SEPT, 2024

ISSUE NO. 2

हरित दृष्टि

Newsletter

www.visiongreen.org

© Om P. Yadav

+977-9767840950

Sankharapur-06, Kathmandu

www.visiongreen.org

visiongreennepal@gmail.com

Vision Green Organization

हरित दृष्टि Newsletter

THRIVING TOGETHER:

ORGANIC FLORICULTURE AND THE POWER OF POLLINATORS

Nirpa Gautam
Agriculture and Forestry University

With the emerging global awareness on climate change, biodiversity loss, and environmental degradation, the topic of environmental sustainability is at the forefront of discussions. Organic floriculture is one of the holistic approaches of harmonizing agricultural practices with nature, aiding to nurture a vibrant ecosystem. The Pollinators are nature's invaluable workforce, contributing to the food supply chain along with natural beauty. Organic floriculture uses these workforces in pollination, facilitating fertilization, and seed production, maintaining biodiversity and conserving ecosystem health. In agricultural ecosystems, pollinator diversity increases the quality and quantity of crop yield.

Furthermore, studies indicate that many pollinator groups are useful in monitoring environmental pollution, aiding in pest and disease control, and providing cultural and aesthetic value.

Large-scale chemically intensive agricultural production has been implicated as a major source of threats to pollinators. Organic farmers use numerous integrative pest management techniques which promote environments that support beneficial insects such as pollinators by providing them with habitat and nutritious floral food sources. A number of studies reviewed here have demonstrated that organic farming practices alleviate many threats to honey bees and that organic farms support significantly more pollinators than conventional farms.

The relationship between organic floriculture and pollinators is a testament to the harmony we can achieve when human practices align with nature's rhythm. Plant-pollinator interactions are valued mutualisms in agricultural food production and provide indispensable ecosystem functions that support global biodiversity (Ollerton, 2017). Organic floriculture is more than just cultivating flowers without synthetic chemicals; it is an integrated approach to growing plants that emphasizes the health of the entire ecosystem. It is a sustainable practice of mobilizing the natural forces to produce an organic product. It aims to enhance soil fertility, reduce environmental impact, and promote the well-being of both plants and the organisms that interact with them. Organic floriculture practices offer the natural pollinators a safe place to hover by minimizing or avoiding the use of synthetic chemical pesticides and insecticides that may affect their health. There's a symbiotic relationship between organic floriculture and pollinators. The pollinators benefit from the abundant nectar and pollen of flowers while the flowers depend on the pollinators for their reproduction. The organic floriculture offers a diverse array of flowering plants according to seasons and environmental condition, which stands as a continuous source of nectar and pollen sources for the pollinators.

Organic floriculture and pollinators thus go parallel together. One cannot thrive without another. This mutual interaction benefits the health and resilience of both the floral and pollinator families. The organic flora and pollinators can thus thrive together to produce more robust blooms and a greater variety of flowers. The pollinators are the unsung heroes of the process, when given a joyous and chemical-free environment boost the floral production with enhanced quality. Organic floriculture promotes healthy pollinator populations and healthy pollinators produce vibrant and healthy flowering plants. So, by supporting each other they contribute to broader ecological goals.

Not only the biodiversity health, the synergistic approach of organic floriculture and pollinators also offers significant social and economic benefits. Increasing demand of people on organic products and sustainable practices can help organic floriculture products get a premium market. It can empower communities by promoting sustainable practices, creating job opportunities, and supporting local economies. Together, we can commercially produce diverse products from pollinators as well as floriculture. For instance, we can produce different honey bee's products using honey bees as the pollinators along with the organic florals through organic floriculture which uplifts the economic status of the producers promoting sustainability

and environmental health.
Thriving together, organic floriculture and the power of pollinators can lead to a healthier, more sustainable world. It is our responsibility to invest in maintaining the vibrancy of our ecosystem intact and inspire the generations to come. Let's all work together to combine these natural forces and flourish a resilient ecosystem fostering the beauty and bounty of nature.

References:

https://www.organiccenter.org/sites/default/files/publication_files/2015/06/The-Role-of-Organic-in-Supporting-Pollinator-Health.pdf
https://www.sciencedirect.com/science/article/pii/S246826592200016

Factor responsible for inadequate pollination

Pollinizer scarcity

Pollinizer is a plant that provides fertile pollen. For the adequate pollination it is necessary to plant or protect sufficient pollinizer trees. The standard requirement is for 20% of trees to be pollinizers and normal minimum requirement is 11%.

Changing climatic conditions

Third major reason for inadequate pollination is climate change. Weather plays an important role in determining the success or failure of pollination as it affects both pollen production and the activities of pollinating insects. Temperature rainfall can affect pollinators' activity. Rain falling on the flower can wash away the pollen grains and hail can also damage the flower resulting in pollination failure.

Declining populations of natural insect pollinators

Decline in the diversity and abundance of natural insect pollinators is the second most important factor affecting pollination and productivity. Pollinators carry pollen between flowers. Pollinators are declining due to use of pesticide, loss of food and nesting habitats. Climate change also affects insect numbers.

https://lib.icimod.org/record/21866/files/c_attachment_125_877.pdf

LETHE CONFUSA (BUTTERFLY)AS A POLLINATOR

Sarojina Subedi
Tri-Chandra Multiple Campus

Pollination is the process in which pollen moves from the male part (anther) to the female part (Stigma) in flowering plants (Angiosperms) or forms the male cone to the female cone in non-flowering seed plants (gymnosperms). Transfer of pollen grains contributes to fertilization, producing seeds and ensuring plant species survival. Self-pollinating, autogamy, and cross-pollinating are the three basic types.

