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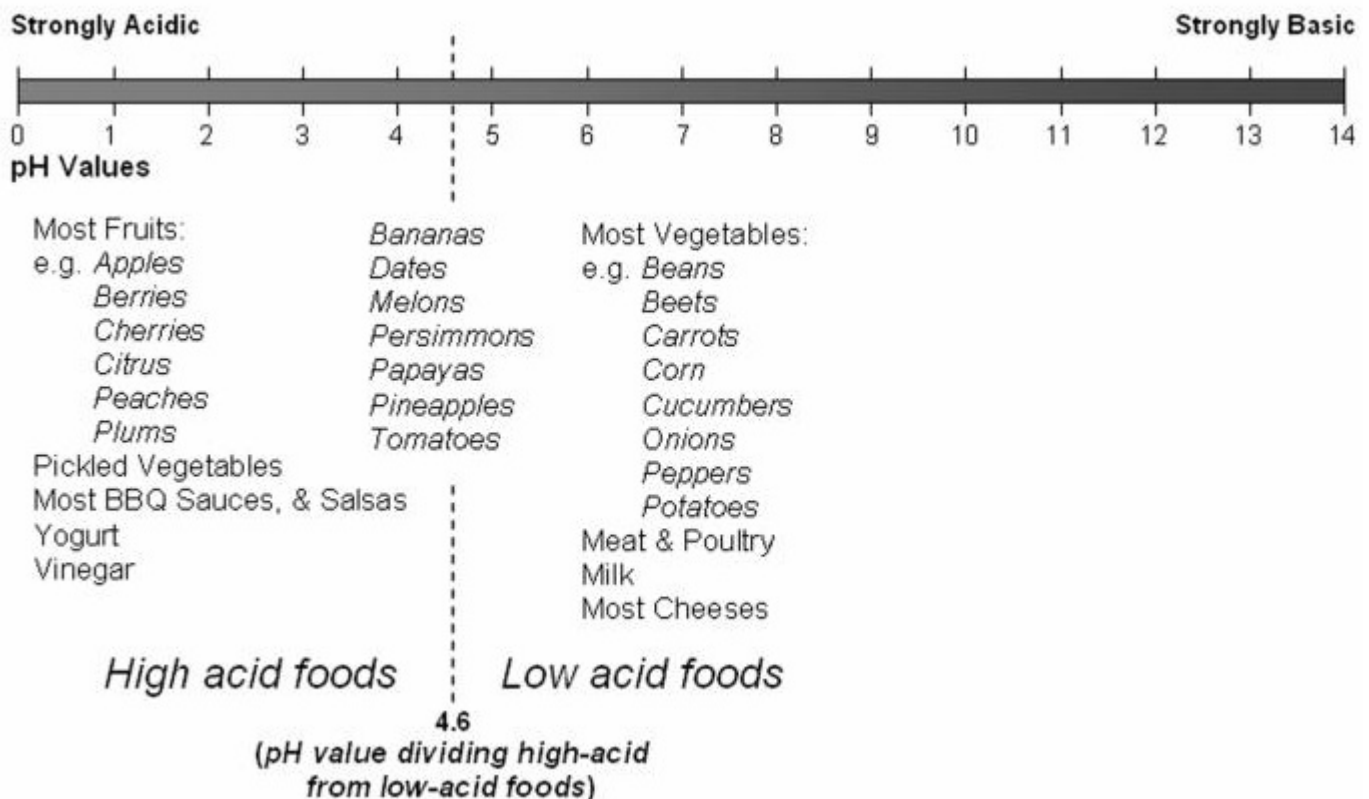
Where you can find a pick-your-own farm near you!

