What is a Hot Bed ?

Bhim Regmi and his Hot Bed

Good, nutritious food is not only a need for everybody, it's a right. Many farmers grow vegetables, which helps to provide us with many essential nutrients. But there are several months when seeds won't grow because of the cold, and the kitchen garden stays empty. One method of raising vegetable seedlings even in cold weather is called the ***Hot Bed.***

The hot bed is a way or providing extra heat to the soil and growing seedlings in the cold season, so seedlings can be grown ahead of time. This means that vegetables can be grown off season, even in cold climates. Read on, to find out how to do this.

Why make a Hot Bed ?

In cold climates and at high altitudes, for several months over Winter and early Spring there is snow and frost, which prevents seeds germinating and can kill young plants. For this reason seedlings can't be grown until the time for frost has past and the weather warms up. By making a hot bed, seedlings can be grown even in the winter. This means that vegetables can be produced 1 or 2 months earlier than usual.

There are also economic benefits from this. If vegetables can be raised off season, i.e. ahead of time, they can be sent earlier to the market when prices will be higher. For example, if in a normal season vegetables are 10 rupees a kilo, at off-season times the vegetables may be sold at 15-20 rupees.

How to make a Hot Bed ?

Making the Hot Bed

- Choose a good site for the nursery. This must be easy to protect and maintain, with plenty of sun.
- Dig a trench. The trench should be 1 metre wide, 50cm deep, and as long as you need for the amount of plants to be grown (a 1x1m hot bed is usually enough for several families to share seedlings grown for planting in their own kitchen gardens).
- Place a 3 inch thick layer of straw or leaf litter in the bottom of the trench.
- On top of this place a 3 inch layer of raw, fresh cow or horse dung, and wet well.
- On top of the dung place another 3 inch layer of straw or leaf litter.
- Then return a 3 inch layer of the soil dug from the trench.
- Finally put a 3 inch layer of fine, fertile soil (which can be made by mixing compost with the dug out soil, if it is suitable).

The seed will be sown into this layer of fine, fertile soil. In the Hot Bed we can sow seeds direct into the soil, or into leaf pots filled with the same soil. After sowing the seed, cover the bed with a thin layer of finely chopped mulch.

Finally, the bed is covered with a sheet of plastic. First of all make a bamboo frame on which to hang the plastic. Bury the edges of the plastic in the soil around the bed, so air cannot get in.