Pollinators play an important role in crop production around the globe. Seventy-five percent of great crops produced for human demand worldwide rely on worms, bees and butterflies for pollination. Insect pollinators play a major part in maintaining mad plant variety and farming productivity. So, international studies have indicated that most plants need animal pollination to grow fruit.
In wild areas, leading pollinator groupings include bees (Hymenoptera), Syrphid (Ditera) too and butterflies and moths (Lepidoptera). Lepidoptera are not thought to be effective pollinators of most cropped plants compared to bees. They also serve as hosts of parasitoids, as surrogate species for faunal and floral diversity (Ehrlich and Raven, 1964) and primarily as pollinators in maintaining and improving the community structure .

However, they are essential pollinators of some flowering plants, particularly in the wilderness, and managed lands, e.g. parks and yards. As an Environmental Science student, I'm deeply fascinated by the intricate relationship within nature, from the grandest species to the tiniest microorganisms, and how these interactions drive environmental processes. Butterflies, much like bees, are crucial to floriculture and serve as significant pollinators. I'm particularly interested in studying the role of butterflies as pollination, with a specific focus on Lethe confusa having observed their beauty and complexity firsthand, I'm eager to explore how they contribute to pollination and the broader ecosystem. Among the bioindicator species, butterflies are the most accepted due to their attractive wing coloration patterns, which make them easily identifiable, high diversity, short life history traits, host plant preferences and sensitivity to environmental changes (Lee et al., 2016)

A butterfly of the Nymphalidae family, Lethe confusa is a medium- sized butterfly. It is identified by its brown wings, which have eye patches and soft, curving lines that blend in well with the leaf litter and forest floor. The tropical and subtropical woods of Asia, encompassed by parts of India, China and Southeast Asia, are the primary habitats for this specific species.

Lethe confusa includes four stages in its life cycle: the egg, larva (Caterpillar), pupa (chrysalis), and adult in their native environments, grasses and bamboo are abundant, providing food for the caterpillars. Their significance as pollinators becomes vital when they transform into adults and begin to feed on nectar. Even though they are not as potent pollinators as bees, butterflies certainly make a big contribution to the process. Lethe confusa harvests among many flowering plants in search of nectar. It purposely spreads pollen grains glued to its body and proboscis as it travels from flower to bloom, promoting cross-pollination. Plants that experience this process have more genetic diversity, which is essential to their resilience and adaptability.
The following information relates to Lethe confusa and its function as a pollinator:

- Behaviours: Butterflies, such as Lethe confuse, usually use their proboscis to suck on nectar from flowers. They may unintentionally gather pollen on their bodies and spread it from one flower to another while they are doing this, which helps with pollination.
- Butterfly Preferences: Brightly coloured flowers with a landing platform open during the day attract butterflies. They specifically like vibrant flowers that yield a lot of nectar.
- Pollination Efficiency: In general, butterflies are more inefficient pollinators than bees. This is because butterflies lack the hairy bodies that bees have, which facilitates bee's ability to gather and distribute pollen. Still, some plant species can benefit from the open pollination of butterflies, especially those that depend on various pollinator types.
- Ecological Role: By facilitating pollination, Lethe confusa and other butterflies, as members of the larger ecosystem, support the diversity and health of plant ecological systems. This in turn provides food for a wide range of different creatures, including herbivores and predators.

Lethe confusa, despite not being the most efficient pollinators, still plays a crucial role in plant reproduction, pollination, and environment biodiversity maintenance. By pollinating plants, Lethe confusa butterflies contribute to biodiversity and an environmentally sound ecology. By giving predators food, they contribute to maintaining the food chain. They tend to be called indicator species because their presence may indicate changes in the environment or habitat deterioration.
In summary, more than merely a beautiful butterfly, the Lethe confusa is an important pollinator for the environment, supporting ecosystem health and plant diversity. Safeguarding this particular species and its surroundings guarantees the equilibrium of biological systems and highlights the significance of understanding Earth's complex interrelationships.

Bibliography:

https://www.weforum.org/agenda/2019/12/protect-pollinators-food-security-biodiversity-agriculture.
https://www.researchgate.net/figure/Map-of Buxa-Tiger-Reserve-showing-location-of transects_fig2_253005351 .

FUTURE TREND OF POLLINATORS:

CHALLENGES AND CONSERVATION

Abash Kaphle

Institute of Forestry, Hetauda campus

Pollinators are the most important component of the global biodiversity that offer crucial ecosystem services to crops and wild plants. Simply, pollinators are the organism that helps for the process of pollination. They can be insects, birds, mammals and any other organism, among which the insect particularly honeybee are the primary pollinators for both the wild crops and the agricultural crops. Over 87% of the flowering plants are dependent on animal mediated pollination for sexual reproduction and production is enhanced in 75% of the globally important crops (Brunetet al., 2024; Klein et al., 2007). The role of the pollinator is more crucial in the pollinator dependent plant as compared to pollinator independent plants. The services are economically important and their loss will have consequences for people around the world. Their role is not only confined to increase the yield of the crops, but also to enhance the seed production of genetically engineered crops, improve the quality of seed and fruits, decrease the variance of seed sets, reduce the time between flowering and flower set, uniform ripening and plant vigor as well as contributing to the integrity of most terrestrial ecosystems.

Currently, pollinators are declining throughout the globe due to a range of factors, including global environmental degradation, climate change, land use and agriculture practice changes, biological invasion, chronic exposure to pesticides, diseases and pests which is disturbing plant pollinator mutualism. According to IPBES 2016, about 40% of the invertebrate pollinators (Bees, butterflies) and 16% of the vertebrae pollinators (birds, bats) are at risk of extinction. This decline is more rapid in the present time which will have a huge impact for people around the world.

