Plant Services Report July 2023-June 2024 Plant Section



Plant and Animal Biosecurity Division Bhutan Food and Drug Authority Ministry of Health (June 2024)

ACKNOWLEDGEMENT

The Plant Section would like to express our heartfelt gratitude to everyone who contributed to the completion of this work. We extend our deepest appreciation to the BFDA management at Headquarters for their constant guidance and unwavering support throughout this process.

We are confident that this report will provide valuable insights into plantrelated services and serve as a foundational reference to strengthen our plant biosecurity program.

A special thank you goes to all the individuals and plant officials in the field offices for their smooth implementation, effective data management, and for being an integral part of this endeavor. Your dedication and cooperation have been essential to the success of this project.

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Background

The Annual Work Plan for 2023-2024 reflects significant progress and accomplishments by the Bhutan Food and Drug Authority (BFDA), Plant Section, despite a period of transformative initiatives. This year, the Plant Section successfully executed the planned activities, resulting in key achievements that further our mission to safeguard the health of humans, animals, plants, and the environment. Our work continues to be guided by the fundamental mandate to support biosecurity systems, ensuring the protection of plant health in line with national and international standards.

Throughout the year, we have remained committed to implementing plant biosecurity measures in compliance with global plant health standards. This includes adhering to phytosanitary standards and best regulatory practices as set forth by both national authorities and international organizations. These efforts are critical to maintaining the integrity and safety of our agricultural and natural ecosystems.

In this report, the Plant Section highlights some of the major activities and achievements from the plant year 2023-2024. These reflect our ongoing dedication to strengthening Bhutan's plant biosecurity systems, ensuring that they remain robust and aligned with global best practices.

We are proud of the progress made and are optimistic about continuing these efforts to protect and promote plant health across the country.

Pests and disease prevention measures

1. Pest Risk Analysis

The Pest Risk Analysis (PRA) process is a critical tool used to identify appropriate phytosanitary measures for safeguarding plant health. Generally, most National Plant Protection Organizations (NPPOs) consider PRA a prerequisite in the plant quarantine process, as it plays a crucial role in facilitating the import and export of plants and plant products. The PRA process can be initiated by either the NPPO of the importing country or the exporting country, depending on the specific circumstances and requirements.

In the previous year, the PRA process was initiated in collaboration with the NPPO of Thailand for the export of apples from Bhutan to Thailand. This initiative marks an important step in expanding Bhutan's export opportunities and ensuring that the products meet Thailand's phytosanitary requirements.

Additionally, we have also initiated a PRA for the export of Hazelnuts to India to support the efforts of the Mountain Hazelnut Venture (MHV). This initiative will be instrumental in determining the import conditions and ensuring that plant quarantine requirements are met, thus facilitating smoother market access for Bhutanese hazelnuts.

Once the PRA processes for these products are completed, it will not only help in determining specific import conditions but also assist in fulfilling plant quarantine requirements, ultimately contributing to the formalization of markets for Bhutan's agricultural exports. This process is essential for opening new trade avenues while ensuring plant health standards are rigorously upheld.

2. Plant Import Quarantine Regulations

The Pest Risk Analysis (PRA) and assessment processes play a critical role in preventing and minimizing plant biosecurity risks associated with the importation of plants and plant products. The primary aim of PRA is to evaluate the potential threats of pests and diseases and establish appropriate phytosanitary measures to protect plant health. Import Permits (IPs) are issued based on the results of these analyses, setting the necessary phytosanitary conditions that must be fulfilled before the import of plant consignments.

To streamline this process, the Bhutan Biosecurity System (BBS) facilitates the issuance of Import Permits through an online platform. However, when the server is down, offline procedures are also in place to ensure continued services without disruption.

Upon the arrival of plant consignments at the Point of Entry (PoE), riskbased inspection measures have been adopted. These inspections are focused on identifying and preventing the entry of quarantine pests and diseases that may be associated with imported consignments. By applying these risk-based measures, the import inspection services at the PoE have been significantly improved, ensuring that only safe, pest-free plant products enter the country.

