## Promotion and Commercialization of Grafting Technology for Selected Fruit-Vegetables (Tomato, Sweet Pepper, and Bitter Gourd)

# Grafting of Sweet Pepper and Hot Pepper

- A grafted plant with sweet pepper (*siling lara* in Filipino) as scion and hot pepper (*siling maanghang* in Filipino) as rootstock
- It is resistant against bacterial wilt, a soil-borne disease that is common among solanaceous crops, like tomato, eggplant and chili pepper, that causes serious damage to farms since it leads to mortality of the plants.
- Bacterial wilt is caused by a bacterium, *Ralstonia solanacearum*, that naturally thrives in the soil, hence, called soil-borne pathogen
- It is also resistant to rainy and waterlogged soil conditions, hence an off-season production technology. This is most helpful during the wet season.
- It has a longer life span as compared to a non-grafted sweet pepper plant

#### **Used varieties:**

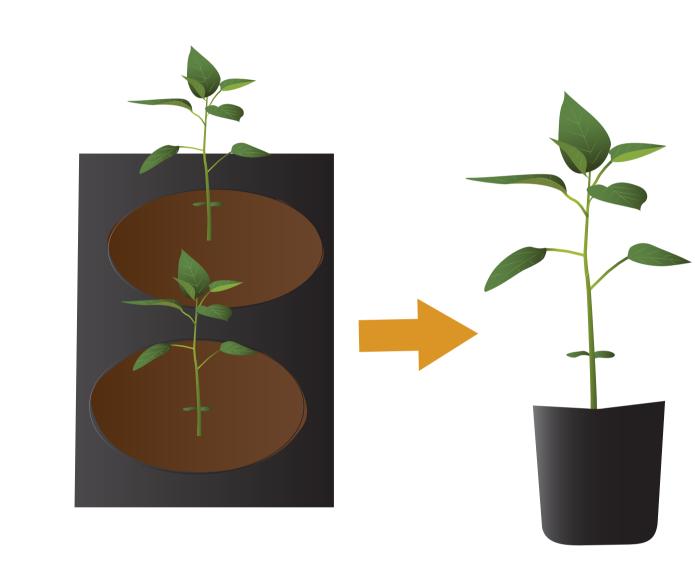
Sweet Pepper: Any variety preferred by the farmer Hot Pepper: HP-RS # 1 (CM 334 long), HP-RS # 2 (Szechuan), HP-RS # 3 (CM 334 short)

Sow seeds of hot pepper (rootstock)

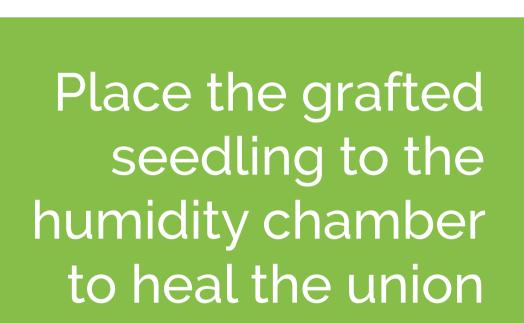
**1-2** days

Sow seeds of sweet pepper (scion); prick the hot pepper seedlings and transfer to individual seedling bags

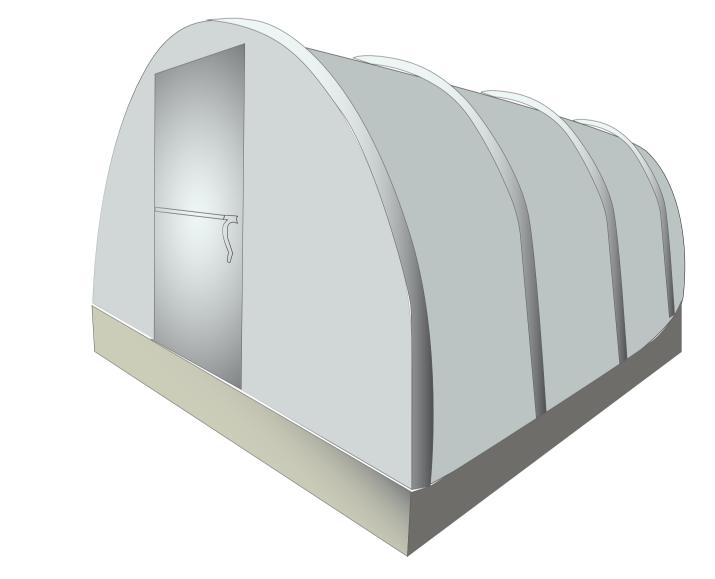
23-26 days for sweet pepper, and 26 days for hot pepper



