

PROPULSE



PROVET @ POULTRY INDIA EXPO 2023

Supreme Charity: Organ Donation
(Page 09)

Poultry India Expo 2023 Hyderabad
(Page 03)

'Naari Shakti'
The Theme of Republic Day Parade 2024
(Page 12)

An Overview of *Argulus* sp.
(Fish Lice) Infestation in Fish Ponds
(Page 06)



BAMBERCIN® PLUS

The Novel & Potent **TRIBIOTIC**

- Healthy birds
- Optimal gut microflora
- Reduction in FCR
- Better immunity & disease resistance
- Wholesome meat & eggs
- Improvement in profits



Poultry India Expo 2023 - Hyderabad

Provet Pharma Private Limited participated in the Poultry India 2023 Expo, the largest poultry exhibition in South Asia, from November 22 to 24, 2023, held at HITEX, Hyderabad.

Provet marked its presence with its poultry division's impressive range of products. The highlighted segment was the portfolio of NAGPs, which comprises Non-Antibiotic Growth Promoters Next Gen: NAGRONEX-SNB (The Novel Synbiotic) and NAGRONEX-ESF (Phytobiotic Growth Promoter). The stall was visited by renowned veterinarians, consultants, breeders, and farmers from India and other Asian countries.





Customer Group Meeting - Avinova

For the benefit of our Kerala customers, for the very first time, we held a customer group meeting in Cochin on December 15, 2023, at Hotel Presidency, Ernakulam. Dr S. Sankaralingam, Ph.D., Senior Scientist, KVASU, Mannuthy, Kerala, gave a presentation on the topic of "Challenges in Broiler Farming and Solutions."

A good number of elite customers attended the meeting who also interacted with the speaker, asked questions, and received clarification.

Our marketing manager, Dr Jayastephen, gave a brief overview of Provet's history and journey. The customers were greeted and welcomed by Mr. B. Vijaykumar, DGM Sales, Avinova-South 1. In this technical seminar, which was arranged by Mr. Govindarajan (ASM) and Mr. Karuchinakumar (TSM), a few important issues pertaining to broiler management in Kerala were discussed.



Provet held a Customer Group Meeting at Garhbeta, Paschim Medinipur Dist.
 Venue: Roy Chicks Agency
 Date: 9th Nov 2023



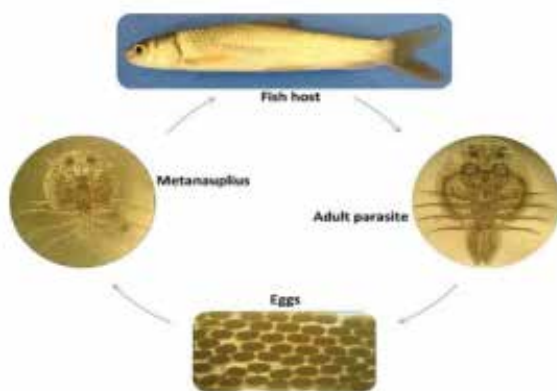
Provet organized a Customer Group Meeting at Molara, Paschim Medinipur Dist.
 Venue: Trisha Poultry
 Date: 8th Nov 2023

An Overview of *Argulus* (Fish Lice) Infestation in Fish Ponds

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

Introduction

Aquaculture has emerged as a promising enterprise to retain with the growing demand for high-quality protein food in an ever-growing world population along with generating employment and income for rural people. With the increasing intensiveness of the aquaculture practice to increase the fish production, stress level on fish is also increasing, resulting in compromised immunity of stocked fish which leads to outbreak of infectious. Among infectious mediators, the parasites are in general considered opportunistic infectious agent and highly viable under intensified culture conditions. The cultured aquatic animal harbour's a diverse group of parasites; however, manifestation with ectoparasites is ubiquitous in the aquatic environment. *Argulus* are crustacean macro-ectoparasites that create one of the major threats to the aquaculture due to lack of suitable therapy. Argulosis causes a potentially rapid escalation of infection, causing substantial economic loss to the aquaculture industry worldwide. The use of chemotherapeutics/drugs/chemicals is a routine activity to combat argulosis in aquaculture; however, it has numerous unavoidable drawbacks; therefore, treatment would hardly be feasible with the existing methods.



