

Grow Your Bitter Gourd and Eat it Too

By A. Rani Parker¹

It is a delicate vine, pest resistant, and produces a vegetable that can cleanse your blood. No wonder the bitter gourd has over twenty names and is used in almost all regions of the world, always as a food that is good for you. Yes, bitter gourd, *Mamordica charantia*, is said to regulate blood sugar, cleanse the liver, stimulate digestion and improve skin condition, and is a common Ayurvedic treatment for diabetes. The scientific research on these claims, however, is preliminary.² Among the mainstream studies, the Jawaharlal Institute of Postgraduate Medical Education and Research (India) found that bitter gourd increases insulin sensitivity in rats.³ Nevertheless, it is difficult to ignore the long tradition in Ayurvedic medicine, or the consistency with which bitter gourd is recognized in many regions of the world for its ability to lower blood sugar.



Two South Asian varieties

I have no specific childhood memories of resistance to *pavakka*, as bitter gourd is called in Tamil. In my family we ate whatever was served to us, including various vegetables. Bitter gourd is widely available in Indian markets and we valued it for its healthful properties. As an adult in the United States, the discovery of bitter gourd in Indian stores made it possible for me to begin

¹ I wish to acknowledge and thank Margie Richards and Patrick Meagher for reviewing this article and providing helpful comments.

² Wikipedia offers several references of studies, which the author has not been able to read and independently assess in terms of the claims associated with bitter gourd. Many of these studies appear to have been conducted on rats only, not on humans. A 1995 study is said to have found benefits for treating HIV infection, but those benefits may actually be associated with treating the side effects of HIV medications rather than the infection itself.

³ Sridhar, M. G., Vinayagamoorthi, R. Arul Suyambunathan, et. al. (2008). "Bitter Gourd (*Mamordica charantia*) improves insulin sensitivity by increasing skeletal muscle insulin-stimulated IRS-1 tyrosine phosphorylation in high-fat-fed-rats." *British Journal of Nutrition* **99**(4).

efforts to integrate it into my Indian-American household in Takoma Park. Those efforts continue with only a modicum of success.

In our region, bitter melon grows with little attention and seems impervious to the many pests that may attack other plants in a vegetable garden. Flea beetles, harlequin bugs, squash bugs, aphids, leaf miners and various fungi were among those pests that attacked my garden vegetables this year, but none touched the soft and seemingly fragile bitter melon plants. Indeed, it was only a few weeks before my makeshift bamboo structures were pushed over by this seemingly delicate vine. Bitter melon plants love our climate and can form beautiful green walls where needed in the summer. And, there are the health benefits. So why isn't more of it grown and eaten in the United States?



An emerging bitter melon

Is it the harsh taste? Maybe -- but bitterness is no stranger to American cuisine – collards, kale, radishes and mustard greens are among bitter foods that go unquestioned, although they are not universally loved. The secret to enjoying bitter melon as food is in finding ways to prepare it that will make it appetizing while retaining its nutritional value.

Convinced that bitter melon can be more widely used in American diets, I decided to test a few different ways of preparing it. I hope that these will generate curiosity and interest in experimenting with this wonderful vegetable. Below are the results of testing I conducted of three different recipes, each taking a different approach to reducing the bitterness in bitter melon. The first approach is to kill the bitterness with salt, which is the technique most used in my family in India. The second is to use lemon, an approach I have tried with my American family and friends, and the third is to use onion as a sweetener to balance the bitterness. The three options described below were blind-tasted and rated by a group of eleven women and two men from Takoma Park. None had a family tradition of eating bitter

gourd, or familiarity with it as a food. I chose this type of sample because I am convinced that with the right way of cooking it, bitter gourd’s health benefits may be shared more widely by more people.

The Salt Options: Option One

Salt is a sure way to reduce bitterness. But how much nutrition is left when the salt has done its job of extracting the flavors (not to speak of the additional health risks introduced by salt)? In this option, the cut-up gourd is soaked and rinsed in salt water before cooking. More salt may be added during cooking. Then it may be sauteed and added to pasta, fried rice, tofu, or dropped into a curry or other stew or sauce. In a spicy sauce, such as an Indian curry, the bitter gourd can blend into a mix of flavors – and may even escape notice. I prepared the test recipe by cutting up the bitter gourd, soaking in salt water for one hour, then lightly sauteeing in just a teaspoon of olive oil. Finally, I tossed the bitter gourd into a dish of cooked plain white rice before serving.

