Storing fruits and vegetables from the home garden

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https://learningstore.uwex.edu/

and

Iowa State University Extension Article

https://www.extension.iastate.edu/smallfarms/store-fresh-garden-produce-properly

Some fruits and vegetables are high ethylene producers, others produce very little ethylene and may be sensitive to it. Fruits and vegetables are classified as "climacteric" or "non-climacteric" depending on their response to ethylene. Climacteric species emit a greater amount of ethylene as they ripen, and after ripening peaks, the production of ethylene gas drops off significantly. Thus, climacteric fruits have a fast period of ripening during which they soften and develop flavor and aroma. Climacteric fruits will continuing to ripen after they are harvested, as you may have noted with green bananas and mature green tomatoes, pears, mangos, peaches, apples, and avocados. Non-climacteric plants, such as leafy and root vegetables, citrus, cherries, and berries, produce very little ethylene and do not continue to ripen after harvest; however, they will soften and rot as they age.

So what does this have to do with the bad apple affecting the whole bunch?

It has to do with the fact that high ethylene producers should not be stored with ethylene-sensitive crops. For example, if spinach, kale, or broccoli is stored in the same refrigerator bin as apples, those crops will turn yellow and limp in just a couple of days. You also don't store potatoes and onions together because the potatoes emit ethylene which will cause premature sprouting of the onions. Fruit that is damaged, such as bruised or punctured, will produce more ethylene, causing the others to ripen, soften and spoil faster; so always use the damaged fruit first and don't store them with unblemished product.

Storage Temperature

Temperature is another factor to consider when storing fresh fruits and vegetables. Cold-sensitive fruits and veggies lose flavor and moisture at low temperatures. Store them on the counter, not in the fridge. DON'T REFRIGERATE these ethylene producers: avocados, unripe bananas, nectarines, peaches, pears, plums, and tomatoes. Also, never refrigerate potatoes, onions, winter squash or garlic.

Table 1. Summary Table of Storing Vegetables Longer Term.

1	2	3	4
Cold and Moist 32-40 F Humidity 90-95%	Cool and Moderately Moist 40-50 F Humidity 80-90%	Cold and Dry Optimum 32-40 F Humidity 60-70%	Warm and Dry 50-60 F Humidity 50-70%
Asparagus Beets Brussels Sprouts Broccoli Cabbage Carrots Cauliflower Celery Horseradish Kale Kohlrabi Leeks Lettuce/Greens Parsnips Pea Radish Rhubarb Sweet Corn Turnips	Bean (snap) Cantaloupe Cucumber Eggplant Pepper Tomato (ripe) Watermelon	Bean (dry) Garlic Onions Pea (dry) Potatoes* Shallots	Tomatoes (green) Hot Peppers Pumpkins Sweet Potato Winter Squash
Usually stored between layers of moist sand, leaves, or sawdust in a box in basement or garage, or in a garbage can buried outdoors.	For cabbage and cauliflower, pull up roots and replant in sand outdoors, enclosed in wooden frame and cover with a heavy layer of straw or leaves.	A cold, dry room in basement is best for onions and garlic. Store in dark in slatted crates or mesh bags. **Potatoes stored very cold begin to taste sweet. Store closer to 40F.*	Store in a dry room on shelves. Do not allow to touch each other.

Adapted from Gross, K.C., C.Y. Wang, and M. Saltveit. 2014. The commercial storage of fruits, vegetables, and florist and nursery stock. USDA Agriculture Handbook #66.

Climacteric Fruits and Vegetables	**Non-climacteric Fruits and Vegetables**	**Ethylene Sensitive Crops (do not store with climacteric crops)**
Apple Apricot Avocado Banana Mango Cantaloupe Pear Peach Plum Potato Tomato	Berries Cherries Citrus Cucumber Eggplant Grapes Pineapple Strawberry Pepper Summer squash Watermelon	Asparagus Broccoli Brussels sprouts Carrots Cauliflower Cucumbers Eggplants Green beans Kale Lettuce and other greens Onions Parsley Peas Peppers Summer squash Sweet potatoes Watermelon