

COUNTRY AGRICULTURAL EXTENSION PROFILE (C-AEP)

COUNTRY: **BHUTAN**

Country Resource Person (CRP)

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I. BASIC DETAILS OF FARMING

- **Cultivated Area (million ha) - Irrigated/ Rainfed/ Dryland**

- ✓ Country area 38,394 skm (9,487,457.7 Acres)
- ✓ Arable land: 664,000 acres (7 %)
- ✓ Cultivate area: 280,828.74 acres (2% of total land)
- ✓ Mainly subsistence farming: rice, maize, wheat and potatoes
- ✓ Agriculture contribute 14.67% GDP

- **Farming Population (million) - Category wise as applicable**

- ✓ Total population: 770,276 Nos (2024)
- ✓ 43.5% of the population engaged in agriculture (52.3 M & 37.3F)
- ✓ Predominantly subsistence farming using traditional methods.
- ✓ Terraced farming mostly due to hilly terrain.

EVOLVEMENT EXTENSION SYSTEM IN BHUTAN

- 1960 Agricultural extension services started for input supply services.
- 1982, the DoA formally instituted & 1990, Dzongkhag Agriculture Officers and one Extension Agents at gewog levels for (RNR Sectors)
- 20 Districts (Dzongkhag) and 205 Sub districts (Gewogs) each sector
- At the national, DoA, with Research and Extensions Divisions,
- Regional Agriculture Research and Development Centers (ARDCs).
- The DoA functions as the nodal agency for technical and human resources management.
- The ARDCs and Central Programs primarily provide technical backstopping and advisory support to field-level extension offices.

Roles and Functions of Extension Offices:

- To provide technical back-stopping, capacity building of farmers.
- Link to the government and promote best practices.
- Distribution of agricultural inputs, subsidies, surveys.
- Propose support required for the agriculture development.
- Monitoring and Evaluation of agricultural programs and report back to higher authorities or the government.
- Community Engagement or collaborating between farmers, in the decision making and planning of both agriculture and livestock.

Extension Schemes and Programme : Federal

- Focus on technical back stopping towards food production with adoption of modern technologies backed by research, and development.
- Focus on self-sufficiency and sustainability.
- Emphasis on organic farming
- Gelephu Mindful City (Economic transformation) with organic farming system.

Extension Schemes and Programme : Provincial

- Introduction of new varieties with adoptive research for faster extension intervention.
- Focus on infrastructure building such as, building irrigation channel, roads, storage facility, farm shops.
- Farmers training on modern techniques, organic farming and pest management focused with IPM strategy.
- Subsidies for organic and agriculture inputs.
- Chemical inputs are centralized and provided based on Extension advice and recommendations only.

Extension Schemes and Programme : Others

- Agricultural Extension Centers provide technical support and training to the farmers.
- Promote best practices and address challenges like pests and climate change.
- One of the most noble initiative scheme is: the million fruit tree.

EXTENSION INSTITUTIONS AT VARIOUS LEVELS: PRIVATE SECTOR (Companies, Corporates etc.)

Several non-governmental organizations (NGOs) in Bhutan are involved in agriculture and livestock sectors, contributing to rural development, sustainable farming practices, and food security. Some of the key NGOs include

Bhutan Foundation

- Focuses on sustainable agriculture, environmental conservation, and rural livelihoods.
- Supports projects that promote organic farming, community-based natural resource management, and capacity building for farmers.

Royal Society for Protection of Nature (RSPN)

- Primarily an environmental organization but also engages in sustainable agriculture and livestock management.
- Works on projects that integrate agriculture with conservation efforts, such as sustainable land use and agroforestry.

Tarayana Foundation

- Aims to improve rural livelihoods through sustainable agriculture, income generation, and community development.
- Implements programs on organic farming, vegetable gardening, and livestock rearing to support vulnerable communities.

Contd; EXTENSION INSTITUTIONS AT VARIOUS LEVELS: PRIVATE SECTOR (Companies, Corporates etc.)

Loden Foundation

- Promotes social entrepreneurship in agriculture, supporting farmers and Agripreneurs through funding, training, and mentorship.
- Encourages innovative agricultural practices and value addition to agricultural products.

Renew (Respect, Educate, Nurture, and Empower Women)

- Although primarily focused on women's empowerment, RENEW also works on enhancing rural livelihoods through agriculture.
- Provides training and resources for women to engage in organic farming and livestock rearing as income-generating activities.

Horticulture association of Bhutan

- It operates throughout the country by engaging farmer groups and cooperatives in the production, processing and marketing of horticultural produce, aiming at sustainable development of horticulture in Bhutan by raising productivity and total production for sale in the national and export market to increase income opportunities.

BAOWE (Bhutan Association of Women Entrepreneurs)

- It focuses on empowering women through entrepreneurship, with significant involvement in agriculture and livestock sectors.
- These NGOs work closely with local communities, government agencies, and international partners to promote sustainable agriculture, improve livestock management, and enhance rural livelihoods in Bhutan.