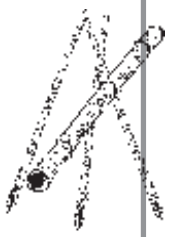
Materials Needed to make a Hot Bed

seed

digging and cut-ting tools

clear plastic

2 metres


bamboo

rotted compost

1 basket

fresh dung

1 basket

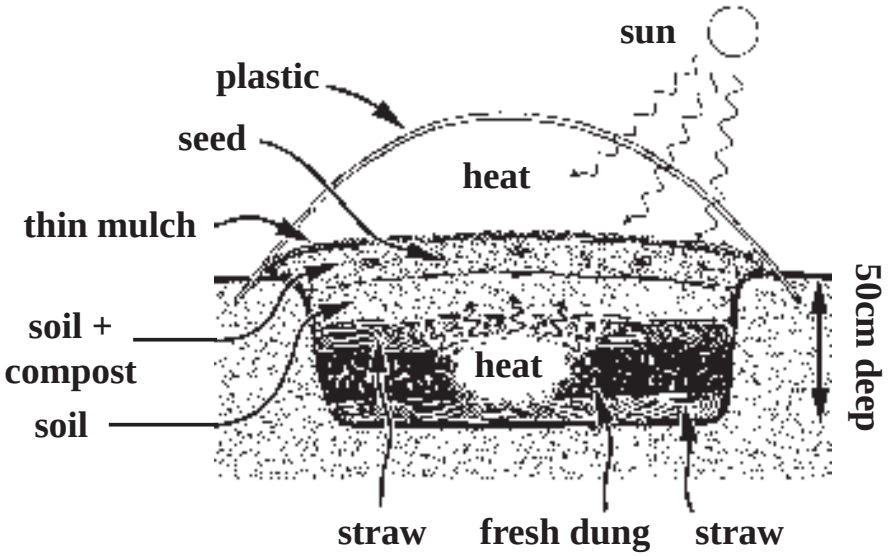
straw or leaf litter

1 basket

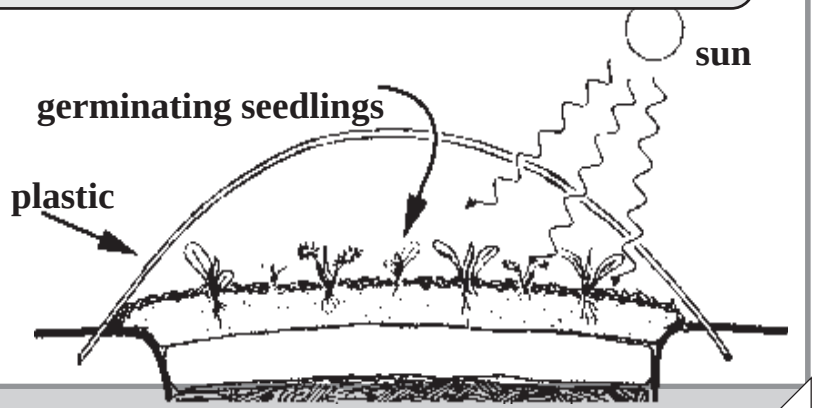
Hot Bed

Inside shown through cross section

1. Heat from the dung helps seeds to germinate



2. The plastic helps to protect growing seeedlings from frost



Species to grow in the hot bed

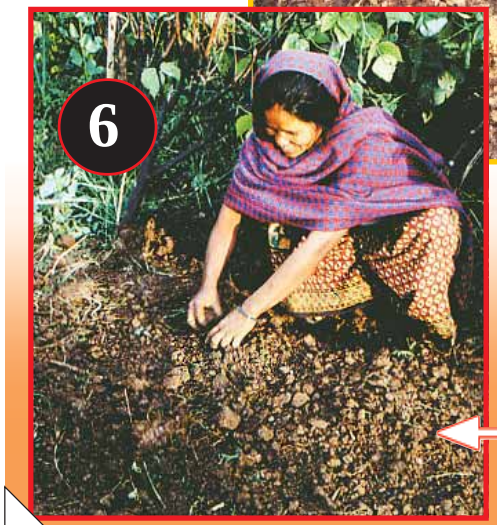
Most types of vegetable can be grown in the hot bed. Usually, summer crops are most suitable as these are the ones that can be started for early planting after the winter.

season / planting method	rainy season plants	dry season plants
leaf pots	pumpkin, cucumber, gourds, beans, etc.	beans, peas, etc.
direct into the bed	chillis, aubergine, ladies' finger, sunflower, etc.	tomatoes, broadleaf mustard, chard, lettuce, onion, cabbage, etc.