From July 2023 to June 2024, a total of 5,851 Import Permit (IP) services were provided to clients for the importation of fruits, vegetables, seeds, seedlings, and agrochemicals. A breakdown of these services shows:

- 5,592 IPs for the import of fruits and vegetables,
- 239 IPs for seeds and seedlings, and
- 20 IPs for agrochemicals.

The demand for Import Permit services has seen a dramatic increase, rising from 1,644 IPs in the fiscal year 2020-2021 to 5,851 IPs in the fiscal year 2023-2024. This significant growth reflects an increasing volume of imports and the expanding need for effective biosecurity measures to protect Bhutan's agricultural sector.

The growth in the number of Import Permit services highlights the increasing importance of plant biosecurity in Bhutan's trade and agricultural industries. By continuing to streamline the permitting process and enhancing inspection protocols, we are improving the safety and integrity of plant imports, thereby supporting the country's biosecurity goals and facilitating smoother international trade.

3. Internal Quarantine Regulations

Currently, the major biosecurity challenge is the outbreak of Giant African Land Snails (GALS) in Bhutan. GALS are known for their rapid spread and their potential to damage crops, soil, and natural ecosystems. The Bhutan Food and Drug Authority (BFDA) has been actively involved in domestic quarantine measures since 2013 to control the spread of GALS.

Initially confined to the Gyalpozhing area in Mongar District, GALS have now invaded Autsho town in Lhuentse District, prompting continued containment efforts. These efforts aim to keep the GALS population below a threshold level to prevent further spread.

The BFDA Regional Office in Mongar monitors the GALS population on an annual basis, implementing control measures to manage and curb its spread. To further mitigate the risk, phytosanitary measures at the point of entry (PoE) have been also considered to minimize the risk of new GALS introductions and prevent the spread of other Invasive Alien Species (IAS).

Recognizing the challenge posed by GALS and other invasive pests, the BFDA is collaborating with key stakeholders to find innovative and sustainable solutions to manage GALS infestations in Gyalpozhing and Lingmethang. These efforts include:

- Trapping systems to compliment reduction of the population of GALS.
- Establishing and implementing protocols, strategies, and frameworks for effective pest management.
- Capacity building and training to equip local communities and stakeholders with the knowledge and tools for effective pest control.
- Outreach and awareness programs to educate the public about GALS and invasive species management.

The Adaptation Fund Project titled "Building Adaptive Capacity through Innovative Management of Pests/Diseases and Invasive Alien Species (IAS) in Bhutan to Enhance Sustainable Agro-Biodiversity and Livelihoods" has been instrumental in supporting these management efforts. The project has provided significant support to the GALS management program, with a focus on eradication and control measures.



Fig. 1. Snapshots from the activities implementation at infested areas(Gyalpozhing and Lingmethang) by TWG

In response to pest outbreaks and to manage biosecurity risks associated with the movement of plants and plant products, in-country movement regulations have been enforced. In-country movement regulations are implemented during the pest outbreak, for transboundary movement of plants and plant products to check the biosecurity risk. Import Permits are issued for regulated commodities to check the safety and quality of plant consignments being transported from one region to another region. These permits ensure that the plant consignments meet the necessary phytosanitary standards and are free from pests and diseases that could jeopardize plant biosecurity.

A total of 1340 In-country movement permits (IMP) have been issued during the FY 2023-2024. The highest IMP issued from BFDA, Regional Office, SamdrupJongkhar and the proactive involvement highlights the importance of localized biosecurity efforts, especially in border regions that face high volumes of cross-border trade and movement.

4. Phytosanitary Certification and export facilitations

Phytosanitary certificates (PSC) are attested with plant consignment to facilitate international trade after inspections based on phytisanitary import requirements of the importing country. The technically qualified quarantine officials inspect and certify the plant consignment based on the ISPM 7 & ISMP12 and national standards wherever applicable.