Click on the printer icon that looks like this:  (at the top left, to the right of "save a copy") to print!
See www.pickyourown.org/allaboutcanning.htm for many other canning directions and recipes

pH of Vegetables, Nuts, Grains and Low-Acid Fruits - Master List

[Click here for a PDF print version](#)

Updated for 2020



The pH and/or acidity of a vegetables (which are overwhelmingly low-acid) and low-acid fruits is generally used to determine the safe home canning methods and conditions. The term "pH" is a measure of acidity; the lower its value, the more acid the food. The equipment used for determining pH was generally pH meters.

The approximate ranges of pH values for many common fresh vegetables and the low-acid fruits are listed below, in three tables, one for those that are considered to be acidic; two more for vegetables and fruits that are considered to be low acid. If a range of values was found in the testing, the range is given. Keep in mind that considerable variation exists between varieties, condition of growing and processing methods, etc. The data presented is applicable to the edible portion of foods in their normal and natural state, unless otherwise designated.

Acidic foods can usually be processed safely in a boiling water canner, usually without added acid (lemon juice, vinegar or citric acid). This is necessary to control botulinum bacteria. Low-acid canned foods are not acidic enough to prevent the growth of these bacteria. Acid foods contain enough acid to block their growth, or destroy them more rapidly when heated. The acidity level in foods can usually be increased by adding lemon juice, citric acid, or vinegar, although this by itself, does not mean the recipe is safe. If either case, following a lab-tested recipe and

canning directions is important for both safety and quality! [Canning methods are described on this page](#). Some liquids, like lemon juice, lime juice and vinegar, are used as acidifiers, to help lower the pH of foods to increase safety. [See this page for an explanation](#).

[Canning directions and recipes that are based on this information and tested in a lab are provided here](#).

In using this table, bear in mind that considerable variation exists between varieties, condition of growing and processing methods, etc. Data is presented for the edible portion of foods in their normal and natural state, unless otherwise designated. Where the research found a range of values due to variability in the samples, the range is provided. Where a single consistent value was determined, that value is provided.

If you would like to pH for other food categories, see these links:

- [pH of fresh fruits](#), acidic and low acid
- [pH of meats, fish, eggs, dairy](#)
- [pH of some processed foods](#)
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- This is a pH meter I have used for liquid food testing.

(note, **As an Amazon Associate I earn from qualifying purchases.**)

pH of Vegetables

For the common use of the general public, we are including tomatoes, pumpkins and some other produce that is technically a fruit, but is commonly thought of as a vegetable (and vice versa).

Acidic Vegetables (and tomatoes)

Note that tomatoes are considered to be a borderline low acid fruit and it is generally recommended that lemon juice, vinegar, lime juice or other acidifiers (in amounts [described in the recipes here](#)) are added to the tomatoes in the canning process.

Item	Approximate pH	Lower range	Upper range
Rhubarb	3.25	3.10	3.40
Tomatillo (resembling Cherry tomatoes)	3.83		
Tomatoes	4.60	4.30	4.90
Tomatoes, Vine ripened	4.54	4.42	4.65

Low Acid Vegetables

Item	Approximate pH	Lower range	Upper range
Aloe vera	6.10		
Artichokes	5.75	5.50	6.00
Asparagus	6.35	6.00	6.70
Asparagus Buds	6.70		
Asparagus Stalks	6.10		
Baby corn	5.20		
Bamboo Shoots	5.65	5.10	6.20
Beans (generic)	6.05	5.60	6.50
Beans, Black beans	5.90	5.78	6.02
Beans, Kidney	5.70	5.40	6.00
Beans, Lima	6.50		
Beans, Soy	6.30	6.00	6.60
Beans, String	5.60		
Beans, Wax	5.50	5.30	5.70
Beets	5.95	5.30	6.60
Beets, chopped	5.44	5.32	5.56
Brussels sprout	6.15	6.00	6.30
Cabbage	6.00	5.20	6.80
Cabbage, Green	6.13	5.50	6.75
Cabbage, Red	5.80	5.60	6.00
Cabbage, Savoy	6.30		
Cabbage, White	6.20		
Cactus	4.70		
Carrots	6.14	5.88	6.40
Carrots, chopped	5.43	5.30	5.56
Cauliflower	5.60		
Celery	5.85	5.70	6.00
Chicory	5.98	5.90	6.05
Chives	5.76	5.20	6.31
Corn, fresh	6.60	5.90	7.30
Cucumbers	5.45	5.12	5.78
Eggplant	6.00	5.50	6.50
Escarolle	5.85	5.70	6.00
Fennel (Anise)	5.68	5.48	5.88
Garlic	5.80		