Let's See how to make a Hot Bed

On top of the dung put another layer of straw

On top of this put a 3 inch layer of the trench soil



Then put a 3 inch layer of fine, fertile soil

Make lines in the soil to sow the seed into

Leaf pots with seed sown can also be put in the hot bed

Now cover the whole bed with a fine mulch

Make a bamboo or stick frame

Hang the plastic on this and bury the edges in the soil

The plastic opened to weed the nursery

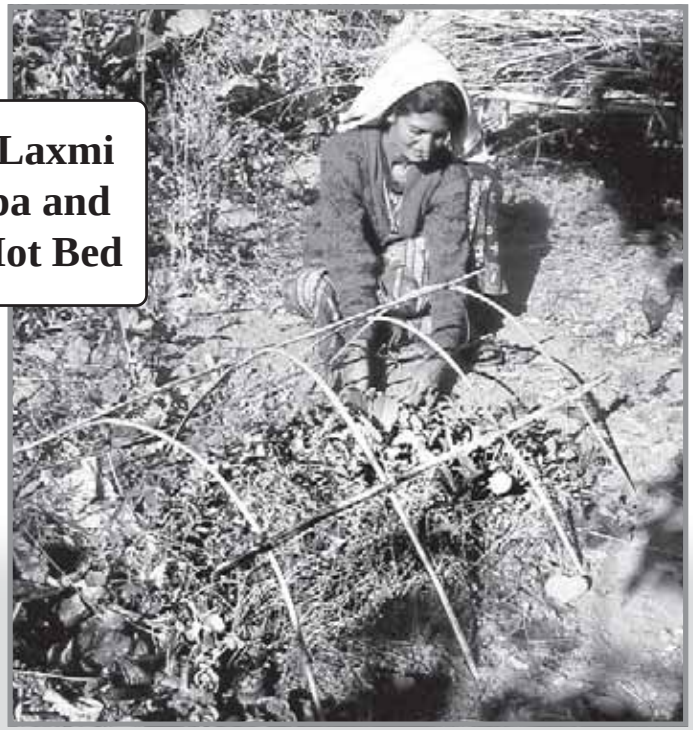
Maintenance