To some extent, all the agricultural crops depend on the pollinator. About 35% of the global production volume of crops grown for human consumption rely on pollinators for the production. However, research by (Aizen et al., 2008) compared the yield, total production and cultivated area of pollinator dependent and non-dependent crops separately for both developed and developing world using the FAO data (1961-2006) which conclude that the crops yield is not affected by the pollinator shortage in both the developed and developing country. Further this research finds the increment in the pollinator dependent agriculture which can drive to a problem of pollinator shortage in the future. In contrast to this, current research considers the decrease in the pollinator as a serious issue which significantly impacts biodiversity conservation, reduces crop yield, increases food price and threatens food security.

To offset the pollinator deficiency, agricultural inputs such as increase in cultivated area, number of managed bees, pollinator domestication, labor required for hand pollination, breeding for autonomous pollination, artificial pollination with blowers and vibrating devices are being implemented.

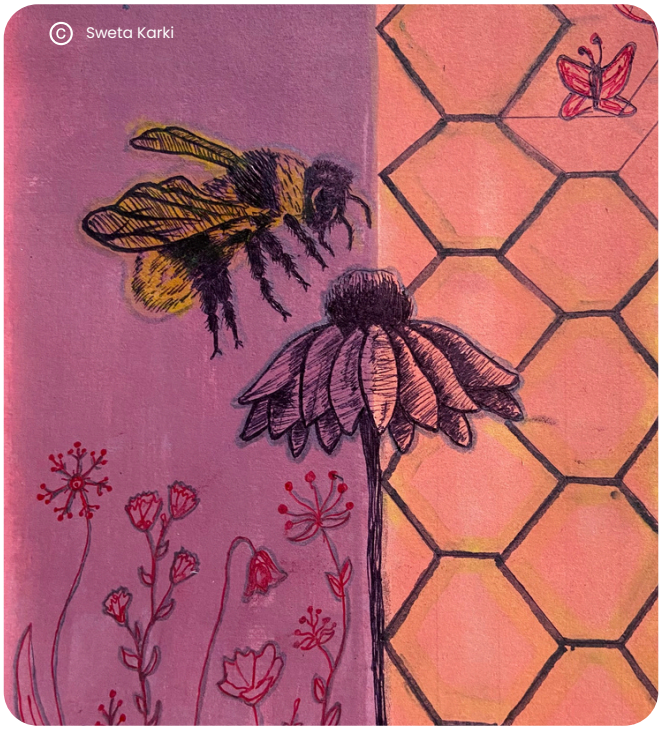
These measures are tidier, expensive, labor intensive and more destructive. The rise to disproportionate demand for agricultural land to meet growing global consumption led to habitat destruction and caused further pollinator losses.

To sum up, this trend of pollinator decline suggests pollinators need to be conserved and managed sustainably. Sustainable agricultural practices along with the development of integrated pollinator management strategies will help preserve pollinators. Drivers of pollinator decline need to be identified and the necessary actions should be accelerated to tackle the problems.

International pollinator initiatives by Convention on Biological Diversity have been established to resolve the pollinator related issues. Alike this, several continental, national and regional programs have to be implemented to tackle the issues of pollinator decline. Knowledge gaps in pollination ecology need to be identified to make the Plant pollinator relation stable. Considering the importance of pollinators in the ecosystem, each action should be carried out to improve the future of the pollinators.

REFERENCES

Aizen, M. A., Garibaldi, L. A., Cunningham, S. A., & Klein, A. M. (2008). Long-term global trends in crop yield and production reveal no current pollination shortage but increasing pollinator dependency. Current biology, 18(20), 1572-1575.



DID YOU KNOW?

Honey bees have 170 odorant receptors and have a sense of smell 50 times more powerful than a dog.

Sweta Karki

INDUSTRIAL REVOLUTION TO ORGANIC REVIVAL

Suman Neupane
Permaculturist
Natural house builder

These days, the term "organic" attracts much attention, from foodies to the common public. The interest in the organic movement has grown humongous, and 'organic' products are often sold at premium prices. However, the term 'organic' goes back deep into history with the dichotomy of pre-industrial and industrial farming.

In the Industrial Revolution, food production began to take a real turn. The discovery of chemical fertilizers and pesticides during the 19th and early 20th centuries shifted the interest to maximize crop yields and allow large-scale food production. This resulted in high-quantity production but gave way to health concerns for people, animals, plants, and the environment.

Historically, all agriculture was organic. With the advent of industrial methods, "organic agriculture" began to be seen as a distinct concept. Dr. Vandana Shiva, an Indian scholar and well-known environmental activist, took up the organic farming cause in the early 1990s. As she puts it, "Organic farming is not just a set of practices; it's a philosophy of working with nature in a manner that is beneficial, respecting the rights of the earth, and appreciating the richness of biodiversity."

Most of the time, inorganic farming focuses on quantity and not quality; therefore, it produces food that has a lower nutrient compared to its organically produced counterpart. Working greatly on genetically modified organisms (GMOs) and hybrid seeds, this approach requires inorganic fertilizers and pesticides. Thus begins a dangerous cycle: farmers buy GMO seeds that destroy soil health and increase the need for chemicals, thus causing ecological imbalance.

This can have serious consequences, as attested to by the failures of BT cotton industries and the results of Vietnamese maize seeds turned out to be disastrous.

Dr. Shiva points out that GMOs have affected many farmers negatively because they plunged them into debt with crops that did not turn out as expected. Higher yields and pest resistance were some of the apparent benefits of the use of the seeds, but they never really came about, causing much hardship.

The three core ethics of permaculture — Care for Earth, Care for People, and Fair Share—are opportunities to break this self-destructive cycle. It is a design philosophy imitating natural processes to arrive at sustainable and self-sufficient systems. In that sense, for example, it would advocate using natural predators for pest control rather than chemicals, as many traditional agriculture models would have it.

Organic floriculture further enhances health ecologically. By sourcing floriculture seedlings locally and imitating regional climates, organic floriculture fosters environmental resilience. If integrated with agriculture, the results of floriculture on ecosystems could be very helpful; for example, floriculture helps attract useful

useful insects and pollinators. Not only does this promote biodiversity, but it also gives an environment its aesthetic and, therefore, its wholesomeness.