Life cycle of Fish Lice (*Argulus* sp.)

Life cycle of Fish Lice - *Argulus* sp.

Argulus is a louse-like parasite having a flat body generally called the fish louse. One of the most widespread crustacean ectoparasites of freshwater fish in the world. *Argulus* has a direct life cycle, meaning it only requires one host (the fish) to completely develop from an egg to a mature, reproducing adult. The adult female parasite leaves the host to lay eggs. then it lays sticky eggs on the submerged vegetation, rocks, sticks, etc. The female dies after spawning. The nauplius, metanauplius and in some species the 1st copepod stages develop within the eggs and hatch as metanauplii or copepods. Other development stages are 2nd to 7th copepodid and finally adult. All free-living stages are parasitic to fish. The minimum period required for life cycle completion varies from 3-6 weeks.



Image 1: Rohu (*Labeo rohita*) heavily infested with *Argulus* sp.



Image 2: Microscopic examination of Larval stage of *Argulus* (Fish Lice)

Scenario of *Argulus sp.* in aquaculture:

Modern fish culture practices generally operate on high stocking densities and creates a favourable environment for infectious diseases and transmission and reproduction of parasites. *Argulus* parasitizes the skin, fins, and gills of host fish and feed on mucus, epidermal cells, and blood leading to dermal ulceration, physiological stress, and immune suppression. The lesions caused by parasites due to blood sucking result in secondary infection with opportunistic pathogens like bacteria and fungus. It secretes certain secretory/excretory proteins (SEP), which help the parasites in attachment with host, tissue digestion, extraction of nutrients, and establishing an infection. Heavy infestations cause severe skin damage, pinpoint haemorrhages, anaemia, fin and scale loss, increased mucus production, lethargy, erratic swimming, and poor body condition and mortality. In a severe infection, fish skin, fins, belly flaps, and head loaded with fish lice make the fish unpleasant or obnoxious, reducing consumer preference and marketability. This situation thus demands efficient antiparasitic drug or managerial measures to tackle argulosis for aquaculture sustainability.

Economic importance of Fish Lice – *Argulus sp.*

Argulus are crustacean macro-ectoparasites that create one of the major threats to the aquaculture due to lack of suitable therapy. *Argulus*, locally called fish lice, is one of the most dreadful crustacean macro-ectoparasites that cause the disease Argulosis, a severe growing concern to the aquaculture industry worldwide. Argulosis is responsible for epizootic outbreaks and is a serious economic concern in all phases of the aquaculture sector, from production to marketing. The fish lice is a prolific breeder with a direct life cycle but comprising several metamorphic stages in their life such as eggs, metanauplius, copepodid, juvenile, and adult stages, and all stages except eggs are infective to fish. The infection leads to reduced appetite, weight loss, and anaemia in fish resulting in morbidity and mortality in the chronic stage of heavily infested fish. The intensity of fish lice is very low with less of a threat in the wild fish than to those in captive conditions at all the stages of fish and exerts massive financial insecurity.

Conclusion:

Argulus sp. infestations of freshwater food fishes. Fish lice are branchiurid ectoparasites capable of inflicting serious pathological effects on freshwater fishes. Little is known on the present status of fish lice in freshwater food fish in India. It has shown that *Argulus sp.* are found parasitizing economically important species of fish in India, determined the species of fish lice are present and which species of fish they infect, and described the parasite populations found on infected fish species.

Prevention:

Because of potential challenges with controlling this parasite, especially in food and pond fish, biosecurity measures should be instituted and followed to minimize introduction or transmission to other ponds, systems, or facilities. Incoming fish, particularly wild-caught or pond-raised stock, should be quarantined, observed, and sampled in order to minimize the risk of introduction. *Argulus* outbreaks, once recognized, should be managed quickly. Source water should be evaluated to ensure that is not a pathway for introduction of argulid eggs. Ideally, water should be filtered or obtained from a fish-free and *Argulus*-free source.