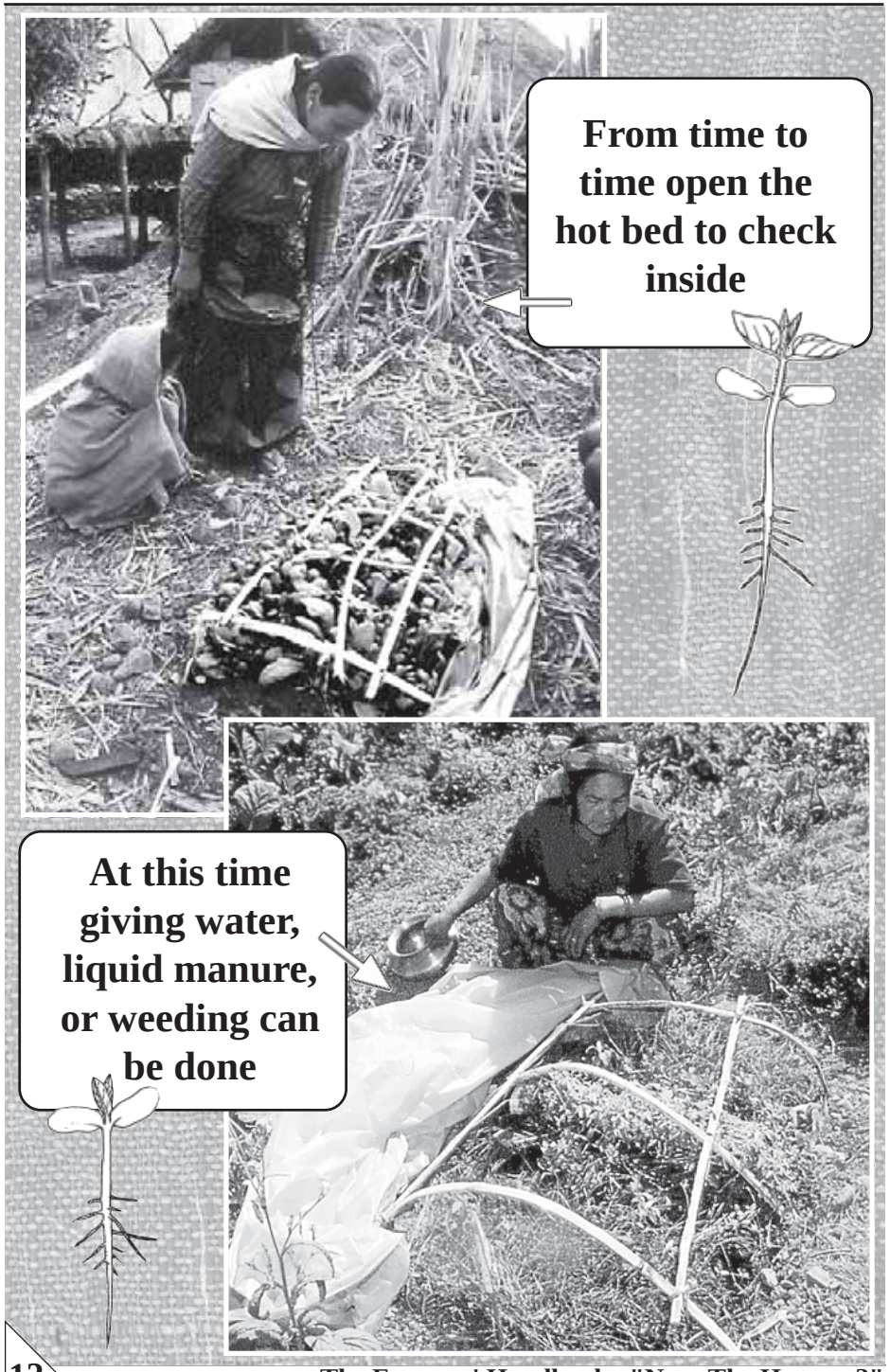
How to maintain a Hot Bed

From time to time the nursery needs maintaining :-

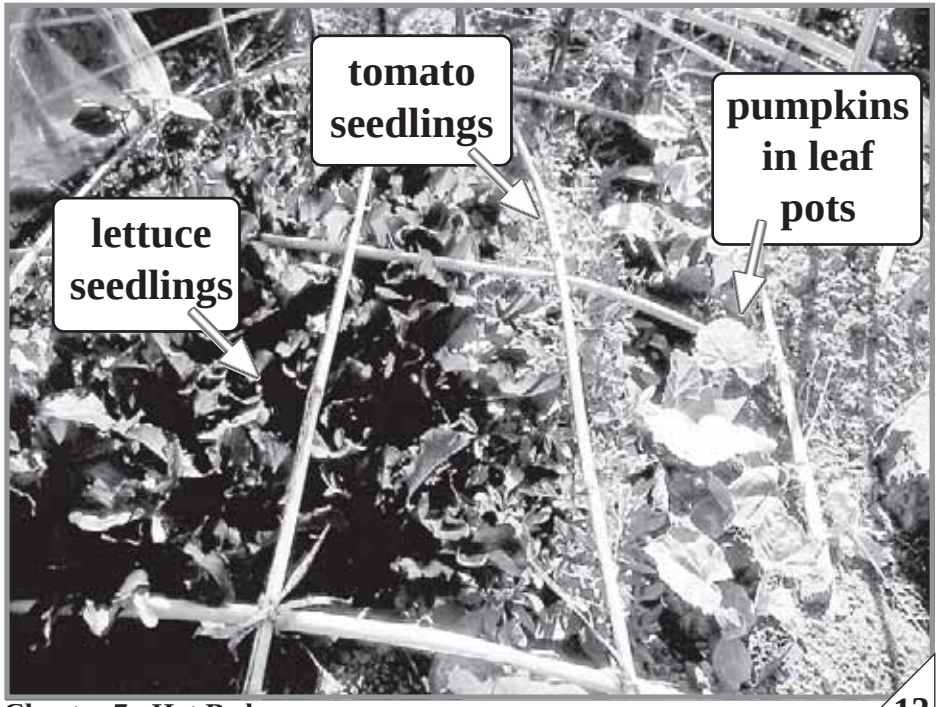
- when the sun is out the plastic can be folded back to irrigate and weed the nursery as required;
- replace the plastic in the evening, when the sun goes down;
- heat from the dung warms the soil, and the plastic prevents it quickly escaping;
- when the danger of frost has passed the seedlings in the hot bed can be transplanted into the kitchen garden

