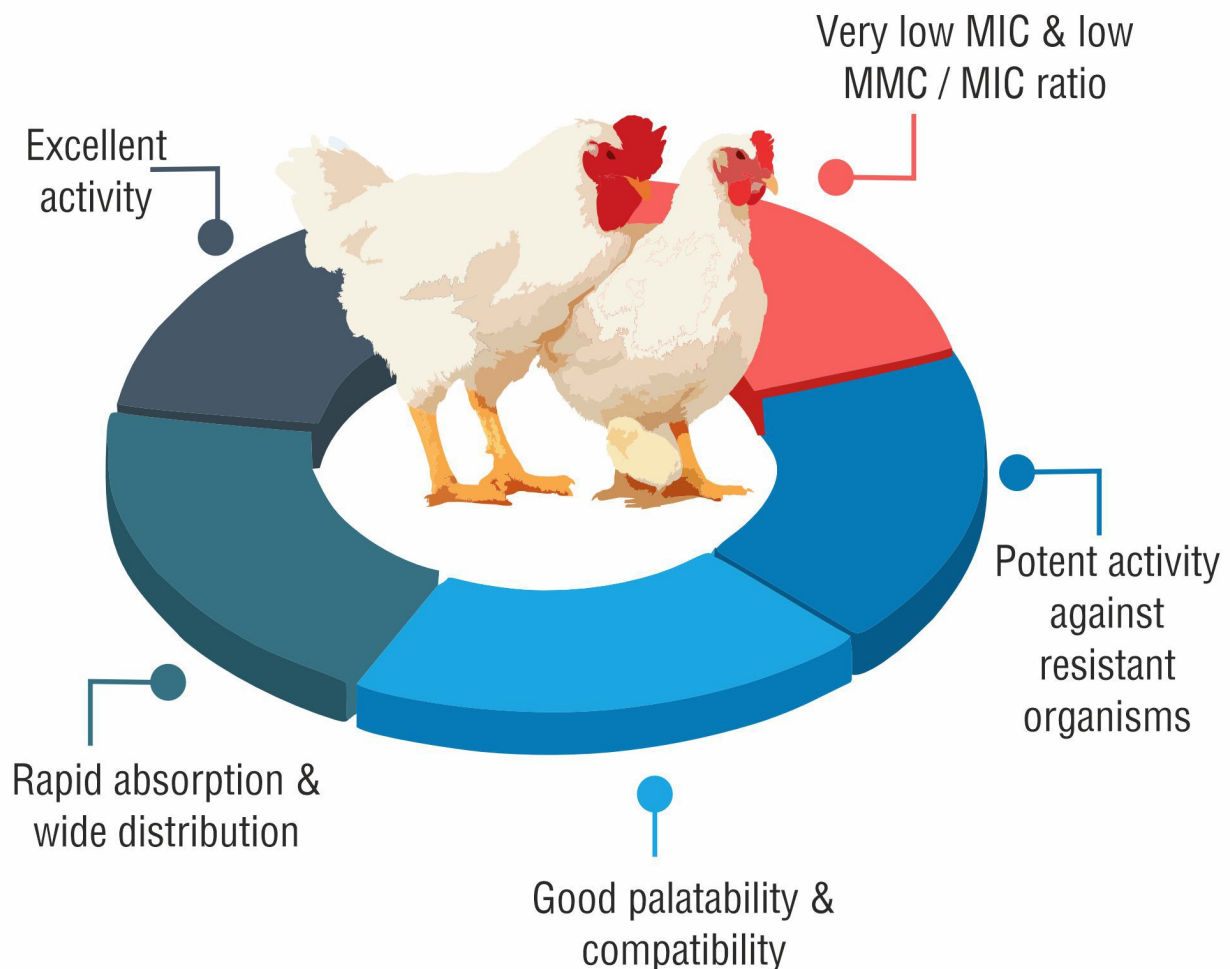
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**For Effective Prevention and Treatment of Respiratory & Enteric Diseases and for Improved Performance & Productivity**

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# Role of IMMULATOR during viral outbreaks in broilers

During the period from June to September 2023, broiler farmers of almost whole of the states of West Bengal and Bihar faced viral outbreaks of suspected Nephropathic IB, typical IBH and Fowl Adenovirus causing very high mortality.