In summary, although the Industrial Revolution gave a powerful push to food production, an organic movement and permaculture are examples of alternatives that respect and restore ecological balance. Organic practices contribute to a healthier planet, delivering better food quality by underlining the crucial relationship between agriculture and environmental well-being.

HOW ORGANIC FLORICULTURE SUPPORTS POLLINATORS AND BIODIVERSITY

Satya Bhattarai
Permaculturist
MSc. Agriculture

Organic floriculture is a burgeoning sub-sector of agriculture that involves the cultivation of flowers using organic farming practices, providing an eco-friendly alternative to conventional methods. This shift aligns with the global movement towards permaculture, which minimizes the use of chemical fertilizers and pesticides, thereby reducing environmental harm. Organic floriculture eschews inorganic fertilizers and chemical pesticides in favor of natural methods such as earth-friendly composting, crop aeration, and biological control, preserving the aesthetic and quality values of flowers while shielding the environment from hazardous chemicals (Sahu & Patel, 2023). The global floriculture market is valued at over hundreds of billions of dollars, with countries like the USA and the Netherlands being major importers of flowers (Barbosa et al., 2022). Organic practices are increasingly being adopted by floriculturists worldwide as the market becomes more attuned to the demand for organic produce, supporting modern society's push towards sustainability and reducing environmental impact (Barbosa et al., 2022). This trend also aligns with the broader effort to utilize open spaces such as parks and gardens to improve mental health, recreation, and air quality in urban areas (Bhandari et al., 2023).

Pollinators play a crucial role in organic floriculture by facilitating the pollination of flowering plants, which is vital for fertilization and seed formation. Insects like bees, butterflies, and moths are indispensable pollinators that significantly influence the quantity and quality of flowers produced (Bhandari et al., 2023). They also contribute to genetic variability in plants, helping them adapt to changing environmental conditions.

In urban areas, non-food crops in public spaces can support pollinator species,contributing to more environmentally sensitive cities and effective urban horticulture (Bhandari et al., 2023). However, pollinators face numerous threats, including habitat loss,

chemical pesticides, and climate change, leading to a decline in their populations (Barbosa et al., 2022). This decline poses a challenge for the floriculture industry, highlighting the need for practices like banker plants to support and protect pollinator populations. Consequently, pollinators are not only essential for the survival of ecosystems but also for the sustainability of organic floriculture, which depends on their vital services to thrive.

Enhancing Pollinator-Friendly Practice;

1. Diversifying Plant Species: Suggestions include using a range of flowering plants of different species to have a high chance of attracting different pollinators in gardens and or farms. According to the scientific data, ornamental plant stocks, especially annuals, relatively populate fewer pollinators because of artificial selection in terms of rewards. Hence, the choice of plants should be done based on the availability of high quality nectar and pollen.
2. Creating Habitat Corridors**:** Conserving and creating a system of strips of flowering plants in agricultural hubs can help in constant supply of nectar for the pollinators. These corridors may improve the continuity in separated move patches, hence favoring both broad and specialized pollinators (Damalas & Koutroubas, 2018).
3. Reducing Chemical Inputs: Such measures as reduction of use of chemical pesticides and fertilizers aims at preventing pollinators from getting in contact with such chemicals. Hypothesized to have minimal effects on the biological organisms, organic pesticides also need to be used cautiously not to cause harm (Sahu & Patel, 2023).
4. Educating Floriculturists: It is very important to train the floriculturists regarding the benefits of pollinators and how they can adapt to ongoing organic practices. This education can assist the floriculturists to arrive at a decision that will be in line with sustainable agriculture (Sahu nd Patel, 2023).

The Future of Organic Floriculture

It could be summarized that the future of organic floriculture is with human satisfaction and environmental protection in mind. Hence, this research suggests that by adopting proper organic practices and acknowledging the significance of pollinators in the floral standard, the floriculture industry can play a major role in supporting sustainable development as well as the preservation of diverse bio resources (Bhandari et al. , 2023).

Bio-aesthetic planning in city urbanization underscores the need to include floriculture as useful for the citizens' welfare and contributing to the improvement of the ecosystem (Bhandari et al. , 2023). Furthermore, since consumer preferences for green products are increasing steadily, the industry is well positioned to move forward with sustainable farming. Floriculturists, researchers, and policymakers will come together to build an improved organic system as well as to support pollinator habitats and health (Sharma, Patel, & Sahu, 2023). Overall, organic floriculture and the pollinators both have a mutual and everlasting bond that promotes the environment and the concept of sustainability. Self-practice and enthusiasm towards pollinator friendly practices can go a long way towards helping the floriculture industry develop sustainably and in harmony with the natural environment.

THRIVING TOGETHER:

ORGANIC FLORICULTURE AND THE POWER OF POLLINATORS

Shubheksha Sharma
Undergraduate student at Agriculture and Forestry University

Introduction

In the lush landscapes of Nepal, a green revolution is quietly unfolding. As the world grapples with environmental challenges, a growing movement is recognizing the profound interconnection between organic floriculture and the vital role of pollinators. This synergy not only promises a sustainable future for agriculture but also offers a blueprint for ecological harmony.

The Essence of Organic Floriculture

Organic floriculture, the cultivation of flowers without synthetic pesticides or fertilizers, is more than just a gardening trend. It's a philosophy that respects the delicate balance of nature. By eschewing harmful chemicals, organic flower growers create safe havens for a diverse range of pollinators – from industrious bees to butterflies and even tiny beetles.

The Crucial Role of Pollinators:

These pollinators are the unsung heroes of our ecosystems. They perform a critical service, transferring pollen from one flower to another, ensuring the reproduction of countless plant species. In fact, nearly 90% of wild flowering plants and over 75% of global crops depend on animal pollinators. Their importance cannot be overstated – they are quite literally the lifeblood of our food systems and natural landscapes.