Control and Treatment:

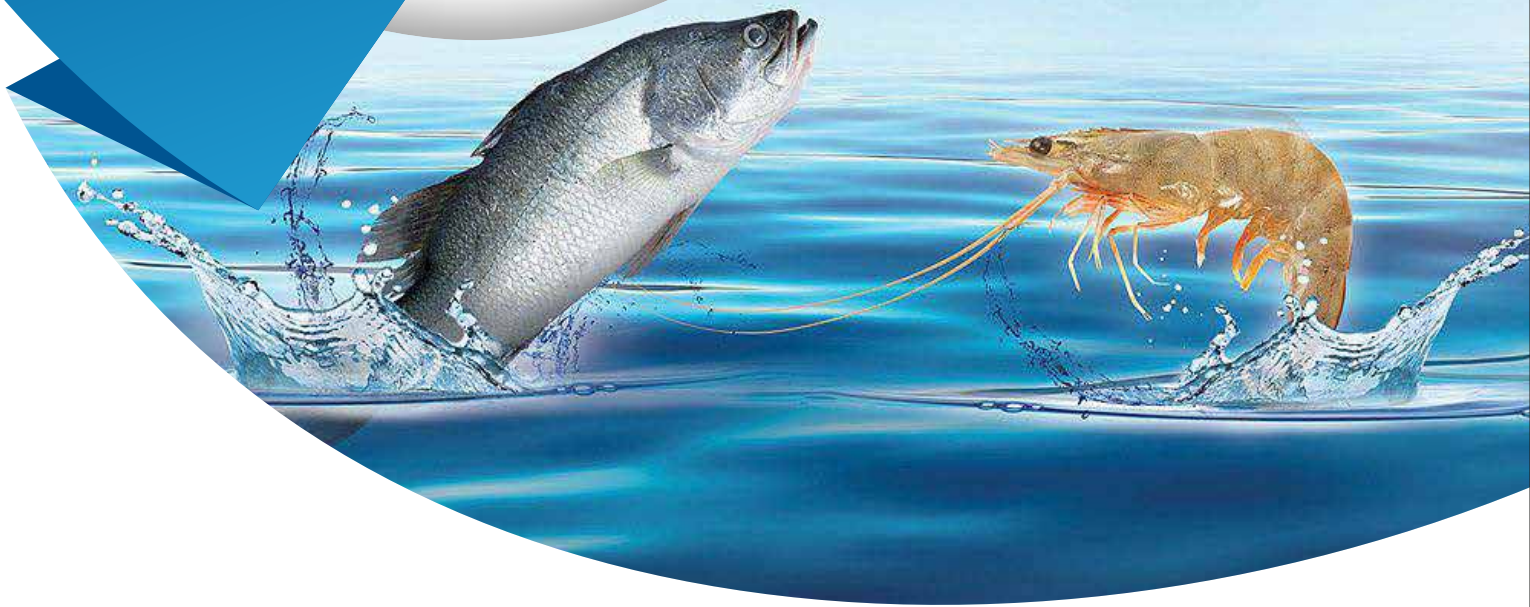
1. Ectocyp – 100ml/acre in 5 feet depth of the fish pond.
2. Mectimax – 10ml/100kg fish body weight for 4-5 days with feed.



The Effective Parasiticides



Excellence through Innovation



BENZATEC[®] 80

*Powerful and Proven
Biocide and Deodorant*



Supreme Charity: Organ Donation

We are aware of blood and eye donation, which is commonplace in today's society. Awareness on other forms of donations like bone marrow, liver, skin and other tissues are on the rise.

Organ donation

Organ donation is the process of donating organs or biological tissue to a living recipient, who needs a transplant.



Organ and cadaver (whole body) donation are 2 important issues that contribute to the future of medicine. Donors with brain death represent the major source of organs for transplantation and contribute to saving millions of lives of patients with organ failure. Organ donation is a miraculous gift and enables the donor to continue to "live" in others.

