



Bitter Melon

Arvazena Clardy, Extension Assistant Professor of Horticulture

Background: Bitter Melon (*Momordica charantia*) is a member of the squash family and is very popular in Asia, Africa, Caribbean, India and Middle Eastern counties. Bitter Melon has a bumpy skin and ranges from light to dark yellowish green in color and oblong in shape as the bitter melon matures and ripens it turns yellow-orange. As the fruit ripens, it becomes tougher and very bitter. The two major varieties are the Chinese (smooth skin) and the Indian (bumpy skin).

Food Uses: Bitter Melon is very common in Asian and Indian dishes.



- Chinese cooking, Bitter Melon is usually stir fried with pork, used in soups and consumed as a tea.
- Northern Indian Bitter Melon can be stuffed with spices and prepared by cooking in oil. It is prepared or served with yogurt to offset the bitterness.
- Southern India, Bitter Melon is mixed with coconut and stir-fried with various spices.
- Caribbean, Bitter Melon is sautéed with onion, garlic until crisp.

- Bitter Melon can be juiced, alone or with other fruits and vegetable combinations.

Medicinal uses: Bitter Melon has been used in Asia, Africa and India as herbal medicine/supplement. Benefits and usages of Bitter Melon (fruit and young leaves and stems) are to relieve:

- diabetes,
- laxatives,
- anti-cancer properties,
- skin infections,
- respiratory diseases,
- gout,
- rheumatism and
- digestive problems,
- heart problems,
- anti-aging properties,
- regulates blood flow,
- wounds,
- ulcers,
- slows the grey of hair.

Bitter Melon

Growing Bitter Melon: Bitter Melon is a subtropical and tropical vine of the family of Cucurbitaceae. Bitter Melon can be grown in Tennessee (both greenhouse and field), seeds can be directly started in the soil in late spring/ early summer. If you have the space you can start seeds in a greenhouse and transplant and grow until seedlings are ready for outside in Tennessee, after the last frost or when temperature is around 70 F. Bitter Melon is a warm season crop, it thrives in hot and humid conditions. Soil should be fertile, well drained and in soil with a pH of 5.5 to 6.7.

Bitter Melon varieties trail and benefit from growing on a trellis which makes the fruit easy to harvest. If you don't trellis, spread hay or pine straw on the ground for the fruit to grow on, don't allow the fruit to grow on the ground, this causes the fruit to rot and disease will develop. Bitter Melon like other members of the squash and cucumber family can develop Powdery Mildew, Downy Mildew, Rust and Rots.

Bitter Melon needs pollinating to produce fruit, the male and female flowers are both found on the plant, the male flower is usually opened for just one day and falls off the plant, bees and insects travel from one flower to another causing fertilization, the remaining flowers are female. So, if you are considering greenhouse growing Bitter Melons and there are no bees available you will need to hand pollinate for fruit development.

Plants benefits from an all purpose fertilizer NPK (14-14-14; 20-20-20) or similar ratio, plants also benefit from compost fertilizer. Fruits are ready to harvest from 40 –63 days after planting depending on the variety. Harvest fruits when they are 4 to 8 inches long, more mature fruits are not as bitter and bitterness can vary from fruit to fruit on the same plant. Bitterness is the result of the alkaloid momordicine found in growing bitter melons; the darker the color of a Bitter Melon the more bitter and intense the flavor of the fruit. Harvest fruit, when they are small and skin is green in color, they are less bitter. Bitter Melon is a herbaceous vine. The skin is tender and edible, the seeds and pit appear white in unripe fruit.

Nutritional Value: Bitter melon has twice the beta carotene of broccoli, twice the potassium of bananas, and twice the calcium of spinach. It also contains high amounts of fiber, phosphorous, and Vitamins C, B1, B2, and B3.

Seed production: You can collect seeds for next years growth from over ripened yellow fruit, seeds will have a red coat, just peel off the seed and store the seeds, in a cool dry place or leave a few fruits on each vine to mature past harvest. Mature fruits will break open and release brown or white seeds. Collect the seed, sort it, wash it, and dry it on a countertop, then store it in a cool, dry spot.

Next spring just soak them over night and plant for next year crop. Seeds will remain viable for 2 to 3 years.

Hint: Try to eat or freeze bitter melon within a few days of harvest. Once the fruit begins to degrade it will quickly mold and turn bad. The most common uses for bitter melon are stir-frying with some type of meat or boiling for use in a soup. Larger bitter melons can also be stuffed with meat or seafood and steamed over medium heat before being served over a bed of rice.