A Mutualistic Relationship:

The relationship between organic floriculture and pollinators is a beautiful example of mutualism in nature. Flowers provide essential nectar and pollen, sustaining pollinator populations. In return, these industrious creatures enable the flowers to reproduce, maintaining genetic diversity and resilience in plant communities.

Threats to the Balance:

But this relationship is under threat. Conventional agriculture's heavy reliance on pesticides has led to alarming declines in pollinator populations worldwide. This is where organic floriculture steps in as a beacon of hope. By creating chemical-free environments, it offers safe spaces for pollinators to thrive.

Organic Practices Supporting Pollinator Health:

Organic floriculture goes beyond just avoiding harmful substances. It embraces practices that actively support pollinator health:

- Diverse plantings: Organic flower farms often cultivate a wide variety of species, providing a constant food source for pollinators throughout the growing season.
- Native species: Emphasising local flora helps support native pollinator species that have co-evolved with these plants.
- Natural pest management: Using biological controls and companion planting creates a balanced ecosystem where beneficial insects help manage pests.

- Habitat creation: Many organic growers create or preserve wild areas, offering nesting sites and shelter for pollinators.

Wider Ecological Benefits:
The benefits of this approach extend far beyond the boundaries of flower farms. By supporting healthy pollinator populations, organic floriculture contributes to the overall health of surrounding ecosystems. This includes improved pollination for nearby food crops, increased biodiversity, and enhanced ecosystem resilience.

The Nepalese Context:
In Nepal, where agriculture is a cornerstone of the economy and culture, the potential impact of widespread organic floriculture is immense. It offers a path to sustainable agricultural practices that work in harmony with nature rather than against it. Furthermore, it presents economic opportunities through the production of high-value organic flowers and the potential for eco-tourism.

A Model of Hope:
As we face the challenges of climate change and biodiversity loss, the partnership between organic floriculture and pollinators offers a model of hope. It demonstrates that human activities can nurture rather than deplete the natural world. By supporting organic flower growers and educating ourselves about the importance of pollinators, we can all play a part in this vital movement.

Conclusion: Thriving Together:
The theme "Thriving Together" couldn't be more apt. It encapsulates the essence of this symbiotic relationship and extends to our own place in the natural world. As we learn to work with nature rather than against it, we open the door to a future where humans, flowers, and pollinators can indeed thrive together. In embracing organic floriculture and celebrating the power of pollinators, we're not just cultivating beautiful blooms – we're nurturing the very foundations of life on Earth. It's a responsibility and an opportunity that we, as stewards of this planet, must seize with both hands.

DID YOU KNOW?

Every year, World Bee Day is celebrated on 20 May.

THE ENCHANTED GARDEN OF SINDHULI

Aananda Pandey
Western Regional Campus, TU

Once upon a time in the picturesque town of Sindhuli, Nepal, a special project was underway. A new school was being built, but it wasn't just any school—it was going to have a magical garden that would be the pride of the community. The garden was designed to be a vibrant space filled with colourful flowers and buzzing pollinators, creating a perfect place for learning and enjoyment.

Leading the enchanted project were three dedicated individuals: Professor Hedaya, Deepak, and Aananda. Professor Hedaya, the architect with a flair for creativity, envisioned a garden that would be a blend of beauty and function. Deepak, the program coordinator with a deep knowledge of forestry, was eager to see a variety of plants thrive. Aananda, a civil engineering student with a playful spirit, was in charge of ensuring everything was built perfectly. Together, they were ready to turn their vision into reality.

"Let's make this garden special!" Professor Hedaya exclaimed, holding up a blueprint filled with colourful designs. "We'll fill it with flowers, trees, and lots of pollinators like bees and butterflies."

"And we'll plant a variety of flowers," Deepak added enthusiastically, "so the bees and butterflies will have plenty to visit."

"I'll make sure all the measurements are just right," Aananda said, proudly adjusting his flower hat. "And if you see me talking to the plants, don't worry—I'm just making sure they're happy!"

The team worked diligently every day, planting flowers, building garden beds, and creating a welcoming environment. The kids from the neighbourhood were thrilled to join in, turning the project into a community event. Aananda's flower hats and funny jokes kept everyone in high spirits, while Professor Hedaya's cheerful songs and Deepak's gardening tips made the work enjoyable.

As they planted the flowers, Deepak jokes, "Let's make sure these flowers don't get tired. Maybe we should give them a nap under a shade tree!"
Professor Hedaya laughed and added, "Or perhaps we could ask the bees for some buzzing energy. They're always so lively!"

Aananda chimed in, "And if the butterflies know any bedtime stories for the flowers, I'll be sure to ask them!"

The garden began to bloom with vibrant colours, attracting bees and butterflies from near and far. The children loved exploring the garden, learning about plants and pollinators in a hands-on way. They sang songs about their new buzzing friends and fluttering butterflies, celebrating their hard work.

On New Year's Eve, the team and the kids gathered around a campfire, roasting marshmallows and enjoying the festive atmosphere. Professor Hedaya, Deepak, and Aananda reflected on their accomplishments and shared their hopes for the future.
"Let's make a wish for the new year—to continue growing, learning, and thriving together!" Professor Hedaya said with a smile.
Deepak raised his glass and added, "Cheers to our magical garden and many more adventures to come!"
Aananda, with his usual enthusiasm, said, "Here's to a new year filled with joy, flowers, and lots of buzzing bees!"

The enchanted garden continued to thrive, becoming a beloved part of the community. It served as a reminder of the beauty and joy that comes from working together and caring for nature. The flowers, bees, and butterflies flourished, and the people of Sindhuli enjoyed their magical garden for years to come.