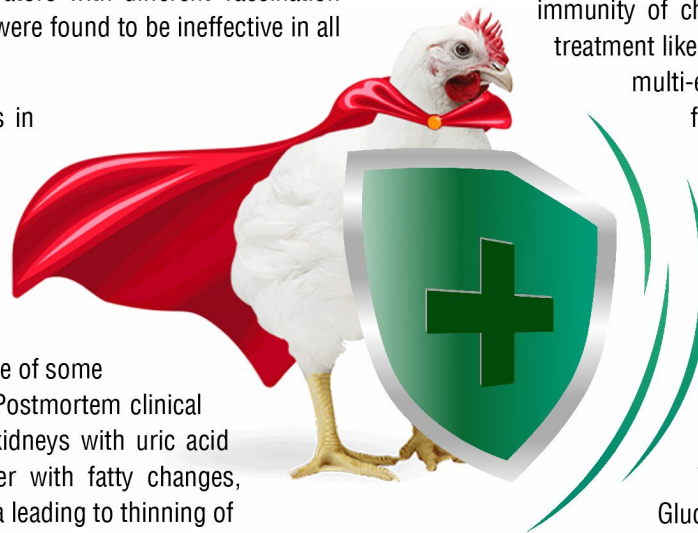
In broilers, the disease usually starts early at 7 – 8 days age with varying symptoms of enteritis, pasty vent, dullness and sudden death. Mortality varies from 5 – 50% depending upon contingency management practice. The disease affects almost all small & big broiler integrators with different vaccination programs. Use of antibiotics were found to be ineffective in all those cases.

There were many such cases in North 24 Parganas, East & West Burdwan, Midnapur, Bankura, Nadia. The history, epidemiology, clinical signs, mortality patterns & recovery process indicated the presence of some self-limiting viral infections. Postmortem clinical lesions included congested kidneys with uric acid crystals, enlarged fragile liver with fatty changes, damaged necrotic gut mucosa leading to thinning of

intestinal wall, gizzard erosion, ascites with secondary E. coli & Mycoplasma infections.

Many broiler farmers did serological tests after collecting the necessary samples which confirmed the presence of either one or two or all the above-mentioned viruses.

One of the renowned consultants suggested the usage of IMMULATOR through drinking water @ 5 ml to 10 ml per 100 chicks for a period of 5 – 7 days to improve the immunity of chicks in addition to symptomatic treatment like liver tonic with toxin neutralizers, multi-enzymes, probiotic & kidney flushers.



IMMULATOR helped a lot in reducing the mortality during the viral outbreak to half in almost all cases. Body weight & FCR was very satisfactory as mortality was under control and the immune system was fully functional.

The unique combination of Beta Glucans, Nucleotides, Peptides, Vit E, Selenium and phytobiotics in IMMULATOR helps in providing an excellent immunostimulatory effect.



## IMMULATOR® Superlative Immunity Booster

- Enhances Immunity & Livability
- Fights Harmful Microbes & Lowers Mortality Rate
- Ensures Profitability

# Provet at Moyna Aquaculture Expo 2024, West Bengal

Provet Pharma Private Limited participated in the Moyna Aquaculture Expo 2024, held on January 6 and 7, 2024, at Bhandar Chandi Mandir, Moyna, Purba Medinipur, West Bengal.

Provet made a statement at this event by showcasing its innovative and distinctive line of aquaculture healthcare solutions, which it hopes will meet the demands of the sector.

The Blunova East Team had the chance to customize the expo and turn it into the ideal interactive platform for business development over the two-day event.



The provet stall was inaugurated by Shri. Ashok Dinda, a former cricketer and MLA of Moyna, West Bengal, and he accepted the warm greetings of Blunova associates. His gracious presence added vibrancy to the stall. He wished for us to reach greater and greater heights in our areas of operation.

The stall had a good turnout of customers. A huge crowd of about 150+ visitors per day, including renowned consultants, farmers, and entrepreneurs of mutual interest, visited the stall, and the team missed none to enlighten the product details. Unique brands like Bacitox Plus, Envipro Gold, Maxigro XL, Mintroplex Ultra, and Nagrowall were the key topics of discussion.

It was very much appreciated that the majority of our key customers and stockists had taken the time to visit the stall in spite of their busy schedules. We are very thankful for their support and service over many years.



# An overview of Hepatopancreatic Microsporidiosis (HPM) in Shrimp Farming

-Vijay Sundar Deva G  
Technical Manager - Blunova  
Provet Pharma Pvt Ltd.