Today, most government bodies encourage organ donation to save human life. Most of the major religions also support this selfless act. A recent report has unleashed the fact that one organ and tissue donor can impact the lives of nearly 50 individuals in a positive manner.

Why to donate?

The fact that the donated organ can potentially save a human being from the clutches of death is one of the biggest plus involved in organ donation. Needless to say, saving human life is one of the most righteous acts that one can ever consider in his or her lifetime. Organ donation makes it possible for an individual, family, to get involved in this selfless act of saving human life. Your eyes can make a person see the world and certain organs can make a person breathe and so on.

While there are plenty of compelling reasons to donate organs, one of the reasons is self-satisfaction. The fact that you are involved in such a noble act is something that is worth of appreciation. As they say, "Everything that goes around comes back". The fact that you will be able to do something good towards mankind is a hugely gratifying feeling.

Choosing to donate is a voluntary step that one takes and there is no age restriction when it comes to organ donation. Newborn babies and elders can also donate organs if the organs are healthy.

Efforts of the government to encourage body donations, has paid off

Tamil Nadu registers 8% increase in donation of organs. With more than two weeks left, the state has retrieved vital organs from 170 brain-dead patients in 2023. Nearly 30% of the year's donations came in October after the government announced it would accord state honours for organ donors during their last rites. Since the announcement, there have been 48 organ donations including 23 from government hospitals.

Several elected representatives including ministers, MPs, and MLAs went to hospitals, homes, and burial grounds to place wreaths and pay last respects to bodies of organ donors. The number of people who have registered for organ donations also went up by more than 4,111 in the last three months. Yet the demand for organs still exceeds the supply.

One such instance poured life into four needy patients, recently

The parents of a five-year-old girl in Mumbai, donated her heart, kidneys, and cornea, after she was declared brain-dead at B J Wadia Hospital, Parel. The girl, a special child, was admitted a week ago to a Chembur Hospital and shifted to Wadia Hospital on November 22, 2023.

She was brought in on an artificial ventilator and remained critical. The hospital declared her brain-dead on November 26, after which their transplant coordinator and team counselled the parents about organ donation. The parents, after initial hesitance, agreed to donate her organs and give a new lease of life to four patients.

The girl's name was Drishti (sight). The team convinced her mother saying that Drishti's eyes would gift eyesight to two new people and her heart would beat in another person's body, and she would live on in them.

While Drishti's heart was sent to a hospital in Delhi via a green corridor, one kidney was transplanted to an end-stage kidney patient in KEM Hospital, Parel, and the other in a patient at Jupiter Hospital, Thane. This is the third paediatric donation at Wadia Hospital since 2022 and the second one this year.

In Mumbai, this will be the third paediatric donation in 2023. In July, the parents of a five-year-old donated her liver to Lilavati Hospital, Bandra, after she was declared brain-dead. In February 2019, Mumbai saw the paediatric donation of a two-year-old child, the youngest donor so far.

Let's hear a story of a recipient who got a second lease of life by receiving a heart from a similar donor in November.

Until November 25, Kerala's Kayamkulam resident Hari Narayan was living on the edge. Diagnosed with dilated cardiomyopathy earlier this year, the 16-year-old and his family were waiting for a heart donor.

It was then that the family of Kanyakumari resident Shekhar, who passed away on November 24 at the KIMSHEALTH Hospital in Thiruvananthapuram, decided to donate his organs.

Shekhar's heart was brought to Kochi by helicopter and the transplant surgery was performed by Dr Jose Chacko Periyapuram at the Lisie Hospital.

After 15 days, Hari Narayan, with a new heart, left the hospital on Monday. He was accompanied by his elder brother Soorya Narayan, who had also undergone a heart transplant in 2021.

As Hari was leaving the hospital, he thanked the family of Shekhar, whose benevolence gifted him a second life. "The decisions of two families have helped us live better lives. We will forever be grateful to them," Hari said.

