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# NAGRONEX<sup>®</sup> ESF

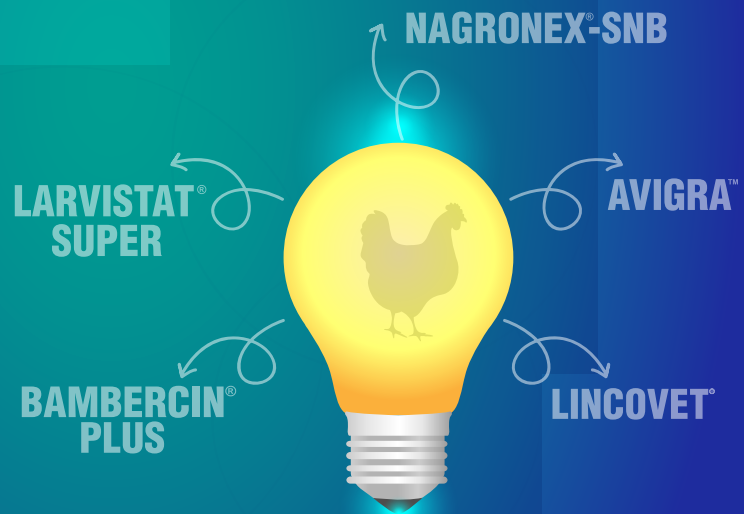


- Acts as an Anti-Oxidant & Acidifier
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# Epitome of Innovation



## INTRODUCTION

Provet prides itself with the spirit of innovation, creative zeal well imbued with ethics in providing effective, economical solutions to the end user.

Innovation and striving to provide solutions is fraught with failures rather than success. Only the thirst to be a dependable, innovative and economic solution provider keeps us going despite pitfalls, adversities, etc.

We have given below certain examples / practical situations wherein the spirit of innovation in Provet is well exemplified.



### PROBLEM SITUATION

Coccidiosis is caused by *Eimeria spp.* a fast evolving organism and one, which has developed resistance against many of the anti-coccidial agents available in a very short time.

Newer agents were very hard to come by and the industry didn't have the wherewithal to come out with effective, sustainable solutions.



### INNOVATIVE SOLUTION

In coordination with AlPharma, Provet established "The Anti - Coccidial Rotation / Shuttle Program" and made it the gold standard, the new normal, hitherto not common in the sub-continent.

Also, Provet was instrumental in establishing the standard "Lesion Scoring and Gut Health Evaluation" programme and made it an excellent tool in the hands of the poultry professional.



### PROBLEM SITUATION

*Escherichia coli* is the major and common pathogen compounding Chronic Respiratory Disease (CRD) leading to Complicated CRD and frustrating all attempts to control mortality.

Avian Pathogenic *Escherichia coli* (APEC), is a major problem afflicting poultry flocks even today causing immense mortality and huge economic losses.



### INNOVATIVE SOLUTION

BACTIPHAGE EC – Sensing the gravity of the problem caused by *Escherichia coli*, the constant development of antibiotic resistance, the importance of Colistin as a critical drug in human medicine and to aid the farmer in managing APEC, Provet came out with the "Next Gen Solution against E. coli" containing Bacteriophages.

Bacteriophages are highly specific and highly sensitive to the bacterial species.

**! PROBLEM SITUATION**

Growth parameters are negatively correlated with Reproductive traits in poultry parent stock and the heritability is much lower. Reproductive traits are further affected by restricted feeding, stress, increasing age, etc. The focus of general solutions in the market was imbalanced and was not hitting the problem on its head.

**💡 INNOVATIVE SOLUTION**

AVIGRA – Provet came out with a better & balanced solution touching all bases, thus providing an effective solution.

**! PROBLEM SITUATION**

Lack of parenteral anti mycoplasmal agents in actively treating mycoplasmal infections in both poultry and livestock.

**💡 INNOVATIVE SOLUTION**

LINCOVET INJ – Lincosamides were generally available as feed premix. Provet came up with the most effective anti-mycoplasmal lincosamide in parenteral form.

**! PROBLEM SITUATION**

Flies are a global problem in poultry farms and they cause annoyance, irritation/nuisance to farm workers and birds, affect productivity and act as vectors to disease.

Currently available control measures face numerous difficulties & need multiple interventions in managing flies.