Every garden has a touch of magic, especially when we all work together. By nurturing our environment and supporting the creatures that help it grow, we can create something truly wonderful.

DID YOU KNOW?

International Flower Day is celebrated on January 19th.

Ameeca Maharjan

Poems

FLORICULTURE FOR FUTURE

Dharma Acharya
Third Pole Conservancy

In gardens where the flowers sway,
Life's dance begins anew each day,
Petals burst in vibrant hues,
Morning whispers in the breeze.

Beneath the sky, vast and blue,
Organic fields spring to life,
With tender care and nature's grace,
Each bloom finds its place.

Bees arrive with a buzzing song,
Golden paths on journeys long,
From bloom to bloom, they weave,
A living bridge of earth and heart.

Tiny wings, a miracle, Nature's plan,
so lyrical, With every touch, with every kiss,
They gift the world its bliss.

Flowers thrive in colors bright,
Testaments to nature's might,
Their scents, a love-filled symphony,
Prayers whispered to the skies.

In this embrace of earth and sky,
Where flowers and pollinators fly,
We find a world that breathes and sings,
Harmony on fragile wings.

Together, they create a show,
A cycle where all life can grow,
In floriculture's gentle hands,
Pollinators' power stands.

In this dance of life and light,
A future shines, so bright,
A world where every bloom and bee,
Thrives in organic harmony.

DID YOU KNOW?

World Bee Day 2024 focuses on the theme "Bee engaged with Youths".

THE GARDEN OF FRIENDSHIP: A PLAYFUL FLIP

Rosan Godar
Tribhuvan University / Western Regional Campus

In the heart of Jumla, where the night starts its song,
Our bond shines bright, where it belongs,
In every buzzing bee and each petal's hue,
Our friendship blooms eternally, so true.

As the sun sets, behind the mountains so grand,
Our connection glows, a bright, warm hand,
In the breeze of evening, gentle and sweet,
We find our hearts, where joy and friendship meet.

With each new dawn, our garden grows,
In Jumla's highlands, where nature flows,
Our friendship blooms, in the sunshine's grace,
A perfect bond in this beautiful place.

So let's wander through this cheerful land,
Hand in hand, let's make our stand,
In every leaf and every flower's play,
Our friendship grows stronger every day.

In Jumla's embrace, where wildflowers sway,
Our connection shines like a bright new day,
In every petal and every bee's dance,
Our bond flourishes, taking its chance.

The seasons turn, our bond remains,
Like the flowers that grow through joys and pains,
Through rain and sun, frost and bloom,
Our friendship endures, like a bright full moon.
In Jumla's gardens, where herbs grow tall,
Our connection's reflected, never to fall,
In every seed sown and every harvest's yield,
Our hearts are entwined in nature's field.

The butterflies flutter, so light and free,
Their dance mirrors our joyful spree,
In the garden where our moments reside,
Our bond blossoms, with nature as our guide.
For in this garden, where our friendship plays,
With pollinators guiding our ways,
Our bond is a vibrant, ever-true bloom,
In nature's embrace, there's always room.

Through planting, growing, and resting time,
Our friendship's garden is truly sublime,
In the beauty of blooms and the bees' gentle cheer,
We find our shared joy, so near.

In Kanchenjunga's orchids, bright and serene,
Our moments shine in the evening's sheen,
Pollinators dance in the floral delight,
Echoing the fun we have each night.

Under Bardiya's trees, where rhinos roam,
Our connection is free, our bond is home,
In the fertile grounds where crops thrive tall,
Our friendship is nurtured, standing strong.

In Chitwan's rich soil, where desires root,
Our bond grows like a vibrant shoot,
Bees buzz softly, a rhythm so sweet,
In every bloom, our friendship's beat.

In Langtang's gentle light, petals unfold,
Reflecting moments of joy untold,
Like butterflies dancing in the quiet air,
Our bond blossoms with tender care.

In Rara's serene garden, calm and bright,
Your presence warms the day and night,
Nurturing our friendship, giving it new birth,
In this peaceful place, we find our worth.

In the high-altitude meadows, where rare blooms grow,
Our bond is the joy that the wild winds know,
Among the shadows of Himalayas tall,
Our connection thrives, through it all.

फूल खेतीमा जैविक मलको महत्व, चुनौती र समाधान

बिनिता चौधरी, रेडियो नेपाल

थाइभिङ टुगेदर इन अर्गानिक फ्लोरिकल्चर एन्ड पावर अफ पोलिनेटर्स भन्नाले अर्गानिक फूल खेतीमा दुबैको सहकार्यका फाइदा रइकोसिस्टममा परागसेचकहरूले खेल्ने भूमिकालाई जनाउँछ ।

आजभोलि विश्वभर नकरात्मक औद्योगिक अभ्यासहरूको प्रभाव वातावरणमा बढ्दै गएको छ । यस्को प्रभाव परागसेचकहरुमा पनि परेको छ । जैविक फूल खेतीले सुन्दर फूल उत्पादनकासाथै जीवन्त पारिस्थितिकी प्रणालीको पनि विकास गर्दछ । अर्गानिक फूल खेती सामंजस्यपूर्ण र दिर्घजीवनको आधार पनि हो ।

जैविक फूल खेतीले माहुरी, पुतली र अन्य कीराहरूलाई पनि जीवन प्रदान गर्दछ जुन काम बोट बिरुवाको प्रजनन् र पारिस्थितिक सन्तुलन दुवैको लागि महत्वपूर्ण छ । जैविक फूल खेती र परागसेचकहरू बीचको तालमेलले जैविक विविधता बढाउन र वातावरणीय स्वास्थ्य सन्तुलन लाई प्रवर्द्धन गर्दछ । साथै, यसको माध्यमबाट आर्थिक रुपमा फस्टाउन सम्भव छ भनेर चित्रण पनि गर्दछ । यसलाई बुझ्नकालागि अर्गानिक फ्लोरिकल्चरको सारबारे बुझ्न नितान्त आवश्यक छ ।