Whole body donation (Cadaver)

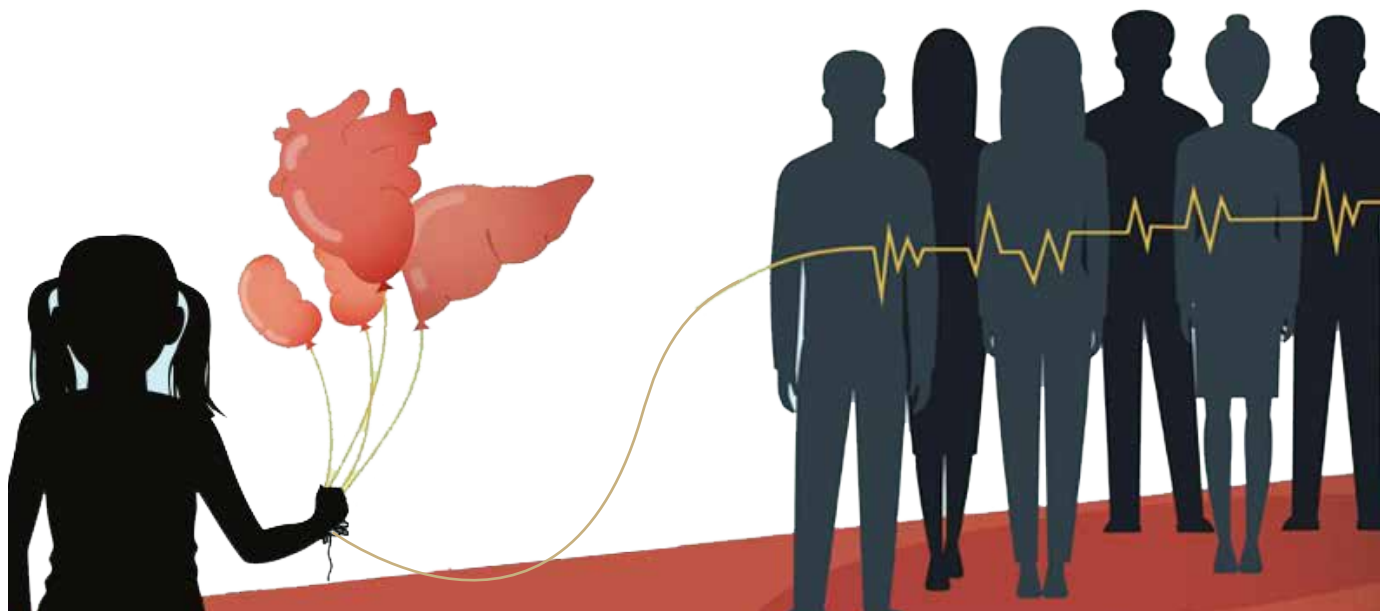
Whole body (cadaver) donation, which is also called Deh Dan, is the donation of the whole body after death for the purpose of medical research and education.

Body Donation is important for helping medical students and researchers to understand the human body, and for the advancement of science. Cadavers are usually part of medical students' first encounters with clinical work and play a very important role in medical education and we need to learn the significance of cadaver donation.

Appeal to have a big heart ❤️!

It's time for us to learn the significance of this great deed and step forward to save many lives around us. Let us pledge ourselves to provide a new life to someone.

We know it's not easy for someone, or their family to go selfless and act upon it when they are grieving already. But all we need is a big heart to make that quick decision and extend that timely help to the needy that in return brings a lot of blessings and prayers to our loved ones.



SILENCE IS THE BEST ANSWER

There comes a time in everyone's life when we get very angry at someone, and we have a lot to say. However, in such situations, it is always good to keep your calm and remain silent. It may seem difficult not to say something at that point and express our anger, but silence is the best answer. Silence is not empty, it's full of answers and has its own language.

Some people consider silence as the victory of the one who is speaking. In reality, a silent person is actually a thousand times more powerful than a person who answers, for this person can say things in the heat of the moment that they will later regret.