**💡 INNOVATIVE SOLUTION**

LARVISTAT SUPER & GOLD – Innovative solutions combining an Insect Growth regulator and Non-Antibiotic Antimicrobial fortified with Bio – actives.

Both are excellent at providing a better solution in solving fly menace, facilitating growth, nutrient utilisation and obtaining better return on investment and makes the farmer stress & worry free. The product promotes healthy and safe management of fly menace and is environmentally sustainable. They also help in reducing the production of irritant gases like Ammonia and thus protect the respiratory system from damage resulting in microbial infection.

**! PROBLEM SITUATION**

Slow & consistent awareness on antibiotic resistance has created the need to provide sustainable and effective solutions to replace AGPs & provide good gut health, growth and production parameters

**💡 INNOVATIVE SOLUTION**

NAGRONEX SNB – Novel Synbiotic Feed Additive, containing highly researched probiotic, prebiotic components & zoo-Technical additives and other synergistic factors combining the best of both worlds.



## CUSTOMER TESTIMONIALS



### Mr. Arjun Jaral

Kashmir Valley Poultry  
Village: Bishna, Jammu



# IMMULATOR®

## The Superlative Immunity Booster

I have been using Immulator for my last three flocks, and the results have been excellent. I was initially unsure about trying a new product, but **IMMULATOR** has given amazing results.

In the first week, my birds gained an average weight of 185 grams, which is much better than the standard 170 grams. Giving **IMMULATOR** on the 9<sup>th</sup> and 10<sup>th</sup> days helped improve the birds' response to the ND vaccine, solving subclinical ND problems we faced earlier. The 15<sup>th</sup> and 16<sup>th</sup> days dose also improved the response to the IBD vaccine.

From the 25<sup>th</sup> day, a three-day dose helped protect the birds from bacterial infections, keeping them healthy and active.

**IMMULATOR** has become a key part of my poultry care routine. It ensures healthier birds, stronger immunity, and better overall performance. I highly recommend it to other poultry farmers for consistent results and disease prevention."

## In Memoriam: Honouring the Icons We Lost in 2024

*We pay tribute to the remarkable individuals who left an indelible mark on our world*



**Ratan Tata**  
Chairman, Tata Group



**Zakir Hussain**  
Tabla Maestro



**Shyam Benegal**  
Visionary Filmmaker



**Dr. Manmohan Singh**  
Former Prime Minister

Their Contributions and Legacies Continue to Inspire and Shape Our Lives

# DIASHIELD<sup>™</sup>

Dynamic Shield against Diatoms, Microcystis and Snails



- Effectively reduces Microcystis and various types of filamentous algae.
- Controls fungal infections and snail problems.
- Improves shell quality and promotes moulting.
- Provides suitable environment for better performance and growth.
- Binds uniformly with soil/mixes properly with water during application due to gel form.



# Overview of Microcystis Toxicity and Effects with Fish

**Dr. Vijay Sundar Deva**  
Assistant Product Manager  
Blunova

Microcystis is a genus of cyanobacteria (commonly referred to as blue-green algae) that can have significant effects on fish and shrimp ponds. These effects are primarily negative, as Microcystis can form harmful algal blooms (HABs) that negatively impact water quality and aquatic life.

## Effects of Microcystis in Fish and Shrimp Ponds:

### 1. Toxin Production:

- Microcystis is known to produce microcystins, which are potent toxins that can be harmful to aquatic animals, including fish and shrimp.

#### These toxins can cause:

- Liver damage in fish and shrimp, leading to organ failure or death.
- Disruption of cellular processes by inhibiting protein phosphatases, which can interfere with normal physiological functions.
- Neurological issues: In high concentrations, the toxins can affect the nervous system, leading to disorientation, reduced swimming abilities, or death in fish and shrimp.



*Fig. 1: Toxin Microcystin and Cyanobacteria float, along with a dead fish, on the surface of fish pond*

### 2. Oxygen Depletion:

- When Microcystis blooms, they can cause severe oxygen depletion in the water, especially during the nighttime when the algae consume oxygen without producing it (photosynthesis only occurs during daylight).