Ratings: N=13

	Dislike a lot YUCK -2	Dislike will eat if forced to -1	Like, will eat voluntarily +1	Like a lot YUM +2
Salt Option	7	4	2	0

This option got no *yum* ratings and 7 (more than half) *yuck* ratings! Perhaps rice was too plain an addition in appearance and provided insufficient contrast for taste.

Using Lemon: Option Two

Another option, which I use most often, is to cook the cut-up gourd in lemon juice over a low flame, in a pot that is sealed shut—a slow steam. After this, the gourd may be served with other vegetables such as roasted eggplant, zucchini squashes,



Option Two: Lemon steamed with mustard and urad

peppers, etc. Lemon steamed bitter gourd can also be chopped, chilled and added to a cold salad. Hot and cold stews and soups may be supplemented with lemon-cooked gourd. A mix of lemon cooked bitter gourd with freshly chopped tomatoes, cucumber and avocado tossed with basil or coriander and a bit of olive oil makes an exceptional salad. I began this recipe by dropping some black mustard into a pan with olive oil. When the mustard started to pop, I added in urad dhal and shook the pan a bit. Then I tossed in the lemon steamed bitter ground. I served this at room temperature for the test group, but it may be served as a cold side-dish for a summer meal, or hot, fresh out of the pan.

Ratings: N=13

	Dislike a lot YUCK -2	Dislike will eat if forced to -1	Like, will eat voluntarily +1	Like a lot YUM +2
Lemon steamed with mustard and urad	3	5	3	2

Although not preferred by the majority, lemon with mustard and urad provided a good mix of taste and texture, generating two *yum* ratings and five approvals. Still, the majority did not like it.

Sweetening with Onion: Option Three

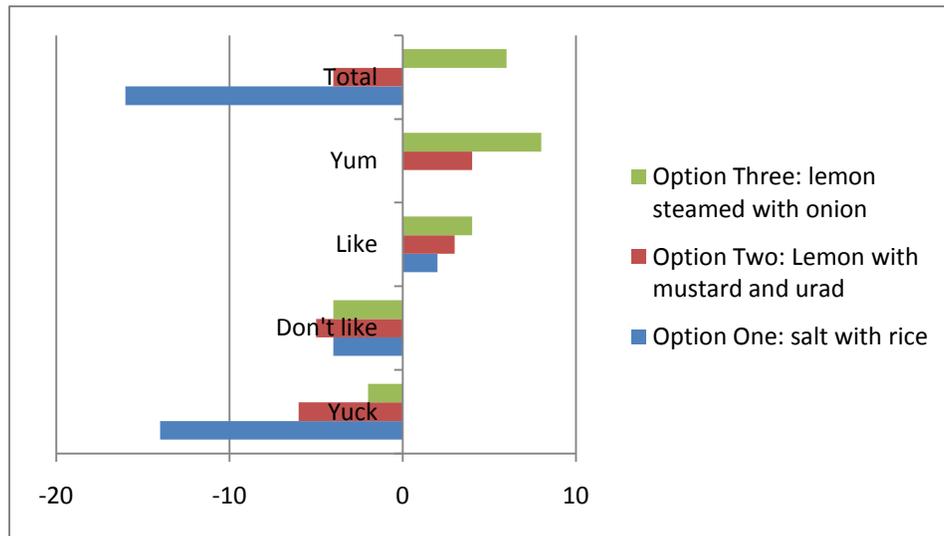
A few years ago I learned that onions contain a great deal of fructose and that triggered some interesting ideas for reducing my family’s sugar consumption. I have replaced sugar with onions in tomato chutney and generated wonderful sugar-free chutney. What if bitter gourd were cooked with onion? This recipe involved cooking the onion in some olive oil until it was caramelized and then tossing the lemon-steamed bitter gourd into the onion. Use yellow onions, not the sweet vidalia varieties. Strangely, the “sweet” onions contain less fructose than the yellow ones. Garlic contains even more fructose than onion.

