

COOPERATIVE EXTENSION SERVICE
MICHIGAN STATE UNIVERSITY

family Vegetable Garden series

EXTENSION BULLETIN E-824 (N)

Drying and Storing Vegetables

by margaret puolo and robert c. herner
DEPT. OF HORTICULTURE

GOOD FOOD AT A SAVINGS

DURING THE COLD, SNOWY DAYS OF WINTER YOUR FAMILY MAY LONG FOR A TASTE OF HOME-GROWN VEGETABLES. SATISFY THOSE LONGINGS BY DRYING OR STORING YOUR EXTRA GARDEN CROPS. DRYING ALLOWS YOU TO STORE A LOT IN A SMALL SPACE AND IN A LIGHT-WEIGHT FORM. STORING FRESH VEGETABLES, ACCORDING TO THEIR INDIVIDUAL REQUIREMENTS, MEANS YOU CAN EAT THEM LATER AS IF YOU HAD JUST PICKED THEM OUT OF THE GARDEN. PRESERVING FOOD BY DRYING AND STORING IS MUCH LESS EXPENSIVE THAN FREEZING AND CANNING.



CHOOSE ONLY YOUR BEST VEGETABLES

KEEP IN MIND THAT THE QUALITY OF YOUR PRODUCTS MAY BE MAINTAINED BUT IS RARELY IMPROVED BY DRYING AND STORING. THEREFORE, YOU MUST START WITH THE BEST. THE VEGETABLES YOU DRY OR STORE SHOULD BE :

- MATURE (NOT TOO RIPE, NOT TOO GREEN)
- FIRM (NOT MUSHY OR WILTED)
- FREE FROM BRUISES AND CRACKS
- FREE FROM INSECT AND DISEASE DAMAGE

HANDLE YOUR VEGETABLES CAREFULLY TO AVOID BRUISING THEM!

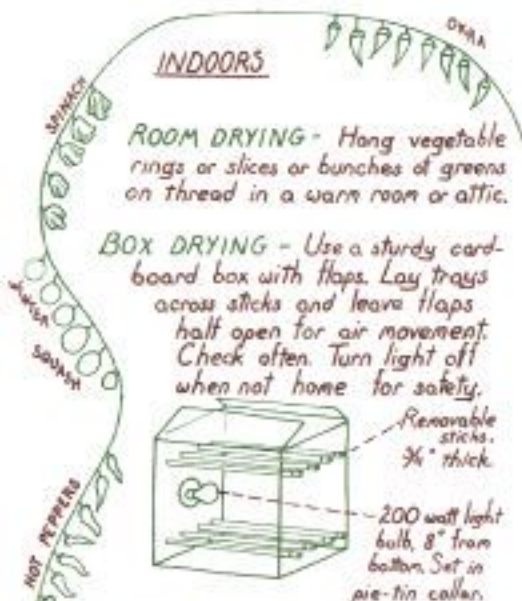


DRY IT ~ YOU'LL LIKE IT!