#### Oxygen Depletion led to:

- Hypoxia or anoxia (low or no oxygen), which stresses or kills fish and shrimp.
- Fish kills: Decreased oxygen levels can suffocate fish, particularly those in deeper areas or those less mobile.
- Degradation of water quality: Oxygen depletion also affects the overall water chemistry, making it harder for beneficial bacteria to break down organic matter effectively.

### 3. Water Quality Issues:

- Microcystis blooms can lead to murky, green water, reducing water clarity. This makes it difficult for sunlight to reach aquatic plants and disrupts the pond's ecosystem. Some additional water quality impacts include:
  - Increased nutrient concentrations (e.g., nitrogen and phosphorus) that fuel further algae growth and contribute to eutrophication.
  - High levels of organic matter: When algae die off, they contribute to increased organic content in the water, which leads to further oxygen depletion during decomposition.

### 4. Reduced Feed Conversion and Growth in Shrimp and Fish:

- The presence of toxic algal blooms can stress fish and shrimp, which affects their feeding behavior and growth rates. In shrimp, this can lead to reduced feed conversion efficiency and slower growth, negatively impacting aquaculture productivity.
- Behavioral changes in fish and shrimp: Exposure to toxins or oxygen-deprived environments can cause abnormal behavior, including erratic swimming, reduced feeding, or increased vulnerability to diseases.

### 5. Skin and Gill Damage:

- Microcystis toxins can also directly affect the skin and gills of fish and shrimp. Damage to these areas can:
  - Increase susceptibility to infections and pathogens.
  - Reduce the ability of gills to exchange gases, further compounding oxygen depletion.

### 6. Toxicity to Other Aquatic Life:

- Microcystins can be toxic to other organisms in the pond, including invertebrates and plankton, disrupting the entire food web. This affects species that fish and shrimp rely on as food sources, potentially leading to nutritional imbalances.

#### Conclusion:

Microcystis blooms in fish and shrimp ponds can lead to significant ecological and economic impacts, particularly due to the production of toxins like microcystins. These toxins can cause organ damage, reduce growth rates, and even lead to mass mortality of fish and shrimp. Additionally, oxygen depletion and poor water quality further exacerbate the situation. Proper pond management, regular water quality monitoring, and nutrient control are essential to prevent and manage the harmful effects of Microcystis in aquaculture systems.

## Provet as Diamond Sponsor at 35<sup>th</sup> PFI AGM 2024



Provet proudly showcased its commitment to excellence at the **35<sup>th</sup> Poultry Federation of India (PFI) AGM 2024** event, held on December 27th and 28th in Gurugram. As a Diamond Sponsor, Provet demonstrated its leadership and unwavering dedication to driving innovation and growth in the poultry sector.

At the event, Provet was ably represented by **Mr. Pramodh Sharma, AGM** and **Mr. Rajneesh Kumar, RSM** who actively engaged with farmers, consultants, and industry leaders. Their meaningful interactions underscored Provet's customer-centric approach and its focus on building strong industry relationships.

A highlight of Provet's participation was a captivating technical session delivered by **Dr. B.C. Dutta**, a renowned poultry consultant. His presentation on "The Importance of Uniformity & Grading in Breeder Performance" provided invaluable insights into optimizing breeder productivity. Dr. Dutta emphasized how uniformity and precise grading contribute to enhanced flock performance, better egg quality, and overall profitability. The session drew widespread appreciation for its practical relevance and forward-looking perspective.

The company's dedication in advancing concept-based solutions and its support for industry-wide knowledge sharing were evident throughout the event.

With a focus on empowering poultry professionals and enhancing productivity, Provet continues to set new benchmarks, making strides towards a more efficient and sustainable poultry industry in India.





# India's Chess Odyssey: From Ancient Roots to Global Glory



## Introduction:

India is a land of great inventions. From the addition of the zero and the place value system in mathematics which changed the face of arithmetic and algorithms, to Ayurveda, the traditional school of sciences or the cataract surgery which was invented in the 3rd century, or the USB which made data saving and transfer so feasible and time saving, Indian contributions have immensely accelerated the growth of human development and brought about revolutionary changes. The western world has now started taking cognizance of our potential and have adopted most of our practices.

Did you know that one such invention, which is now a very respected and sought after sport at the global level, the game of chess, has its roots in India? With 37 Grandmasters of this game, including former World Champion Viswanathan Anand, being of Indian origin, one holds great pride that they have taken this game of the Indian soil to the international tables.