## Introduction

EHP or Enterocytozoon Hepatopenaei is a yeast-like fungus belonging to a group called “microsporidia”, which are obligate intracellular parasites. EHP is widespread in most of the Southeast Asian countries, including India. It is referred to as Hepatopancreatic Microsporidiosis (HPM) since the parasite is confined to the shrimp hepatopancreas (HP). The economic losses to aquaculture seem to be substantial, mainly due to retarded growth of shrimp and overall reduction in farm production. Infectious diseases caused by viruses, bacteria and Microsporidia continue to be a threat for shrimp aquaculture in Asia. The microsporidian, Enterocytozoon hepatopenaei (EHP) has become a significant threat to shrimp aquaculture in recent years globally and has been widely reported from major shrimp producing countries.

## Causes:

- Hepatopancreatic microsporidiosis (HPM) is an infectious shrimp disease caused by, Enterocytozoon hepatopenaei (EHP).
- EHP can be transmitted directly from shrimp to shrimp by cannibalism and cohabitation.
- Shrimps become infected by ingesting spores from the water, from sediment, from eating EHP-infected live feeds (Polychaetes, Molluscs, Frozen Artemia biomass etc).

## Clinical Signs:

- The target organ of EHP is hepatopancreas and affects its digestive and absorptive functioning resulting in poor growth and immunity.
- EHP infected shrimp may have a thin cuticle, white muscle as a stress response, black spots on their eyestalks, in their muscle tissue and along the hind gut.
- It is associated with severe growth retardation in *P.vannamei* exhibits high size variability.
- Causes chronic mortality in severe cases.

- Associated with White Faecal Disease.
- Severe infections by EHP can increase the susceptibility to other bacterial infections due to *Vibrio* spp. in shrimp farms and could manifest in mortality.
- Affected shrimp also become increasingly susceptible to secondary bacterial and viral infections and leading to substantial economic loss.



Fig 1: Growth retardation in *P.vannamei* exhibits high size variability due to EHP

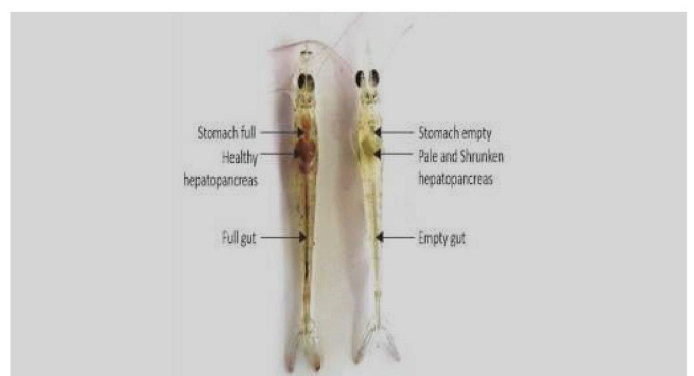


Fig 2: Normal Shrimp vs EHP infected shrimp

## Diagnostic Measures:

- Infection can be checked by microscopic examination (at x 100 oil immersion) of the hp and the gut of the shrimp.
- Infection can also be confirmed by molecular testing of the hp by PCR.

## Prevention:

To keep the parasites away, its recommended to use better management practices (BMPs) and proper bio security in the shrimp farms. After harvesting, disinfection, ploughing and drying of pond is important to make sure the destruction of EHP spores and their carriers before stocking. Even SPF shrimp broodstock can harbor EHP spores, hence only PCR tested EHP free seeds should be stocked. Only EHP free seed should be stocked in the ponds. Once spores are in ponds it is very difficult to eradicate the disease. Hence farmers should adhere to strict biosecurity protocols and adopt better management practices (BMPs). Pond preparation should be carried out properly by drying and disinfection after every harvest to ensure that the EHP spores along with the carriers are destroyed. To control the EHP infestation.

## Conclusion:

Occurrence and prevalence of EHP in shrimp farm is of great concern for shrimp farmers due to its contribution in greater loss in economy and productivity. Increase in incidence of disease outbreak is mainly regulated by the interaction of ecological condition with shrimp health status and epizootics of EHP pathogen. Therefore, it is crucial to concentrate on better management practices for shrimp farming using high quality EHP free seeds, and strictly following farm bio security measures. It is required to prevent the spread of EHP pathogens to avoid the disease in subsequent culture operations and to improve the production and sustainability of shrimp culture. It is important for shrimp farmers to realise that following custom rules and regulations in shrimp farming is the need of the hour for responsible aquaculture practices.

