

Application of Rangzhin Bupmen

1. When Rangzhin Bupmen is ready, strong odor due to decomposition of rotten leaves is released.



Fig 4: Rangzhin Bupmen

2. Dilute 1 liter of Rangzhin Bupmen in 1 liter of water
3. Use cotton cloth to sieve and spray it on leaves on both side of leaves and stem

Botanical that can be used for preparation of Rangzhin Bupmen

English name	Local name	Botanical name	Parts used
Artemisia /Mugwort	Khempa shing (Dz) Titaypati (Lho)	<i>Artemisia vulgaris</i>	Leaves and stem
Stinging nettle	Zocha (Dz), Sisnoo (Lho)	<i>Urtica dioica</i>	Leaves and stem
Malabar nut	Basikha (Dz), Asuro (Lho)	<i>Justica adhatoda</i>	Leaves
Sichuan pepper	Timur (Lho) Thingay (Dz)	<i>Zanthoxylum simulans</i>	Seed
Persian lilac	Bakaino	<i>Melia azadirachta</i>	Leaves and fruits
Indin lilac	Neem	<i>Azadirachta indica</i>	Leaves and fruits
Marigold	Sayapatri (Lho) Sergimeto (Dz)	<i>Tagetes erecta</i>	Leaves and stem
Siam weed	Banmara (Lho)	<i>Chromolaena odorata</i>	Leaves and stem
Peach	Aaru (Lho) Khamshing(Dz)	<i>Prunus persica</i>	Leaves

Others: Ginger, Chilli, Garlic, Onion (Source: ICIMOD)



ལྷ་ཡོངས་རང་བཞིན་སྐྱོ་བྱེ་བ། འོད་གསལ་ལྷན་ཁག

National Centre for Organic
Agriculture, Yushipang



Department of Agriculture

Ministry of Agriculture and Forests, Thimphu, Bhutan

RANGZHIN BUPMEN (BIO- PESTICIDE)

“A low-cost homemade bio-pesticide for organic farming”

PREPARATION OF RANGZHIN BUPMEN



Published by: Technical Support Service Sector &
Horticulture Sector, NCOA, Yushipang

Laxmi Thapa (laxmit@moaf.gov.bt)
Yeshey Wangmo (yeshey123wangmo@gmail.com)
Karma Chophyll (carboncarbon15@gmail.com)
Contact: 17636093/17924945/77617863

Rangzhin Bupmen 1

What is Rangzhin Bupmen?

Rangzhin Bupmen is a homemade bio pesticide that improves crop yield while lowering cost of farmers and reducing the use of harmful chemicals.

Rangzhin Bupmen is based on local traditional practice in Nepal that is being promoted by ICIMOD as an alternative environmentally friendly and low-cost technology highly applicable in organic farming in the Himalayas.

How does it help?

4. It improves plant health and controls pests of crops
5. Protects crops against fungal diseases and vector diseases.

How does it work?

Four ingredients are used to prepare Rangzhin Bupmen:

1. **Animal urine** plays a part of fertilizer and a pesticide. It contains nitrogen, potassium and phosphate-as well as antibacterial, antioxidant, anthelmintic, antibiotic and antifungal agent. Useful microbes are found that act as catalyst agent that accelerate decomposition (**ICIMOD, 2016**).
2. **Locally available plants** with odor and repellent properties and kills pest and controls diseases.

3. Beneficial Microbes

At NCOA Effective Microorganism (beneficial microbes) cultured at National Soil Service Centre Semtokha is used. If unavailable it can be left out.



Fig 1: *Ingredients of Rangzhin Bupmen*

How to prepare Rangzhin Bupmen?

In a 50 liters drum or bucket following quantity of ingredients is needed:

1. Chop leaves of locally available plants with bitter, sour or pungent smell and fill it in the drum.
2. Fill up the drum with equal amount of cow urine and water and 1 Liter of EM.
3. Mix all the ingredients thoroughly and ferment it for 21-30 days.

Dosage

In an area of 4m²: 2 liters of diluted solution is required (1000 liters/Acre)

Rangzhin Bupmen is a low-cost bio-pesticide. Estimated material cost is Nu.15 /liter and cost of production is Nu 16/liter which translates to Nu.16000/acre.



Fig 2: *Chopping leaves before preparation*



Fig 3: *Preparation of Rangzhin Bupmen*

1. Preparation of Rangzhin Bupmen should begin as soon as crop is sown or transplanted.
2. Spray at an interval of 15 days. If severity of pest is high, spray weekly.