## Origin of the sport:

1500 years ago, during the Gupta Empire, the game of Chess or Chaturanga, came into existence. This game flourished in India during the 6th Century, which was based on the four divisions of the military - infantry, cavalry, elephantry, and chariotry or the modern-day pawn, knight, rook and bishop – hence the name Chaturanga. The game was a battle simulation game which rendered Indian military strategy of that time. This game has two of the most essential features inspired from the battle formations of the Indian epic of Mahabharata, that different pieces have different powers and victory depended on the survival of one piece – the king of the modern chess. In the medieval times, if the king surrendered, it signifies the loss of his kingdom, exactly the way one loses the game of chess when the king is captured.

## Travelling of this came all round the world:

Originating in Northern India, this game spread across Persia. It also spread to China during the Hans Dynasty. When the Muslims started their reign over Persia, they too adapted the game and finally spread it over Europe during the Moorish Conquest of Spain.

## The story behind the Modern Name – Chess

When a form of Chaturanga spread to Persia, the Persian rulers changed the king from Sanskrit 'rajah' to the Persian 'shah'. In Persia, checkmate was called "shaamat". When it went to Europe, countries like Germany called it Shach- meaning game of the kings. Finally, the French coined the term "eches"- meaning to fail, who's English version is chess.

## Cut to the present world chess game:

No one can deny that 2024 has been the year of Indian chess. And Indian chess' best year on the chessboard too.

It was a year that started with the Candidates tournament in Toronto. The Candidates — a test any player must pass if they are to earn a shot at the world champion's crown — can accommodate only eight players, who make the cut through various, equally treacherous paths. Some make it via ranking, others via the FIDE circuit, and the rest via winning designated tournaments like the FIDE Grand Swiss. The Candidates is designed to be tough to qualify for, because it's an event where only finishing first matters, which is why every game is a knife fight.

## Hear it from the Horse's mouth:

Magnus Carlsen says, "For years now, I've been expecting to face Indians in every super tournament there is. And if you look at the youth levels, Indians are absolutely dominating. I'm thoroughly impressed by the chess revolution that has happened in India. The current generation of Indians is certainly the strongest. And the most dangerous."



### Indian team's best ever performances at the 2024 Chess Olympiad, Budapest:

If Gukesh has become the poster boy for this generation of Indians by his victory in Singapore, the generation as a whole had its coming-of-age moment in Budapest when they swept most medals on offer at an event where there are over 180 nations participating.

India's chess teams won double gold at the 2024 Chess Olympiad at the Budapest. The open team featured Gukesh D, Praggnanandhaa R, and Arjun Erigasi while the women's team included Harika Dronavalli and Divya Deshmukh. This achievement reflects India's strategic investment in nurturing chess talent.

The open team claimed the gold after going undefeated at the Olympiad. Gukesh and Arjun both had individual golds as well. To make things even better, the women's team claimed the team gold too with Divya Deshmukh and Vantika Agrawal claiming individual golds on their boards.

Like Gukesh, Arjun has also chosen 2024 as his breakout year. He used the heartbreak of not qualifying for the Candidates as fuel to become only the 15th player in history to touch the 2800 rating mark. It's a symbolic achievement that rates high on many elite grandmasters' goals.

The year also saw Divya Deshmukh win the girls title at the FIDE World Junior Chess Championship in Gandhinagar to send a message that the country could soon have its fourth woman becoming a grandmaster. Divya was the youngest member of the Indian women's team at the Chess Olympiad and delivered wins even when more established players like Harika Dronavalli and Vaishali did not have their best tournaments.

This double triumph is not merely a statistical achievement but a culmination of years of strategic investment in chess development in India. The legacy of Viswanathan Anand, India's first Grandmaster and former world champion, is evident in the

success of the current generation. Three of the open team's top players – Gukesh, Praggnanandhaa, and Arjun - are products of the West bridge Anand Academy (WACA), an initiative spearheaded by Anand himself to nurture young talent.

This success story is even more impressive considering the challenges posed by the global pandemic in recent years. The double gold medal performance represents a significant improvement from India's bronze medals in both sections at the 2022 Olympiad held in Mamallapuram, Chennai, India. The progression from bronze to gold in just two years reflects the rapid development and growing confidence of Indian chess.