Lessons to learn

Once a wise person said that if you answer to every barking dog, you will never reach your destination. There is no doubt about it. Most people around us generally talk and gossip about others' problems. Some people will say good things, while most will criticise, and some will even make fun. But if we start responding to all of them, we will never have peace of mind and will never be able to reach our destination, since their words will always hold us back.

In the same way, if we start responding to everyone's words, we will be wasting our time and will eventually pay attention to their comments. This will divert us from focusing on our goals and stance, and we be influenced by others' points of view.

Do we remember a short story told by our grandmas?

In the story, there was a pond where six frogs used to live. Once, they all gathered and challenged each other to climb the tallest tower next to the pond. Each frog thought he could climb easily, the next day, they started the race. When the frogs started to climb the tower, many other frogs came to see them climbing, and they all thought that it was impossible for a frog to climb on such a tall tower and so started making fun of those who were climbing.

As a result, the racing frogs got demotivated and backed off, except for one frog who kept climbing the tower, without paying heed to the mocking.

Finally, everyone saw this frog reach the top of the tower. It was a feat that none thought could be accomplished. So, when they asked the frog how he did that, it could not answer them. It turned out that the frog was actually deaf and participated in excitement when it saw other frogs climbing up, without being influenced by the mocking of the frogs, watching the race.

Similarly, we should also ignore people's idle talk because it is their job to talk behind one's back and criticise. We can't shut everyone's mouth, but we can focus on what we want and our goals. Work hard and remain silent.

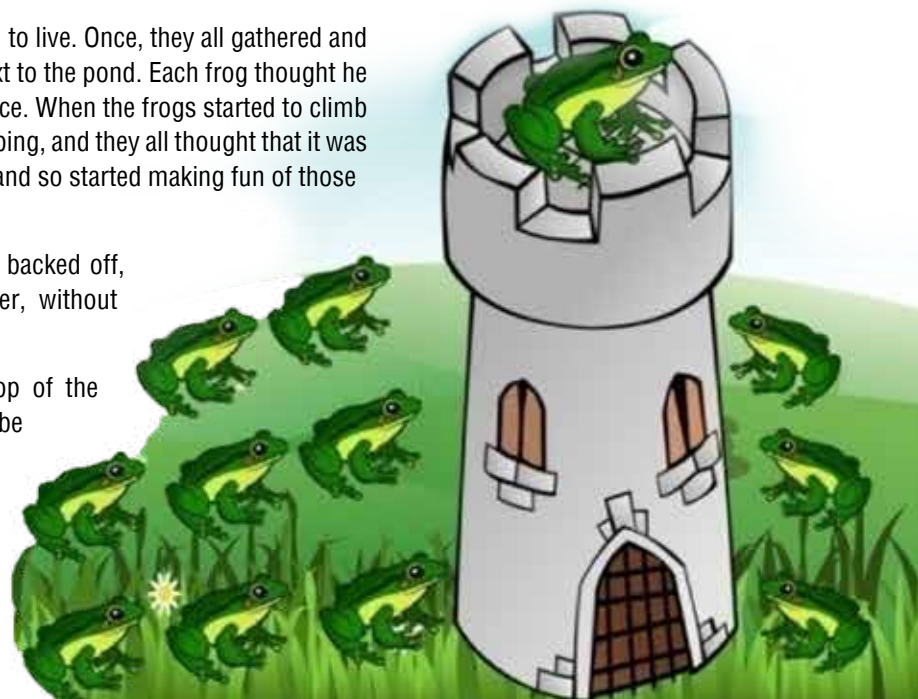
Silence brings harmony in relationships

Silence has many other benefits, like it does not escalate the fight between two people. If one is speaking and the other remains silent, there will be no argument and the anger of the other person will soon cool down and the fight will also end.

There are people who talk rubbish and don't care about their language. At this time, you need more patience than you already have. Keep your calm. The way others behave with you shows you their background and upbringing.