Ratings: N=13

	Dislike a lot YUCK -2	Dislike will eat if forced to -1	Like, will eat voluntarily +1	Like a lot YUM +2
Lemon steamed with onion	1	4	4	4

The combination of lemon and onion did best with more than half liking it, and almost a third rating it *yum*, with only one *yuck*.

The results are summarized below.



Clearly the overall *yuck* factor is pretty high! The salt option summed to -16, clearly disliked. Option two with lemon, mustard and urad did better, although it too generated a net negative result of -4. The clear winner is option three, a combination of steaming in lemon juice and adding onion - a net positive result, of 6. Perhaps most promising for consumption of this vegetable in the future is that the tasting process itself appears to stimulate tasters to imagine variations on the test recipes. Tasters voluntarily came up with many suggestions for preparation that would make it more interesting for them. Among those: add tomato or something acidic to contrast, use as a relish, consider pickling, etc.

My eleven-year old daughter, Asha, and her friend, Abby, had this to say about a lemon-based version of bitter gourd:

Asha: *It's still unbearable.*
 Abby: *I think it's interesting.*
 Asha: *Do you like it?*
 Abby: *I don't know...*

Comments from my husband and a family friend:

- *If you tell me this is healthy, I would have no problem eating it.*
- *I think I actually like it better than broccoli.*
- *It's growing on me.*
- *It's strong, but it has a certain panache.*

There are of course many other ways that bitter melon is cooked traditionally. A favorite Sri Lankan recipe is to slice the bitter melon very thinly, wash in salt water and deep fry with thinly sliced red onions... definitely *YUM*, lots of people like it, but no health benefit. A common Indian preparation is to divide the gourd into two lengthwise halves, scoop out the insides and fill with a spicy meat dish and bake. The spices in the meat often absorb the bitterness. The bitterness may be reduced even more if the insides of the bitter melon are rubbed with lemon or salt prior to filling with meats or savory herbs, or something else.

And there are other options beyond the traditional Indian fare. Lemon-steamed, cut-up bitter melon may be chopped up and tossed with avocado, corn or roasted pepper salads. It may be added to most stews and soups, and even mixed in with risotto, barley or *couscous*. The options are endless once you determine the level of bitterness you desire. For least bitterness, always pre-steam in lemon or use the salt



With the right support structure, unlike the makeshift one I have here in my garden, bitter melon can make a beautiful green wall in the summer landscape.

options before incorporating into the meal. For highest bitterness, use fresh, as is. Fresh bitter melon juice is priceless for those who cherish the bitterness.

The best time to pick a bitter melon is before it ripens. A ripe bitter melon turns a shade of golden orange, varying with the cultivar. I find that ripeness eliminates much of the bitterness, but that is contested. Besides, it is not clear whether the ripe gourds retain the nutrients that are found in them when they are still green. I let my gourds evolve to peak bitterness and retain their crunchiness, which is just before they begin to ripen.

Having grown up with bitter gourd and loving its bitterness, I have never fully understood how others can reject this lovely vegetable so categorically. My favorite recipe is to slow steam the cut up gourd in a little water. Separately I heat a little olive oil in a pan and throw in some black mustard. When the mustard pops, I toss in some urad dhal, shake the pan and then mix in the bitter gourd and serve immediately. The mustard and urad complement the soft gourd with crunchiness and the bitterness is retained...yum. No salt or other flavors needed.



Ready for eating or for making juice

If you would like to grow bitter gourd next year, you may consider several varieties offered through [amazon.com](https://www.amazon.com). *Foo Gwa* and *Solok* bitter melons look like the kind I grew last year—not as striking in appearance as the ones photographed here, but definitely less bitter. *Jawahar*, *Gori* and *Comet* look like the varieties I grew this summer; they are wonderfully bitter. Master Gardener Diyan Rahaman is another potential source of seeds. Bitter gourd may also be purchased at any Indian store near you. Choose the ones that are crispy, and enjoy...