## Treatment:

Pathostat Blu – 15g to 20g/kg of the feed for one week

Fepromix – 5g/kg of the feed



## From Slum to Sky



High above the cacophony of Mumbai's bustling streets, a dream takes flight. It belongs to an indomitable spirit named Nadrat, a young girl from the infamous Dharavi slum. Her aspiration, as lofty as the clouds, is to become a pilot. The financial constraints of her reality, however, threaten to chain her dreams to the ground. A beacon of hope emerges from an unexpected quarter—Captain Zoya Agarwal, an acclaimed Air India pilot and recipient of the 'Bharat Ki Beti' award.

Through her initiative 'Udaan Pari,' Captain Agarwal is committed to empowering underprivileged girls to pursue their dreams in aviation. Aiming to shatter the glass ceiling, she offers not just financial assistance but also mentorship, guidance, and an unwavering belief in their potential. Despite her humble beginnings, Nadrat's passion for aviation remained undeterred, and her determination caught the attention of Captain Agarwal, who stepped in to turn her dreams into reality.

She exhorts women to have big dreams and to fly by spreading their wings. By elevating the "Naari Shakti's Beti Bachao, Beti Padhao" movement, she promotes women.

The youngest woman in India to fly a Boeing 777, Captain Agarwal's career is a testament to her tenacity and dedication. Making history as the first Indian woman to fly over the North Pole, Captain Agarwal's achievements soar beyond the realm of aviation. Recognized at the SFO Aviation Museum in San Francisco, she is a global ambassador for gender equality, taking her advocacy to the United Nations.

Her venture 'Udaan Pari' reflects her dedication to ensuring that lack of resources does not discourage girls from pursuing their dreams, casting a long shadow of hope across the globe.

**Doesn't India need more Samaritans like her?**



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*PATHOSTAT BLU is a Unique and an Optimized Combination of Tannins, Polyphenols, Mucilage, Cynodon dactylon Extract, Curcumin, Tricholine citrate, Allicin, Thymol, Potassium diformate, Formic acid and Minerals for improving the health and performance of Shrimps.*



# Hill Stations

## Once the less untouched places, scream for rescue

Overcrowding of hills is a growing concern in many parts of India. The increasing number of tourists and the lack of proper infrastructure to accommodate them are leading to environmental degradation and pollution. The situation is particularly dire in popular hill stations like Shimla, Mussoorie, and Nainital, where the water crisis, traffic congestion, endless traffic jams, toxic vehicular pollution, mounds of litter, and unchecked development are turning these once-beautiful retreats into unwelcome and unsustainable hotspots.

We need tourism, but we also need to preserve the beauty and sanctity of the mountains.



## Overwhelming ecological destruction

A water crisis of Himalayan proportions that could have been avoided. Burgeoning tourist traffic causes automobile pollution; interminable traffic jams clog roads not built to accommodate such vehicle inflow; rampant littering of non-degradable material; and waste generated by roadside restaurants and eateries. Rampant misuse of precious natural resources. Uncontrolled development as builders of large resorts and small hotels on hillsides flout building norms.

Another significant challenge in the Indian Himalayan Region (IHR) is waste management. It has the potential to become the main source of pollution in all important riverine systems and valleys if it is not handled right away. Burning garbage would contaminate the air and worsen the local climate, thus it is not a practical solution.

The first group of places includes Shimla, Darjeeling, Nainital, and Ooty—names plucked from the annals of history and pasted into tacky travel pamphlets.

## The recent traffic menace leading to ecological red flags

In a concerning turn of events, the Himalayan region faces a severe ecological threat as an unprecedented surge of traffic, totalling 12,000 vehicles, has crossed through the Atal Tunnel this Christmas season. Massive traffic was witnessed at Atal Tunnel, a highway tunnel built under the Rohtang Pass, as thousands of tourists thronged Himachal Pradesh during the long Christmas weekend. This significant traffic influx is ringing ecological red flags, posing a substantial risk to the fragile biodiversity of the region.

Adding to the ecological apprehensions, reports indicate a massive traffic snarl on the Manali-Atal Tunnel Road. The congestion has further exacerbated the challenges faced by both local authorities and travellers. The surge in traffic is not only a logistical nightmare but also poses an immediate threat to the natural surroundings.