Graft the sweet pepper to hot pepper using tube grafting method

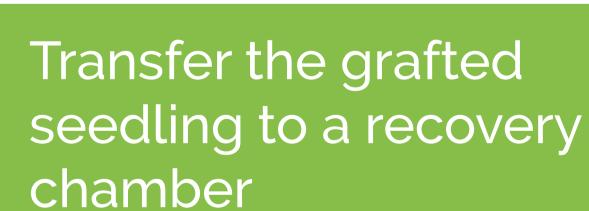


**4-5** days

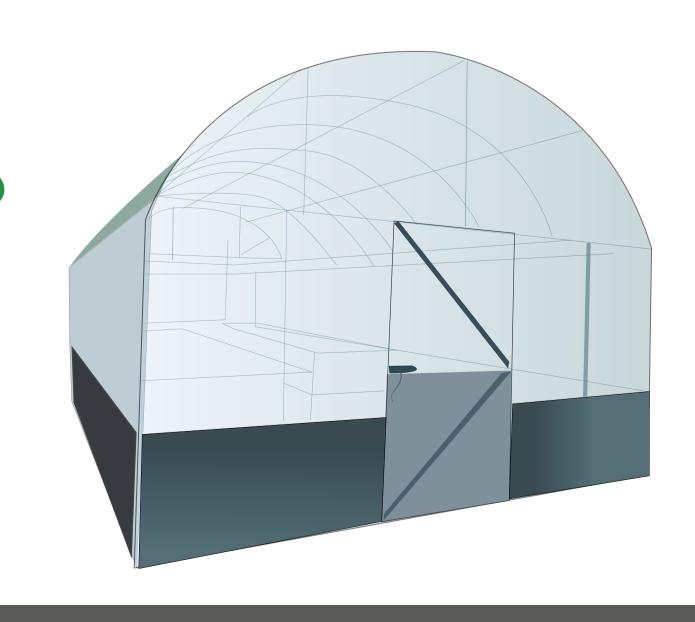


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Transfer the grafted seedling to the nursery. Harden the seedling for **7-10** days before transplanting to an open field.



2 days



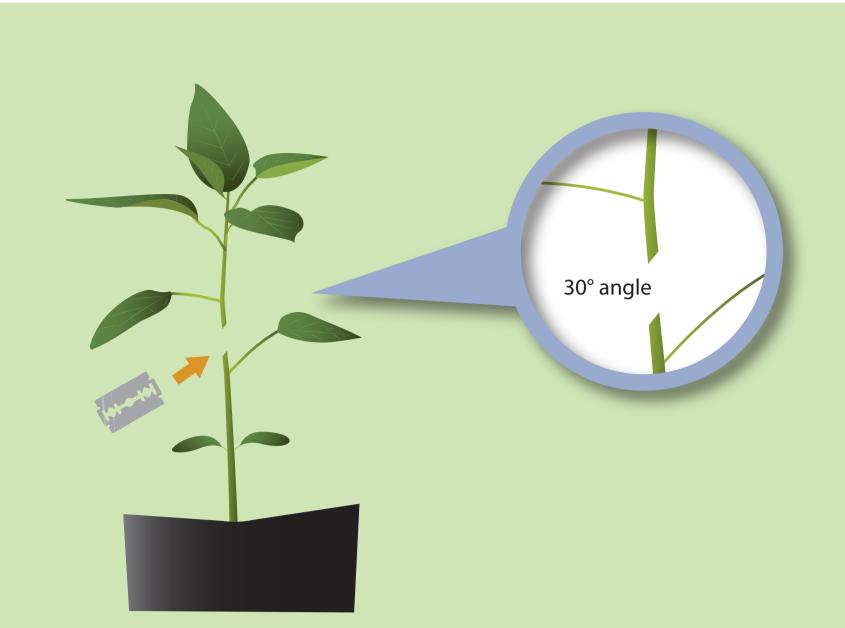
#### NOTE

The whole process of grafting takes **42** days before it can be transplanted to an open field A grafted plant lives up to **100** days in an open field

### Grafting Procedure:

In grafting sweet pepper on hot pepper, tube grafting method is being used. Note: Cut the portion on sweet pepper and hot pepper shoots that will fit into the size of the rubber tube.