Fig.2.umber of PSC issued during the FY2023-2024



During the FY 2023-2024, a total of 11,082 phytosanitary certificates were facilitated to the clients with highest number of 4406 PSC is issued by BFDA, Regional Office, Phuntsholing. PSC are facilitated from all BFDA Regional and cluster offices for smooth service delivery within TAT. These plant consignments include fruits and vegetables,

Fig.3.PSC inspection site

non-wood forest products, timbers for export to various countries. About 200 truck load of wood and timber consignment has been certified for export to India.



Fig.4.Wood consignment loaded

Key Achievements Highlights (2023-2024)

1. Seed Certification

As mandated, BFDA certified 14 crops during the FY 2023-24 for making availability of quality seeds for farmers and also to facilitate export. The scope of the seed certification program primarily covers cereals, fruits, and vegetables (details provided in the table below). Seed Certification are carried out in government nurseries at National Seed Center (NSC), Commercial private nurseries such as in Bhutan Alpine Seed (BAS), Druk Singthog Nursery,



Fig.5.Field certification inspection

Mountain Hazelnut Private Ltd. Seed growing and certification area covers Wangduephodrang, Gelephu, Paro, Tsirang Dzongkhags. Currently, about 160 registered nurseries maintained by BFDA across the country.

Table 1: Detail of nurseries and crops certified (Year 2023-2024)

Sl.No.	Office	Nursery Operator	Сгор	Scientific name	Variety Qu	antities
1	Mongar	Mountain Hazelnut Pvt.	Hazelnut	Corylus allevana	Yamhill	2000 Nos.
		Ltd.			Tonda di Giffoni	2000 Nos.
					Jefferson	750 Nos.
					Theta	500 Nos.
					Epsilson	750 Nos.
					Sacajawea	1000 Nos.
		Sonam Choden Nursery	Avocado	Persea americana	Hass	4000 Nos.
2	Paro	National Seed center	Radish	Raphanus sativus	SPTN	28kg
		Bhutan Alpine Seeds	Cabbage	Brassica oleracea	Golden Acre	40 kg
			Pole Beans	Phaseolus vulgaris	Kentucky	70 kg
					Wonder	
			Lettuce	Lactuca sativa	Great lake	2 kg
3	Punakha	Druk	Grafted	Juglans regia	Kanthel	231 Nos.
		ShingthogGongphel	Walnut			
			Pecan Nut	Carya illinolensis	Western Schley	7000 Nos.
			Grafted Pear	Pyrus communis	Hosui	1500 Nos.
			Grafted	Prunus persica	Flordasum	1164 Nos.
			Peach			
			Grafted Plum	Prunus domestics	Soldum	4300 Nos.
			Kiwi	Actinidia deliciosa	Hayward	1050 Nos.
			Asparagus	Asparagus officinalis	s Mary	40,000 Nos.
					Washington	
			Avocado	Persia americana	Bacon	2500 Nos.
4	WangduePhodra	National Seed Center	Rice	Oryza sativa	Bajo Maap II	1500 kg
	ng		Rice	Oryza sativa	Bajo Kaap III	1500 kg
5	Gelephu	National Seed Center	Rice	Oryza sativa	SRK	10 Mt
			Rice	Oryza sativa	Kamja -01	2 Mt

2. Capacity building program on Heat Treatment at NIPHM

Phytosanitary measures such as fumigation and heat treatment have become increasingly urgent in recent times due to their critical role in international trade, particularly concerning wood and wood packaging materials (WPM). To meet the global standards and requirements for the movement of WPM and timber, a training program was conducted for 20 quarantine officials from the Bhutan Food and Drug Authority (BFDA). The training took place at the National Institute of Plant Health Management (NIPHM) in Hyderabad, India, from March 13–19, 2024.

The program was supported by the International Technical Economic Cooperation (ITEC) mission of the Government of India, which aimed to enhance the capacity of officials involved in managing phytosanitary risks associated with the movement of wood and timber products.

References

- BAFRA Annual Report 2020-2021
- <u>https://pestsofbhutan.nppc.gov.bt/crop-and-pest-identification/</u> diseases/huanglongbing-hlb/



Fig.6. Participants at NIPHM, Hederabad, India