Perhaps the most shocking image this summer was the one that went viral on Twitter - a traffic jam on Mt Everest. The image and a corresponding video show a snaking queue of mountaineers almost glued to each other while they make their way to the summit, one inch at a time.

Environmentalists and conservationists are expressing growing concerns over the potential impact on the delicate balance of the Himalayan ecosystem.







**Mawlynnong**  
Cleanest village in Asia in 2003

## Asia's cleanest village leading by example

Mawlynnong is a small village situated around 90 km from Shillong in the East Khasi Hills, Meghalaya and is also known as God's own Garden. It was declared as the cleanest village in Asia in 2003 by Discovery India which certainly makes it one of the most popular tourist destinations in the Indian state. Mawlynnong village is a community-based ecotourism initiative where the entire community made collective efforts in making and maintaining the cleanliness of the village.

Mawlynnong offers some of the most picturesque natural beauty with lush green valleys, crystal clear water in the river, an abundance of flowering orchids hanging from the trees and extremely clean roads which makes this small village a worth visiting destination for tourists visiting Meghalaya.

## The need of the hour

It is essential to take immediate action to address these issues. Sustainable tourism practices, such as encouraging eco-friendly accommodations, promoting responsible tourism, and implementing effective waste management systems, can help mitigate the impact of overcrowding on the environment.

It is essential to take steps to preserve the natural beauty of these areas while ensuring that tourism remains sustainable and does not harm the environment.

## New Inclusions into the Ramsar List

With two days to go for World Wetlands Day, India today increased its tally of Ramsar Sites from 75 to 80.

The aim of the Ramsar list is to develop and maintain an international network of wetlands, which are important for the conservation of global biological diversity and for sustaining human life, through the maintenance of their ecosystem components, processes and benefits.

Five more Indian wetlands have been added to the global list of wetlands of international importance under the Ramsar Convention, taking the total number of such highly recognised waterlogged ecosystems in the country to 80.

Of the five, Magadi Kere Conservation Reserve, Ankasamudra Bird Conservation Reserve, and Aghanashini Estuary are in Karnataka, and Karaivetti Bird Sanctuary and Longwood Shola Reserve Forest are in Tamil Nadu.



*Karaivetti Bird Sanctuary*



# Know Your Value

A father said to his daughter, "You graduated with honours; here is a car that I acquired many years ago. It is several years old. But before I give it to you, take it to the used car lot at downtown and tell them I want to sell it, and see how much they offer You."

The daughter went to the used car lot, returned to her father, and said, "They offered me \$1000 because it looks very worn out."

The father said, "Take him to the pawn shop."

The daughter went to the pawn shop, returned to her father, and said, "The pawn shop offered \$100 because it was a very old car."

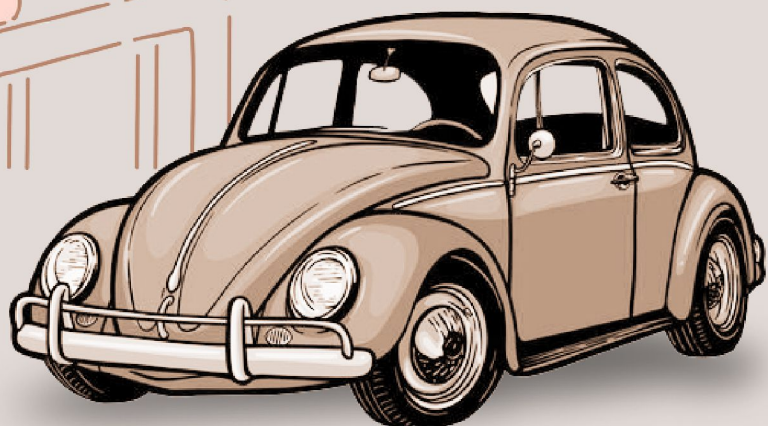
The father asked his daughter to go to a car club and show them the car.

The daughter took the car to the car club, returned, and told her father: "Some people in the club offered \$100,000 for it, since it is a Nissan Skyline R34, an iconic car and sought after by many."

The father said to his daughter, I wanted you to know that the right place values you in the right way. If you are not valued, do not be angry. It means you are in the wrong place. Those who know your value are those who appreciate you. Never stay in a place where no one sees your value!

It's important to be in an environment that values you and your contributions. If you feel undervalued, it's natural to feel upset or frustrated. Remember your strengths and the value you bring to the table. Don't let someone else's opinion of you define your self-worth. Surround yourself with people who value and appreciate you. Spend time with friends and family who uplift you. Make sure you are taking care of yourself physically, mentally, and emotionally.