Moral of the Story

Silence is the symbol of maturity. When you speak less, you listen more, and as you listen more, you develop more understanding. Let others criticise and talk about us; just focus on your targets so that not just you, but your success will stop people from mocking you.



‘Naari Shakti’ The Theme of Republic Day Parade 2024

Breaking another glass ceiling, our government is working on a proposal to have only women marching and band contingents for the Republic Day parade in 2024.

Since 2015, when the women’s marching contingent made its debut at the Republic Day parade, in which then US President Barack Obama was the chief guest, women in the armed forces have been making a mark in various spheres. In 2016, Avani Chaturvedi, Bhawana Kanth, and Mohana Singh made history by becoming the first women fighter pilots to be commissioned by the Indian Air Force (IAF). And with the Indian Navy deploying women officers on its warships, women are now at the forefront of the Indian military, performing a range of duties.

An official memorandum circulated by the ceremonial branch of the ministry of defense, which handles the Republic Day parade, to the three services and various ministries and departments says that the parade in 2024 will have only women participants in the contingents (marching and band), tableaux, and other performances. All concerned ministries and departments have been asked to prepare accordingly.

Even this year’s Republic Day parade, which was the 74th in the series, had ‘Naari Shakti’ as the dominant theme in the tableaux of Kerala, Karnataka, Tamil Nadu, Maharashtra, and Tripura.

However, a section of the military is flummoxed by the proposal—the strength of women in the armed forces still being an issue. The strength of women officers, as on March 1, 2023, in the IAF (excluding medical and dental branches) was 1,636. The strength of women officers in the Indian Navy, as on March 9, was 748, including medical and dental officers. When talking about the women power in armed forces, let’s see the daredevil achievement of a women who acclaimed global recognition.

However, a section of the military is flummoxed by the proposal—the strength of women in the armed forces still being an issue. The strength of women officers, as of March 1, 2023, in the IAF (excluding medical and dental branches), was 1,636. The strength of women officers in the Indian Navy, as of March 9, was 748, including medical and dental officers. When talking about women's power in the armed forces, let’s see the daredevil achievement of a woman who has acclaimed global recognition.



World’s first woman to fly solo across the Atlantic

Journey of an Indian Aviator, Aarohi Pandit

It was always her dream from childhood to fly, and that dream became a reality when she joined the aviation sector at a very young age. We are talking about Captain Aarohi Pandit, the trailblazing Indian aviator who has redefined the boundaries of women's achievements in the aviation industry. Having made history as the first Indian woman to accomplish a solo flight across the Atlantic and Pacific Oceans, Captain Pandit has now successfully completed her A320-type training at the Pier Seven Aviation Academy, a division of Sky One FZE.

At just 26 years of age, Captain Pandit holds an impressive array of accomplishments that have positioned her as a true pioneer in aviation. What is interesting to note is that she has garnered global recognition for becoming the world's first woman and youngest pilot to fly solo across both the Atlantic and Pacific Oceans in a light-sport aircraft.





Thoughts to Remember

DON'T POLLUTE ME

The Earth still has the ability to repair the damage caused by humans' actions to its well-being. We caused enough pollution in the name of the festival by burning firecrackers loaded with chemicals. The atmosphere is foggy, not because of heavy clouds, but because of the heavy smoke it contains. Nature brought the rains to cleanse its system because it couldn't digest the damage we caused. I hope the Earth also has its way of detoxifying itself.

We should avoid adding more burden and conserve mother nature. Take immediate action to mitigate climate change as there is no planet B. It's good to be selfish and ensure your home and surroundings are breathable so that you can breathe fresh air.



EXPLORING THE DEPTHS OF EMOTIONAL WELL-BEING

Here are five powerful things to be okay with that can transform your emotional well-being. Never forget them and here it goes.

1. It's okay if you need a break from life's chaos. Self-care is a sign of self-compassion.
2. It's okay to make mistakes. They are valuable lessons on your journey.
3. It's okay if you set boundaries. They protect your emotional health.
4. It's okay to take one step at a time. Progress is about moving forward and not about speed.
5. It's okay to prioritize your happiness. It's a gift to yourself and those around you.