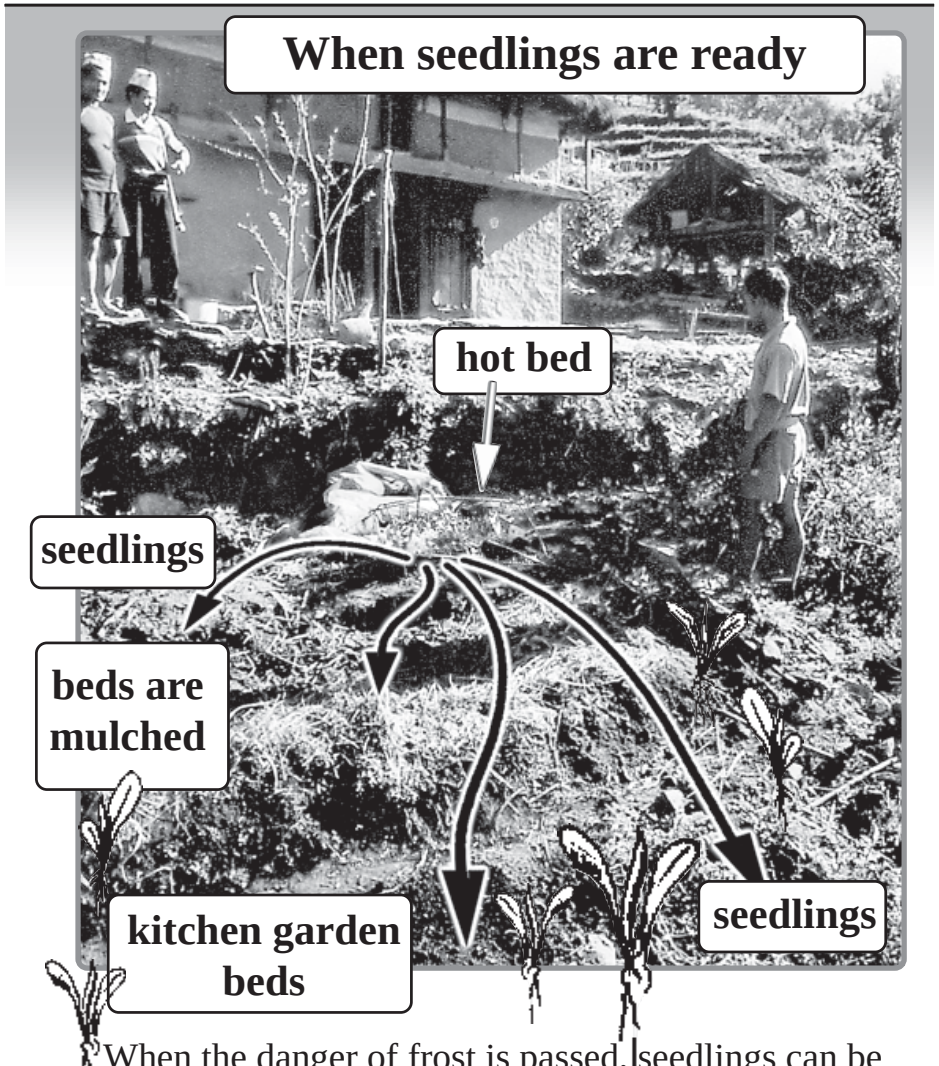
Mrs Laxmi Thapa and her Hot Bed




From time to time open the hot bed to check inside
At this time giving water, liquid manure, or weeding can be done

Remove the plastic when the danger of frost is over. Make a fence to protect against livestock


tomato seedlings
pumpkins in leaf pots
lettuce seedlings



When the danger of frost is passed, seedlings can be transplanted from the hot bed into the kitchen garden. First, water the plants well before transplanting. Water them again once they have been transplanted.

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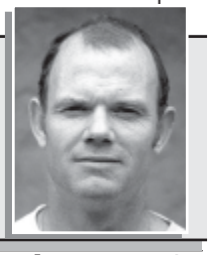
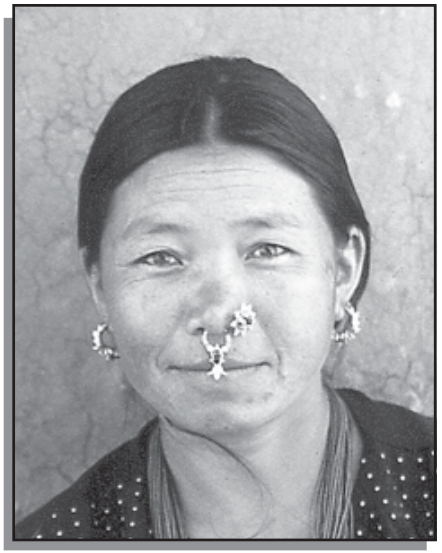


Farmers' Experience

Mrs Tulisara Gyami

From Nepal, Surkhet district, Lekh Pharsa-2, Purano Gaun village, and a member of "Creative" Women's Group, Mrs Tulisara Gyami has made her own hot bed nursery. Now let's read about her experience.



Mrs Tulisara Gyami

" In our village, it's difficult to grow vegetables in the winter because of the cold at that time. The frost kills the plants. That's why I made a hot bed, to grow off season vegetables. After I made the hot bed it was easy to grow vegetables earlier in the season. As soon as I saw the first hot bed, I knew it would work because the morning after the day we made it, the heat had warmed up the inside and it was full of steam. Outside we were shaking with cold, but inside the plastic seedlings started to germinate very quickly. I used the bed for 3 or 4 successive plantings into the garden. This made it easy to grow lots of beneficial vegetables 2 months sooner than normal. "

Read On !

Subjects Related to the Hot Bed

Hot Bed chapter

Leaf Pots chapter

Many types of vegetable for off-season production can be grown in the hot bed. Cucumber, pumpkin, beans, etc. can also be grown off season. You can learn how to make leaf pots from this chapter.

Mixed Vegetable Gardening chapter

Plants grown in the nursery can be mixed with all sorts of others for planting. Information on a method producing more with less work is given in this chapter.

Kitchen Garden chapter

Where, when, and how to plant seedlings raised in the nursery with less work and more production ? Information on how to make a successful kitchen garden is given in this chapter.

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