The success of the Indian teams at the 2024 Chess Olympiad is not just a triumph of individual talent but a testament to the country's systematic approach to nurturing chess excellence.

### Gukesh D wins World Chess Championship 2024:



Indian Grandmaster Gukesh Dommaraju made history by becoming the youngest-ever world champion after defeating reigning champion Ding Liren in the decisive 14th game of the World Chess Championship match in Singapore on Thursday, 12 December. At just 18 years old, Gukesh also became the second Indian, after Viswanathan Anand, to claim the classical chess world championship title.

Gukesh shattered the record previously held by Russian legend Garry Kasparov, who had become the youngest world chess champion at the age of 22 in 1985.

### The Rise of Indian Chess: A New Era Begins

As the chess world looks on, it's clear that India's ascendancy in the sport is no fleeting phenomenon but the dawn of a new chess superpower.

Today, it has become one of the most engaging games in the world. But this game is also another feather in India's cap, another evidence of our intellect, our rich history and culture, our belief and usage of science and mathematics in every aspect of our lives.

# SpaDeX or Space Docking Experiment: Another Milestone in India's Space Journey



ISRO's historic Space Docking Experiment (SpaDeX) mission was launched on December 30, 2024, at 10 pm. The SpaDeX mission aims to demonstrate space docking technology by connecting two small spacecraft travelling at ten times speed of a bullet. The success of this mission will mark a significant milestone for Indian space missions, paving the way for many more exciting achievements. It will bring transformative advancements in space technology and research in India, representing a major step towards mastering orbital docking technology.

With this success, India joins the elite club of just three nations that have previously achieved this feat. After the United States, Russia, and China, India becomes the fourth country to successfully execute in-space docking technology.

This technology is essential for India's space ambitions such as Indian on Moon, sample return from the Moon, the building and operation of Bharatiya Antariksh Station (BAS), etc. In-space docking technology is essential when multiple rocket launches are required to achieve common mission objectives.

## Key points about the mission

### Launching Site:

Satish Dhawan Space Centre, Sriharikota, Andhra Pradesh

### Rocket:

PSLV-C60

### Satellites:

Two small satellites launched, each weighing 220 kg

### Orbit:

470 km circular orbit, at 55° inclination

### Time cycle:

66 days

### Time:

December 30, 9:58 pm, the last mission of 2024

The SpaDeX mission will carve out a new identity for India on the international stage, opening doors to new research opportunities and global collaborations. It will establish India as a leading space power.

Reference: [www.mynation.com](http://www.mynation.com)

## POSH Awareness Training Program at HO & Factory

**POSH** (Prevention of Sexual Harassment) awareness training program for the employees was held at Provet's Head Office and Factory on 23<sup>rd</sup> of December 2024.

This initiative was aimed at fostering a safe and respectful workplace for all employees. All employees were encouraged to participate in this session.

### What is the POSH Act?

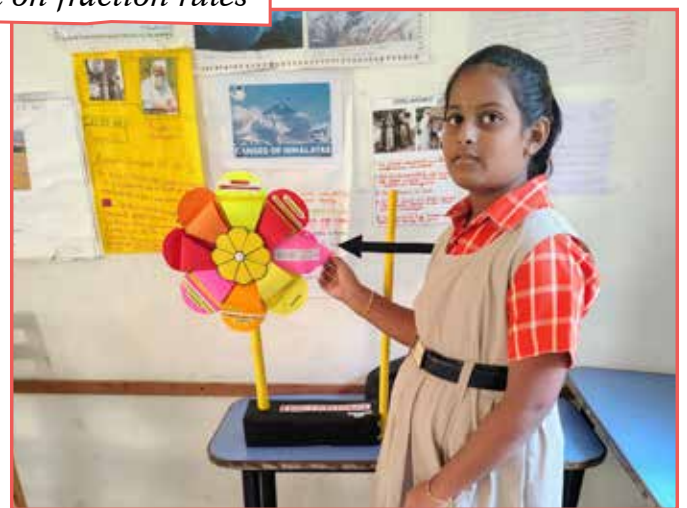
The POSH Act is a legislation made by the Indian government in 2013 to deal with sexual harassment that women face at work. It's designed to make sure workplaces are safe for women and to protect them from sexual harassment.