**Moral of the story:**  
Remember, you deserve to be valued and respected.







## Odisha's Red Ant Chutney gets GI tag:

Insects have been consumed as a food source for centuries in communities worldwide. In Odisha's Mayurbhanj district, red weaver ants are used to make a chutney, or a watery semi-solid paste known as "Kai Chutney." This chutney is renowned in the region for its medicinal and nutritional properties. On January 2, 2024, this distinctive savoury chutney was awarded the geographical indication (GI) tag.

Hundreds of tribal families in the district make a living by collecting and selling these insects and chutneys. The ants and their eggs are gathered from their nests and cleaned before being used. The chutney is made by grinding a mixture of salt, ginger, garlic, and chilies. Similar red ant chutneys can also be found in other eastern states such as Jharkhand and Chhattisgarh.

The red ant chutney is renowned for its potential health benefits. The chutney is believed to be a good source of nutrients like protein, calcium, zinc, vitamin B-12, iron, magnesium, potassium, etc. This unique chutney is also treasured for its role in the development of a healthy brain and nervous system, potentially aiding in the management of conditions like depression, fatigue, and memory loss.



## A Trailblazer in Equestrian Excellence:

In a momentous achievement, Jaipur girl Divyakriti Singh has etched her name in the annals of Indian sports history as the first woman from the country to be honoured with the prestigious Arjuna Award in Equestrian. The President of India, Draupadi Murmu, presented the coveted Arjuna Award to Divyakriti Singh at a glittering ceremony at the Rashtrapati Bhavan in New Delhi, marking a crowning glory for the Asian Games Gold medallist in equestrian.

In fact, she is the only one from Rajasthan to get the Arjuna Award in the last five years. The last athlete from Rajasthan to get the Arjuna Award was in 2018. She is also the first Indian Woman to win a medal at Asian Games in Equestrian.

Divyakriti Singh's accolades extend beyond the Arjuna Award, as she also made history by becoming the first woman from Rajasthan to clinch a medal in Equestrian at the Asian Games. Her triumph in Hangzhou not only showcases her brilliance but also serves as an inspiration for aspiring athletes in the region.





# The Power of Manifestation

My mom planted this soursop plant in our compound. Being a hybrid plant, we expected it to start fruiting after a year.

The first year came, the plant now a shrub did not fruit. The second year came, this plant flowered, produced some fruits and all the fruit withered away. The third year came, and the plant flowered again but bore only one fruit.

So, this year, my mom called me, with a cutlass in her hand she asked, "What did the Bible say about a tree that does not bear fruits?"

I looked at her and said, "The Bible says that any tree that does not bear fruit should be cut down and cast into the lake of fire."

She said good and pointed at the soursop tree. "I am going to cut down this tree since it has refused to bear fruit."

I rushed toward my mom and snatched the cutlass from her hand. I begged her not to cut the tree.

She told me to give her one reason why she should not cut down the tree. After searching for several reasons, I said to her, "Mommy, let us just give it one last chance. If it does not bear fruits this year, we will cut it down."

And she agreed.

This year, when it started raining, the soursop tree began to flower. I will always walk around the tree and whisper, "You know if you don't bear fruit this year you will be cut down. So, prove yourself to the world."

I don't know, but I felt the universe heard my whispers to this tree because to everyone's surprise, this soursop bore more than twenty fruits and they all survived. We have been plucking and eating it.

I don't know what you will make out of this story. But this is my prayer for us in this EMBER period:

## Moral of the story:

When the world calls us useless and unproductive, may the universe bring someone who will stand by us and say, let us give him/her a second chance.

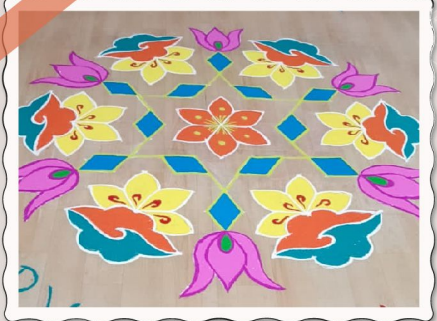
And when we are given a second chance, just like this soursop tree, may we multiply and produce beyond measure.







# Adding vibrancy to our festivities







# REPUBLIC DAY 2024

'NAARI SHAKTI': Empowering Women



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