GENERAL PROCEDURES FOR DRYING INDOORS AND OUTDOORS

- * FOLLOW PREPARATION AND STEAM RECOMMENDATIONS IN CHART.
- * STEAM VEGETABLES IN A BOILER TO CONDITION THEM FOR EASIER AND MORE EVEN DRYING.
- * PLACE VEGETABLE PIECES LESS THAN 1/2" DEEP ON COOKIE SHEET OR TRAY.
- * IF DRYING OUTDOORS, TURN PIECES OVER ONCE IN THE MORNING AND ONCE IN THE AFTERNOON; INDOORS, TURN ABOUT EVERY HALF HOUR.
- * ALLOW A PIECE TO COOL BEFORE TESTING ITS DRYNESS (SEE CHART).
- * AFTER THE VEGETABLE PASSES ITS DRYNESS TEST, REMOVE IT FROM TRAYS. PILE PIECES LOOSELY ON A CLEAN SURFACE IN A DRY PLACE. PROTECT FROM DUST AND INSECTS. LET DRY 10-15 DAYS. STIR PIECES EVERY DAY.
- * AFTER DRYING IS FINISHED, THE FOOD MUST BE PASTEURIZED. SPREAD PIECES ON A COOKIE SHEET OR SHALLOW PAN IN THIN LAYERS. PLACE IN OVEN FOR 5 MINUTES AT 180°-200°F. THIS HELPS PREVENT SPOILAGE DURING STORAGE.
- * WHEN THOROUGHLY COOL, PLACE IN COVERED GLASS OR PLASTIC CONTAINERS OR PLASTIC BAGS.
- * TO USE THE FINISHED PRODUCT! BEFORE COOKING, SOAK ALL VEGETABLES, EXCEPT GREENS, IN ENOUGH WATER TO COVER THEM UNTIL NEARLY RESTORED TO ORIGINAL TEXTURE. ALWAYS SOAK THEM IN THE WATER THEY HAVE SOAKED IN. COVER GREENS WITH BOILING WATER AND SIMMER UNTIL TENDER.

VEGETABLE	PREDRYING TREATMENT	STEAM TIME IN MINUTES	TESTS FOR DRYNESS	STORES WELL FRESH
BEANS, SNAP	With larger varieties split pods lengthwise to dry faster. Keep whole for hanging.	15-20	Brittle	
BEEETS	Steam first with 1/2" tops. Trim. Peel. Slice 1/4" thick or shred coarsely. Steam.	25-35	Slices leathery Shreds brittle	X
CABBAGE	Remove outer leaves. Quarter. Cut out core. Shred coarsely. Steam.	8-10	Thin edges of shreds crumble	X
CARROTS	Steam. Trim. Peel. Cut into 1/8" rings or shred.	20-30	Slices leathery Shreds brittle	X
CUCUMBERS & SUMMER SQUASH	Wash. Cut into 1/8" thick slices. Steam squash only.	5	Brittle	
EGGPLANT	Peel. Slice 1/4" thick. Steam.	15-20	Leathery	
OKRA	Use young, tender pods. Dries best hung in dry room. No need to steam.	-	Brittle	
ONIONS	Peel. Slice 1/8" thick. Steam.	5	Brittle	X
PEPPERS, HOT	Use mature, dark red peppers. Thread through stems and hang. No need to steam.	-	Pods shrunken, dark, bend without snapping.	
PEPPERS, SWEET (GREEN OR BELL)	Split. Core, remove seeds. Cut into quarters. Steam.	10-12	Brittle	
SPINACH & OTHER GREENS	Use young, tender leaves. Cut out tough midribs. Steam.	4-6	Crumbles easily	
SQUASH, WINTER & PUMPKIN	Split. Peel. Remove seeds. Shred coarsely or cut into 1/4" slices. Steam.	6-10	Slices leathery Shreds brittle	X
TOMATOES	Cut into wedges. Steam.	2-5	Leathery	



YOU NEED:
WARM DAYS
LOW HUMIDITY
SUNSHINE



TAKE trays of food indoors every evening. BEGIN testing for dryness after second day. If you live near a busy street or high pollution area, it would be better to dry INDOORS

TO MAKE YOUR OWN TRAYS



MAKE A FRAME of thin wooden strips 1-2" wide. Trays made 3" shorter than a drying box can be used in the box as well as outdoors. Then either:

Tack a piece of bedsheet about 2" up the side of the frame to make a strong bottom or

loop jute or strong cord around short nails 1/2" apart and weave a bottom across the frame.