अर्गानिक फ्लोरिकल्चरमा बिषादीयुक्त रसायन हरुको प्रयोग हुदैन यसमा प्राकृतिक प्रक्रिया र सामग्रीहरूमा ध्यान केन्द्रित गर्दै फूलहरू उत्पादन गरिन्छ यस प्रकारको अभ्यासले वातावरणीय प्रभावलाई कम गर्ने, माटोको उर्वरा शक्ति बढाउने अनि थप लचिलो पारिस्थितिकी प्रणाली सिर्जना गर्ने गर्दछ ।

अर्गानिक विधिहरूमा कम्पोष्टिङ, कीट व्यवस्थापन, र लाभदायक कीराहरूको प्रयोग गर्ने गरिएकाको दाङस्थित सूर्यशक्ति जैविक मल उत्पादक ई.सशिल चौधरी बताउछन् । चौधरीका अनुसार अर्गानिक मलले प्राकृतिक रूपमा बिरुवाहरू बढ्न सक्ने वातावरण सिर्जना गर्दै, माटो र पानीको समर्थन र संरक्षण गर्दछ ।

फ्लोरिकल्चरमा अर्गानिक मलको महत्व :

परागले भालेयुक्त कण उत्पादन गर्दछ जसलाई परागकण भनिन्छ । तिनै परागकणहरू विउहरु स्वास्थ्य बनाउन र बाली उत्पादनमा बृद्धि गर्न आवश्यक हुन्छ । परागसेचक हरूले एक फूलको परागकण अर्को फूलको स्टिग्मामा स्थानान्तरण गरेर फूल फुल्ने बिरुवाहरूको प्रजननमा महत्वपूर्ण भुमिका निर्बाह गर्दछन । कौसी र करेसाबारीमा आर्गानिक फूल खेती गर्दै आएकी कौशलटार निवासी चन्दा चौधरीले आफूले आफ्नो फूल खेतीमा जैविक मल नै प्रयोग गर्ने गरेको बताइन ।

जैविक मल नै किन भन्ने जिज्ञसामा उनले भनिन् यो मल पूर्णरुपमा अर्गानिक भएकाले पुतली र आवश्यक किराहरुलाई हानि गर्दैन र बिरुवाहरूलाई स्वास्थ्य बीउहरू उत्पादन गर्न मद्त गर्छ ।

उनले फ्लोरिकल्चर र अन्य खेती बालीहरूको लागि पनि अर्गानिक मल उत्तिकै महत्वपूर्ण छ भन्दै आर्गानिक मलले माटोको अम्लियपन हटाएर आवश्यक मात्रामा फासफोरस र नाइट्रोजन प्रदान गर्छ यसपछि माटो खुकुलो बनाएर, सुक्खापन हटाएर, बोट माटोको स्वास्थ्य सुधारमा राम्ररी सघाउँछ

जसले गर्दा जैविक फूल खेती पनि फस्टाउछ ।
फ्लोरिकल्चरमा परागसेचनको सबैभन्दा कुशल माध्यम माहुरीहरू हुन् । माहुरीहरु जंगली र कृषि प्रणाली दुवैमा परागसेचन कालागि जिम्मेवार मानिन्छन् । यस्तै माहुरीकासाथै पुतली, पतंग अन्य कीरा, चरा र हमिङबर्डहरूले पनि महत्त्वपूर्ण भूमिका खेलेर उत्पादन बढाउन योगदान गर्दछन् । तसर्थ फूलका साथै सम्पूर्ण जीव, जगत र अन्नकालागि अनि स्वस्थ मानव जीवनकालागि पनि अर्गानिक मल र अर्गानिक फूल खेति को अत्यन्त ठूलो महत्व छ ।