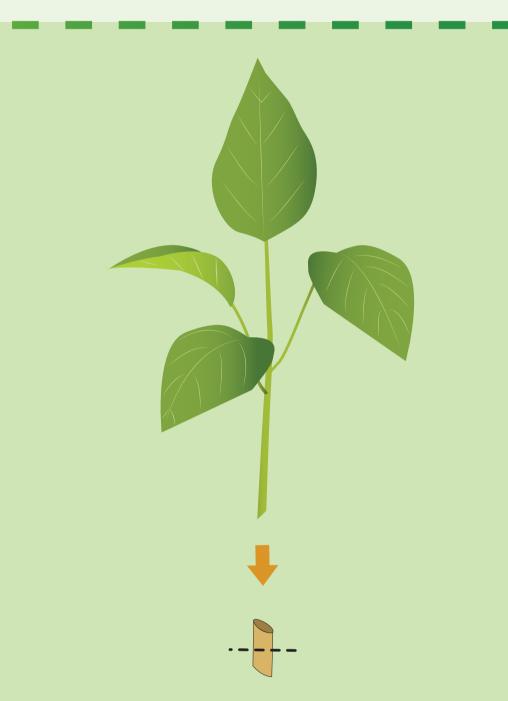
1. Cut the hot pepper shoot, above the two bottom-most growing leaves or at a part of the stem that will fit into the rubber tube, at 30° angle



2. Cut the sweet pepper shoot, above the two bottom-most growing leaves or at a part of the stem that will fit into the rubber tube, at 30° angle.



3. Insert the sweet pepper shoot into the rubber tube. Make sure that the shoot occupies only half of the rubber tube.

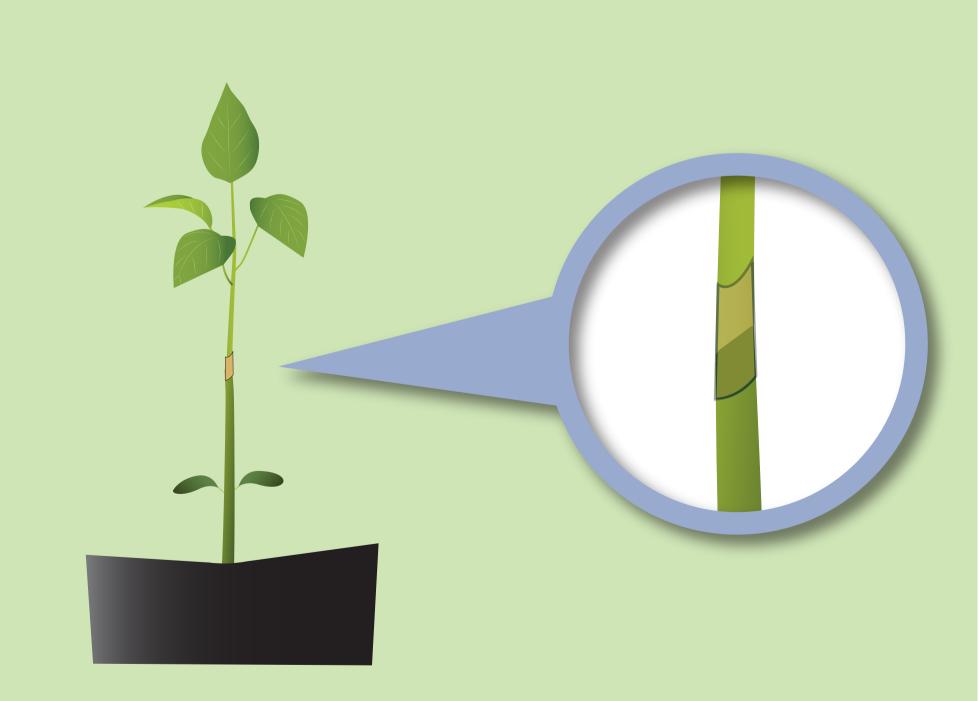


4. Insert the rubber tube with the sweet pepper shoot into the cut portion of hot pepper. Be guided by the shape of the rubber tube in uniting the sweet and hot peppers.



5. Make sure that the cut portion of both sweet pepper and hot pepper unite appropriately.

Observe carefully if the grafted plant can stand on its own.



#### NOTE

- The varieties used as rootstock are wild and open-pollinated varieties. These are proven to be resistant against bacterial wilt.
- Make sure that hands and materials, such as blade and scissors, are sanitized before doing the grafting procedure.

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