Ginger root	5.75	5.60	5.90
Greens, Mixed, chopped	5.14	5.05	5.22
Horseradish, freshly ground	5.35		
Leeks	5.84	5.50	6.17
Lettuce	5.98	5.80	6.15
Lettuce, Boston	5.97	5.89	6.05
Lettuce, Iceberg	5.92	5.70	6.13
Lettuce, Romaine	5.92	5.78	6.06
Lotus Root	6.90		
Mushrooms	6.35	6.00	6.70
Onions, red	5.55	5.30	5.80
Onions, white	5.61	5.37	5.85
Onions, yellow	5.46	5.32	5.60
Oyster mushrooms	5.50	5.00	6.00
Parsley	5.85	5.70	6.00
Parsnip	5.50	5.30	5.70
Peas, Chick, Garbanzo	6.64	6.48	6.80
Peppers	5.05	4.65	5.45
Peppers, green	5.57	5.20	5.93
Pimiento	4.65	4.40	4.90
Potatoes	5.65	5.40	5.90
Potatoes (fresh tubers)	5.70		
Pumpkin (note that pumpkin may only be safely canned in a cubed form)	5.20	4.90	5.50
Radishes, red	5.95	5.85	6.05
Radishes, white	5.61	5.52	5.69
Rattan, Thailand	5.20		
Razor shell (sea asparagus)	6.00		
Red Ginseng	5.50		
Rice, Wild	6.25	6.00	6.50
Scallion	6.20		
Spinach	6.15	5.50	6.80
Spinach, chopped	5.45	5.38	5.52
Straw mushroom	4.90		
Sweet Potatoes	5.45	5.30	5.60
Tomatillo (resembling Cherry tomatoes)	3.83		
Truffle	5.90	5.30	6.50
Turnips	5.60	5.29	5.90
Water Chestnut	6.10	6.00	6.20
Watercress	6.03	5.88	6.18

Low Acid Fruits

Item	Approximate pH	Lower range	Upper range
Ackees	5.50		
Avocados	6.43	6.27	6.58
Banana, yellow	5.15	5.00	5.29
Bananas	4.85	4.50	5.20
Bananas, red	4.67	4.58	4.75
Cantaloupe	6.36	6.13	6.58
Figs, Calamyrna	5.52	5.05	5.98
Jackfruit	5.80	4.80	6.80
Jujube	5.20		
Loquat (May be acidified to pH 3.8)	5.10		
Lychee	4.86	4.70	5.01
Mangoes, ripe	5.90	5.80	6.00
Mangostine	4.75	4.50	5.00
Melon, Casaba	5.89	5.78	6.00
Melons, Honey dew	6.34	6.00	6.67
Melons, Persian	6.14	5.90	6.38
Olives, ripe	6.75	6.00	7.50
Papaya	5.60	5.20	6.00
Rambutan (Thailand)	4.90		
Watermelon	5.39	5.18	5.60

pH of Grains

Item	Approximate pH	Lower range	Upper range
Oats, rolled, cooked	5.95		
Oats, rolled, raw	5.95		
Rice, Brown	6.50	6.20	6.80
Rice, White	6.35	6.00	6.70

Nuts and nut products

Item	Approximate pH	Lower range	Upper range
Coconut milk	6.55	6.10	7.00
Coconut preserves	5.40	3.80	7.00
Coconut, fresh	6.65	5.50	7.80
Peanut Butter	6.28		
Walnuts, English	5.42		