These five statements can guide you on your emotional wellness journey. Embrace them and watch how they transform your life. Your well-being is a precious gift. Cherish it.

PRIME MINISTER NARENDRA MODI PENS SONG WITH GRAMMY WINNER FALU

A special song promoting the benefits of millets, in which Prime Minister Narendra Modi collaborated with Indian American singer Falguni Shah and her husband Gaurav Shah, has been nominated for the Grammy award in the best global music performance category.

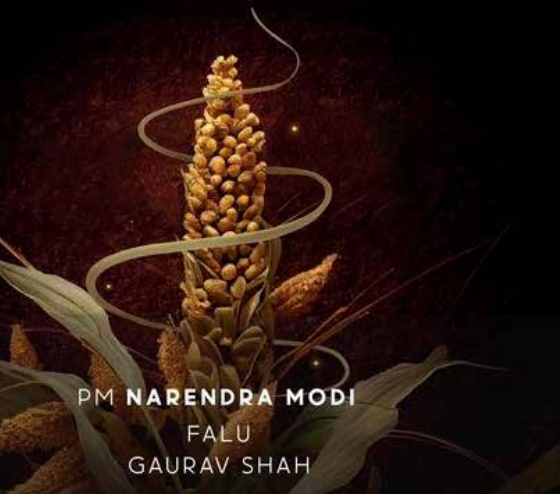
The year 2023 has been designated as the "International Year of Millets" following a proposal from India, which was endorsed by the members of the United Nations' Food and Agriculture Organization (FAO) governing bodies and the 75th Session of the UN General Assembly.

Prime Minister Modi has written a song along with the couple.

"Abundance in Millets" was created to raise awareness regarding the super grain as another potential key to minimizing world hunger.

Knowing the the power of music that can bring about a positive change and uplift humanity, the singer asked the prime minister if he would write the song with her.

Abundance in Millets



PM NARENDRA MODI
FALU
GAURAV SHAH

How to be fearless in any situation?

Once there was a farmer who was heavily in-debt to a selfish landlord. This landlord fancied the farmer's beautiful daughter so he made a deal with the farmer.

The landlord said to the farmer:

"I will put one black stone and a white one into an empty box. Your daughter should select a stone from this box. In case she picked the black stone, she would be my wife, but your debt will be forgiven. If she picked the white stone your debt will still be forgiven but she no longer needs to marry me. However, if she refused to pick a stone, I will have you thrown into jail."

However, the landlord did something unethical – he cautiously picked two black stones. The young lady saw it and was faced

with a difficult choice: Should she sacrifice herself and pick one stone or not pick at all and have his father be thrown into jail?

This seems to be a no-win situation for the farmer's daughter but she did next was nothing short of remarkable.

She picked a stone and intentionally dropped it on the ground where it immediately became lost with all the other stones.

"Oops, sorry for being so clumsy," she said. "Anyway, let's just look inside the box for the other stone left so that we'll be able to tell which stone I picked." Since the remaining stone is black, it must be assumed that the lady picked the white one. And since the landlord would not dare admit cheating, the farmer's daughter changed what seemed an impossible situation into an advantageous one.



Moral of the story:

Unlike what others may think, complex situations have solutions. Sometimes we just have to think outside the box and use our wits. Fear kills your thinking power, and you may end up falling in a trap.



Celebrations, fun and much galore!

Provet has made the Dubai trip for the shrimp hatchery technicians more memorable



IMMULATOR[®]

The Superlative Immunity Booster



Enhance Immunity &
Fight The Invaders



www.provet.in

[f](#) [x](#) [in](#) [p](#) provetppl

Provet Pharma Private Limited

No. 9, 1st Floor, Chakrapani Street, 2nd Lane,
Narsingapuram Extension, Maduvankarai, Guindy,
CHENNAI - 600 032. INDIA

Telefax: +91 44 2244 2124 / 27 | e-mail: info@provet.in