## To Blanch or Not to Blanch .......

## Don Mercer Associate Professor, Food Science Kemptville Campus University of Guelph

Preserving the quality of fruits and vegetables is a major concern for gardeners and food processors alike. Freezing is one of the easiest ways to do this. Unfortunately, many people neglect the key step of "blanching" in this preservation process, and their frozen foods may suffer because of it.

Not only is blanching a simple yet effective way to slow the degradation of frozen foods, but it should also be included as a pre-treatment step when using a home food dehydrator.

The blanching process involves immersing the fruits or vegetables in boiling water for a specified period of time. Following the short exposure to heat, the produce is plunged into ice-cold water to stop any further cooking which would soften the tissue.

Some of you may use blanching to make it easier to remove the skins or peels from such things as tomatoes or peaches; but this is not all that it accomplishes. When cauliflower is left at room temperature, it will eventually begin to darken to purple and then to black. This is due to a naturally-occurring enzyme, polyphenol oxidase, in the tissue of the cauliflower. Blanching sliced florets of the cauliflower raises their temperature to a level which is sufficient to deactivate the enzyme and halt its negative impact. In the case of peas and carrots, blanching helps set the colour and slow their softening while frozen.

Blanching is also like pasteurization for fruits and vegetables. In the pasteurization of milk, a relatively mild, short heat-treatment step destroys many of the microorganisms that could otherwise proliferate and cause potential health issues later. In fruit and vegetable blanching, exposure to boiling water destroys many of the microorganisms on their surfaces. Without this, serious problems could result when the food is thawed and prepared for consumption.

The actual blanching procedure is not terribly complicated. A large pot of water should be brought to a boil. Some sources recommend the addition of salt, but this is not required. Small amounts of fruits or vegetables which have been cut into appropriately sized pieces can then be introduced into the boiling water in a strainer. This will lower the water temperature somewhat. Once the water comes back to the boil, you can start timing the blanching. At the desired endpoint, the material can be removed using the strainer and immediately immersed in a sink full of ice-cold water. It will only take two or three minutes for the temperature to fall sufficiently. Then you can drain the cool produce and blot it with paper towels to remove the excess surface water. By spreading the blanched product on a cookie sheet and placing it in the freezer, you can freeze it fairly quickly. The frozen product can be put into plastic freezer bags from

which the air can be withdrawn before sealing. Don't forget to label each bag with the name of its contents and the date it was frozen.

If you simply put the produce into plastic bags and try to freeze them as a large mass, it will take much longer than if you were to spread it out on a cookie sheet for freezing. Remember, what you are trying to do is get the fruit or vegetables frozen as quickly as possible, and reduce the time available for the deterioration process to take place.

To find recommended blanching times for specific items, you can consult one of the many books available on preserving food at home, or check various on-line sources.

Having properly prepared your fruits and vegetables for freezing (or drying), you will be able to enjoy high quality foods from your own garden or local market in the months to come.



Without blanching, the fresh cauliflower on the left can darken and become unappealing