EXTENSION INSTITUTIONS AT VARIOUS LEVELS: NGO SECTOR

- In Bhutan, farmers primarily form groups or cooperatives focused on crop production, marketing, and livestock sectors.
- A group can be formed with a minimum of three farmers sharing a common interest.
- Extension Officials at the district level recommend the formation of these groups.
- The Department of Agricultural and Marketing Cooperatives (DAMC) evaluates and prescribes the necessary requirements.
- After fulfilling the criteria and undergoing evaluation by DAMC, the group is registered and certified.
- Executive members are identified to ensure the smooth functioning of the group.
- The delivery of all kind of extension services at district/field level are done by the Extension officials placed at District and block level.
- We have adopted focus village and lead farmer approach to empower the community beside the regular extension services.
- Farmers Group & Cooperatives are linked with School/Institutions (linkage program) to supply farm produce to School/Institutions.

FARMER ORGANIZATIONS IN EXTENSION

- In General, there are just 119 farm registered groups in Bhutan involved in agriculture, horticulture, fishery, poultry and livestock.
- The Royal Government of Bhutan promotes Farmers Groups and Cooperatives as key pillars for economic development, particularly at the Block and District levels.
- The legal framework for Cooperatives was established with the Cooperatives Act of Bhutan (CAB 2009).

Extension Models, performance, constraints, etc. in Public Sector

- Bhutan's farm and livestock extension model focuses on a community-based and participatory approach to enhance agricultural productivity and sustainability.
- The extension models have been successful and contributed to improved agricultural productivity, better livestock management, and increased farmer knowledge.
- **Constraints:**
- **Resource Limitations:** Budget constraints and lack of infrastructure can hinder the effectiveness.
- **Geographical Challenges:** Remote and mountainous regions pose logistical challenges for delivering extension services.
- **Coordination Issues:** Fragmentation among government, private, and NGO services can lead to gaps and overlaps in service delivery.
- **Sustainability:** Some models, particularly those reliant on external funding or specific individuals, may face challenges in long-term sustainability

Details of Farm Extension Models, Performance, Constraints in Private Sector

- Bhutan's extension models focused to community-based and participatory approach to enhance agricultural productivity and sustainability.
- Training and visit system with community based model village approach.
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- In Bhutan, approximately 90 percent of extension offices for agriculture and livestock are government-based.
- Most private firms seek assistance from these government extension offices. However, there are a few private sectors with their own extension offices. For example, Mountain Hazel Nut Ventures, an FDI company based in eastern Bhutan, operates its own private extension offices.

EXTENSION FOR FARM WOMEN & Youths

- The government providing assistance such as soft loans and, in some cases, loans without collateral.
- This initiative aims to empower youth in the agri-food business,
- Women-led groups and progressive individuals
- Participants receive both inputs and technical support to enhance their agricultural activities.
- At District level the technical department extend support women and farm youth under extension programmes.
- Farm mechanization programmes also look for small farm equipment and machineries that can be handled by women and youth.
- Apart from the government, there are other CSOs, NGOs and other international organization which fund women and farm youth in agriculture.
- The extension offices puts up the proposal to the funding organization.
- Urban and Peri Urban Farming (PUUF) empowers urban women's and youths to adopt urban farming like mushroom and hydroponics.

EXTENSION FOR FARM YOUTH

- Cherub farming: Youths trained as volunteers (Desups) in group farming
- OAP farming for prisoners
- Commercial farming on high value low volume farming
- Localised organic farming groups
- Funded by the Provincial Agencies
- Progressive farmers
- Early school leavers in farming
- Funded by the funded by Other sources
- School gardens
- Nutrition gardens
- Schools and hospital supply group farming

INNOVATIONS/SUCCESS STORIES

- Farmers connected for Extension network through Facebook, WhatsApp, Messenger, and WeChat.
- Urban and Peri Urban farming concept for technologies dissemination.
- School Agriculture Programm, Extension to Teachers to Children and to parents approach.
- Extension through exposure visits as adult learning forum.
- Awards of Best Extension Agents annually.
- Community based farming system.
- ICT and IOT based protected farming system for educated youths group farming.

Scope for Cross Learning of Success Stories Within the Country and With Other Partner Countries

- The Ministry of Agriculture invites experts from renowned institutes in Japan, India, and Israel. These agricultural specialists visit village extension offices to train both extension officers and local farmers.
- Partnerships with countries such as India, Bangladesh, Thailand, Japan, and Singapore enhance the extension services.
- Information and Communication Technology (ICT) plays a crucial role, with extension officers using social media platforms to disseminate information related to agriculture and livestock.
- Disseminate all information concerning agriculture and live stock
- Numerous credible NGOs, farm cooperatives, and other organizations assist farmers in Bhutan through the extension offices

Indicative Areas for Collaboration/Pilots to Strengthen Farm extension Services

- Early education on agriculture technology through School Gardens.
- Gardening as a behavioral change in eating habit.
- Periodic awards of excellent Extension service.
- Exchange programme for extension and farmers
- Urban gardens for unemployed youths and women for food security.
- Extension journals and periodic publication in SAARC regions and beyond.
- Best farmers innovation awards.
- Prime Ministers awards to best Extensions innovations and development.

THANKS