Chinese Style Bitter Melon

Bitter Melon Shrimp Egg Pie Recipe:

This is Simple, Fast and Tasty recipe at 10 minutes from start to finish, serves 2.

Ingredients:

1/2 Bitter Melon, seeded, cut into thin strips
1/2 cup shrimp, peeled, deveined
1 egg, beaten, whisked lightly with a dash of salt
2 Tbsps. Vegetable oil for stir-frying

Directions: 1. Blanch the Bitter Melon strips in boiling water for about 30-60 seconds, or until jade green, drain well and remove to cold water to stop cooking, then drained well again and set aside for later use.

2. Preheat 2 Tbsps, of vegetable oil in a wok until hot, stir fry Bitter Melon strips and shrimp until the shrimp in pink, about 1-2 minutes, then reduce the heat to medium, pour the whisked egg over them, cook until the egg has set.

3. Remove to a plate and serve immediately.

Servings per recipe: 2

Protein: 17.55 grams

Total Fat: 7.5 grams

Carbohydrates: 2.85 grams

Calories: 151.5 Kcal

Indian Style Bitter Melon

Ingredients:

1 Bitter Melon
2 Potatoes, peeled and cut in long strips-**half cooked**
2 Chopped Onions
2 Chopped Tomatoes
2 Tablespoon Oil

Seasoning (In Teaspoon)

1 Cumin seed, 1/4 Tumeric Powder, 1/4 Red Chili Powder, 1 1/2 Coriander Powder,
1/2 Mango Powder, 1/2 Black Pepper and 1 Salt

Directions:

Rinse the Bitter Melon, Trim both ends and scrape off hard skin, Cut Bitter Melon into small round pieces, Heat the Oil (Medium-High Heat), Add a layer of Bitter Melon Stir and Cook until Bitter Melon is brownish color, Reduce Heat, Add Onions, Potatoes and All Seasoning, Stir until Potatoes are cooked, Add Tomatoes, Cook slowly on Medium low heat and Stir as needed.



Bitter Melon

Stuffed Bitter Melon– Indian Style

Ingredients

- 4 medium sized bitter melons
- 1/2 tsp salt for marinating
- 2 tsp cooking oil
- 1/2 cup chopped onions
- 1/2 tsp cumin powder
- 1/2 tsp coriander powder
- 1/2 tsp garlic powder
- 1/2 tsp red chili powder
- 1/2 tsp turmeric powder
- 1/4 tsp dried mango powder
- Salt to taste
- oil for shallow frying



Method

Scrape the bitter gourd with a peeler to remove the bumpy skin. Make a slit into each length-wise and carefully scoop out the insides to remove the seeds etc. Apply a little salt to the hollow inside and outside of the bitter gourd and keep aside for 15 to 30 minutes. This helps to

eliminate some of the bitterness and to tenderize the vegetable. Wash the bitter gourd to remove the excess salt and squeeze out the water and pat it dry using a kitchen towel. Keep aside.

Mix the chopped onions and dry spices with salt to taste and 2 tps oil. Divide the mixture into 4 equal portions. Fill a portion of the prepared mixture into each slit bitter gourd. Heat 2-3 tbsps oil in a shallow non-stick pan, gently add the bitter gourds to the pan and cook on a medium flame turning occasionally till they turn golden brown on all the sides. Serve immediately.





Bitter Melon

If you would like additional information on the International Vegetables Research at Tennessee State University or have additional questions and comments about growing Bitter Melon in Tennessee, please contact us below:

***Arvazena E. Clardy, Ph.D.
Assistant Professor of Horticulture
Cooperative Extension Program
615-963-4887 aclardy@tnstate.edu***

***Ms. Sherry Crudup, Research Assistant
Cooperative Extension Program
615-963-5832 shpatterson@tnstate.edu***



**Dr. Chandra Reddy, Dean and Director
of
Research and Administrator of Extension
Tennessee State University
3500 John A. Merritt Blvd.
Nashville, Tennessee 37209-1561**

TSU-18-0005(A) -3-17091 Tennessee State University is an AA/EEO employer and does not discriminate on the basis of race, color, national origin, sex, disability or age in its program and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Ms. Tiffany Baker-Cox, director of Equal Opportunity and Affirmative Action, 3500 John A. Merritt Boulevard, Nashville, TN 37209, (615) 963-7435