चुनौती र समाधानः

जैविक फ्लोरिकल्चर मा अनावश्यक हानि पुर्याउने किराहरु को चुनौतीहरूसंग पनि सामना गर्नपर्दछ । जसका कारणले गर्दा परागसेचकहरूसँगको सम्बन्धलाई असर गर्न सक्छ । यसका चुनौतीहरूलाई नवीन जैविक अभ्यासहरू मार्फत सम्बोधन गर्न सकिन्छ । यसकालागि एकीकृत कीट व्यवस्थापन (क्ष्ए:) रणनीतिहरू विशेष रूपमा प्रभावकारी हुन सक्छ ।
उदाहरणका लागि, बर्डहाउस वा शिकारी कीराहरूको लागि बासस्थान सिर्जना गरेर प्राकृतिक रूपमा कीटहरूको संख्या व्यवस्थापन गर्न मद्दत गर्न सकिन्छ ।
यसैगरी अर्गानिक फ्लोरिकल्चरको फाइदाकालागि थप शिक्षा र चेतनाको अभाव अर्को चुनौती हो । जैविक अभ्यासहरूले परागकसेचकहरू र वातावरणलाई कसरी समर्थन गर्न सक्छन् भनेर धेरै मानिसहरू अझै पनि अनभिज्ञ छन् । त्यसैले सामुदायिक पहुँच बढाउनकालागि सामाजिक सञ्जाल, बिभिन्न मिडियाहरुमा आधिकारिक रुपमा अर्गानिक फ्लोरिकल्चर ग्रुप बनाएर सल्लाह सुझाव लेनदेन तथा शिक्षाको माध्यमबाट जैविक बगैंचा र फ्लोरिकल्चरका फाइदाहरू प्रवर्द्धन गर्नाले यी अभ्यासहरूको लागि प्रबर्धन गर्न मद्दत मिल्छ ।
अर्गानिक फूल खेतीमा परागसेचक र जैबिक बिधि बिच सहकार्यका फाइदा र पारिस्थितिकी प्रणाली मा परागसेचकहरूले खेल्ने भूमिकालाई छोटकरीमा यसरी ब्याख्या गर्न सकिन्छ ।
१) परागकणहरूको शक्ति: धेरै फूल फुल्ने बिरुवाहरूको प्रजननकालागि माहुरी, पुतली जस्ता अन्य कीराहरू आवश्यक हुन्छन् ।अर्गानिक फ्लोरिकल्चरमा एक स्वस्थ परागकणहरुको शक्तिलाई बढावा दिदै धेरै फूल उत्पादन गर्नु र जैविक विविधता बढाउनु यिनको महत्वपूर्ण विशेषता हो ।
२) स्वास्थ्य पारिस्थितिक प्रणाली : जैविक फूल उत्पादनले माटोलाई स्वस्थ राख्ने, विषादीहरूलाई प्राकृतिक रूपमा व्यवस्थापन गर्ने र जैविक विविधता बढाउने काम एकैसाथ गर्छन् । यो सहयोगी दृष्टिकोणले बिरुवा र वरपरको वातावरण दुवैलाई फाइदा पुर्याउने इकोसिस्टम स्वास्थ्य (पारिस्थितिकी प्रणाली) सिर्जना गर्न मद्दत गर्छ ।
३) बासस्थान निर्माण: जैविक फूल फार्महरूले विभिन्न प्रकारका फूल फुल्ने प्रजातिहरू रोपेर, बिषादीरहित जैविक मल प्रयोगगरेर अनि स्वच्छ र स्वस्थ प्राकृतिक वातावरण सिर्जना गरेर माहुरी, पुतली जस्ता आवश्यक अन्य कीराहरूलाई खाना, आश्रय र बासस्थानहरू सिर्जना गर्छन ।
४) शैक्षिक प्रयास: वातावरणीय लाभ र सुधारिएको पुष्प उत्पादनकालागि नेतृत्व गर्नुकासाथै, परागकणहरूको महत्त्व र उनीहरूलाई गर्ने समर्थनबारे मानिसहरुलाई सुसुचित गर्नु र उत्पादकहरूलाई शिक्षा दिनु पर्छ ।

५) सामुदायिक संलग्नता: जैविक फूल खेतीको सफलता प्रायः सामुदायिक सहयोग र उपभोक्ता शिक्षामा निर्भर हुने गर्दछ । यसबारे कार्यशाला, स्थानीय बजार र जैविक मल प्रयोग गरेर उत्पादित फूलहरूको फाइदा तथा दिगो अभ्यासको महत्व बारे शैक्षिक कार्यक्रमको चेतना जगाउन पनि सामुदायिक संलग्नताले ठूलो भूमिका खेल्ने गर्दछ । यसले गर्दा जैविक फूल खेतीकालागि मानिसहरु लाई प्रेरणा प्रदान गर्नु पनि यसको विशेषता अन्तरगत पर्दछ ।

यसरी ठूलो मात्रामा फूलहरू उत्पादन गर्नकालागि किसान, अनुसन्धानकर्ता र समुदायहरू बीच सहकार्य गरि सहकारी खेतीको अभ्यास बढाउन आवश्यक हुन्छ भने दिगो अभ्यासलाई ज्ञान, स्रोत र गुणस्तर बढाइ व्यवसायिक रुपमा खेती गरेर आर्थिक लाभ उठाउँदै दैनिक जीवनमा सुधार ल्याउन सकिन्छ ।

- 1 million flowers and 50,000 bee flights 40mg nectar for each bee flight (2g nectar=1g honey) is needed to produce 1kg of honey.
- Italy is the only country in the world that produces more than 30 varieties of honey, but it is also the country that consumes the least amount of honey.
- Dandelions are the first food for bees emerging in the spring.
- Some species of butterflies, moths, wasps, beetles, birds, bats and other vertebrates also contribute to pollination.
- 40% of invertebrates pollinator species, particularly bees and butterflies , facing extinction.

Team Vision Green

Editorial Team:

Yukta Malasi
Editor in chief, Newsletter Coordinator

Bhojraj Upadhayay
Content Editor, Sudurpaschim Province Coordinator

Akash Bagale Thapa
Content Editor, Lumbini Province Vice Coordinator

Nabin Bhattarai , Prativa Dawadi, Bibek Dhakal
Cover and Layout Design

Special Thanks To:

The entire team, supporter and well wishers of VGO Nepal, Team Bangladesh and Europe team.

Acknowledgement

We are grateful to all the provincial teams for their initiative in launching the Harit Dristi Newsletter, and to **Om Prakash Yadav**, Founder, PhotoWalk Nepal, for his generous contribution of the cover photo.

Contact/ Follow Us:

vgonepal

vgonepal

visiongreennepal

https://linktr.ee/vgonepal

Join Us

Meet our Team

Central Team

Nabin Bhattarai
President

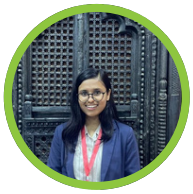
Anju Aryal
Vice- President

Prativa Dawadi
Secretary

Sumit K. Patel
Treasurer

Anisha Subedi
Member

Diwash Bhattarai
Member



Shreya Khatiwada
Member

Vijay Panthi
Member

Yukta Malasi
Member

Provincial Team

PROVINCES	COORDINATOR	VICE-COORDINATOR
Koshi	Bibek Dhakal	Manisha Kafle
Madesh	Suraj Kumar Singh	Arjun Kumar Mahato
Bagmati	Rushal Neupane	-
Gandaki	Shreya Sapkota	Raksha Neupane
Lumbini	-	Aakash Bagale Thapa
Sudurpaschim	Bhojraj Upadhayay	Asim Tharu
Karnali	Satya Prasad Bhattarai	Mahesh Bikram Shahi