**Dr. Nirmala, POSH & POC SO Consultant**, provided the training on this important topic, offering valuable insights and guidance on maintaining a respectful and secure working environment for everyone.



## Bringing out the best: Creative Artwork by Provet Employees' Kids

*Vanitha's daughter Reneeka's Maths working model on fraction rules*



## Maria Branyas Morera: Honouring 117 Years of Unyielding Resilience and a Life Fully Lived



Maria Branyas Morera, who passed away on August 19, 2024, at the remarkable age of 117, was a beacon of resilience, positivity, and unyielding spirit. Maria's life was a testament to embracing every moment with grace and strength, despite the many challenges she faced.

Maria held the Guinness World Records titles for the world's oldest woman and oldest person overall since January last year, when she was 115 years old.

Born in San Francisco on March 4, 1907, to Spanish parents, her family emigrated to Spain during World War I when she was an eight-year-old girl. Her early life was marked by significant hardships, including the tragic loss of her father during the sea voyage back to Spain and losing her hearing in one ear after a severe fall. Yet, Maria's indomitable spirit shone through these adversities.

In 1931, Maria married Joan Moret, a dedicated traumatologist, and together they had three children. During the Spanish Civil War, Maria worked as a nurse alongside her husband, showcasing her unwavering dedication to helping others. Even after her husband's passing in 1976, Maria continued to lead a vibrant and fulfilling life. She travelled to various countries, and engaged in activities such as sewing, music, and reading, always maintaining an active and curious mind.

Maria's longevity and vitality were often attributed to her positive outlook on life, strong family connections, and a deep love for nature. She survived both World Wars, the Spanish Civil War, and even COVID-19 at the age of 113. Despite the challenges, she remained mentally sharp, reading the newspaper daily until she was 110, and always kept a keen interest in the world around her.

Her life is a powerful reminder that a life well-lived is not just about the years we live, but the moments we cherish and the impact we make on others. Maria's legacy is one of resilience, positivity, and love. She exemplified living life to the fullest, inspiring us all to face our challenges with the same grace and determination.

116-year-old Tomiko Itooka (b. 23 May 1908) is now the world's oldest living woman and oldest living person, following the death of 117-year-old Maria Branyas Morera.

### Learnings from this:

Maria Branyas Morera's story teaches us the importance of perseverance, optimism, and the joy of simple pleasures. Her journey is a beacon of hope and a testament to the human spirit's resilience, encouraging us to make the most of every day and spread kindness wherever we go.

# Christmas Celebrations @ Office



- ★ This year, our office was abuzz with holiday spirit and excitement as we embarked on a week-long Christmas celebration. The festivities kicked off with the delightful "Chrisma and Chrischild" tasks, fostering a sense of camaraderie and merriment among colleagues.

**Chrisma and Chrischild Tasks:** Each day brought new challenges and fun activities, as Christmas thoughtfully planned tasks for their Chrischild. These tasks not only ignited creativity but also enhanced our teamwork and collaboration skills.

**Christmas Day:** On Christmas Day, the air was filled with anticipation as we finally revealed our Chrisma identities and presented gifts to our Chrischild. The room echoed with laughter and cheers as everyone exchanged tokens of love and appreciation. The joy of giving and receiving brought smiles to all our faces, creating unforgettable memories.

**Cake Cutting Ceremony:** No celebration is complete without a sweet treat! We gathered around for a heartwarming cake-cutting ceremony. The delicious cake, accompanied by a variety of mouthwatering snacks, was the highlight of the day, bringing everyone together in a moment of shared delight.

Our Christmas celebrations were a perfect blend of fun, teamwork, and festive joy. It was a wonderful opportunity to strengthen bonds, appreciate one another, and create lasting memories. Here's to more such joyous celebrations in the future!





[www.provet.in](http://www.provet.in)

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## **Provet Pharma Private Limited**

No. 9, 1<sup>st</sup> Floor, Chakrapani Street, 2<sup>nd</sup> Lane,  
Narasingapuram Extension, Maduvankarai, Guindy,  
CHENNAI - 600 032. INDIA

Telefax: +91 44 2244 2124 / 27

e-mail: [info@provet.in](mailto:info@provet.in)