NEVER USE METAL - IT CORRODES TOO QUICKLY

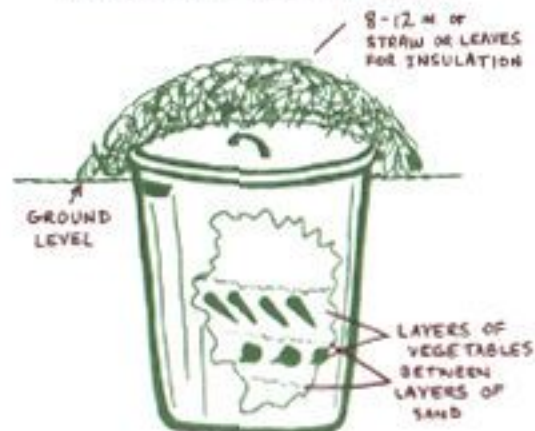
OVEN DRYING - Same idea as drying box. Use only bottom heating element if electric. Set for lowest temperature. Leave door open 6". Use cookie sheets for trays, with bottom sheet 8" from heat source.

STORING FRESH VEGETABLES

STORING VEGETABLES IS PERHAPS THE LEAST EXPENSIVE OF ALL METHODS OF FOOD PRESERVATION. TEMPERATURE AND HUMIDITY ARE THE MOST IMPORTANT FACTORS FOR GOOD STORAGE, AND VARY FOR EACH TYPE OF VEGETABLE. THE TABLE BELOW LISTS THE BEST CONDITIONS FOR STORING SPECIFIC CROPS.

COOL AND MOIST 32° TO 40° HUMIDITY 90-95%	COOL AND MODERATELY MOIST 32° TO 40° HUMIDITY 80-90%	DRY AND COOL OPTIMUM 32°F LOW HUMIDITY	DRY AND WARM 50° TO 58°F LOW HUMIDITY
CARROTS BEETS PARSNIPS TURNIPS	CABBAGE CAULIFLOWER POTATOES	ONIONS	PUMPKINS WINTER SQUASH GREEN TOMATOES
USUALLY STORED BETWEEN LAYERS OF MOIST SAND, LEAVES, OR LAMBST IN A BOX IN BASEMENT OR GARAGE OR IN A CAN IN BARREL BURIED OUTDOORS.	POTATOES MUST BE KEPT IN DARK, PUT IN SLATTED CRATES - NO SAND. FOR CABBAGE AND CAULIFLOWER, PULL UP ROOTS AND REPLANT IN SAND OUTDOORS. ENCLOSE IN WOODEN FRAME AND COVER WITH A HEAVY LAYER OF STRAW OR LEAVES.	AN ATTIC OR COOL DRY ROOM IN BASEMENT IS BEST. DO NOT PUT IN CLOSED CONTAINERS. USE SLATTED CRATES OR MESH BAGS.	STORE IN A DRY ROOM ON SHELVES. DO NOT ALLOW TO TOUCH EACH OTHER.

FOR COOL AND MOIST STORAGE



CLEAN GARBAGE CAN OR BARREL

Other bulletins in this series provide additional information on vegetable gardening.

GENERAL STORAGE HINTS

- VEGETABLES FOR STORAGE SHOULD BE PLANTED SO AS TO MATURE LATE IN THE SEASON.
- HARVEST VEGETABLES DURING COOLEST PART OF THE DAY (USUALLY EARLY MORNING) SO THEY CONTAIN LESS FIELD HEAT WHICH MUST BE REMOVED BEFORE STORAGE.
- NEVER STORE VEGETABLES WITH APPLES OR PEARS BECAUSE THEY GIVE OFF THE CHEMICAL ETHYLENE WHICH MAY REDUCE STORAGE LIFE AND QUALITY.
- CHECK PERIODICALLY FOR SPOILAGE.
- ONCE REMOVED FROM STORAGE THE VEGETABLES DO NOT KEEP LONG, SO USE PROMPTLY.

All Michigan 4-H - Youth, Natural Resources and Public Policy, Family Living Education, Agriculture and Marketing educational programs and materials are available to all individuals on a non-discriminatory basis without regard to race, color, creed, or national origin.

Issued in furtherance of cooperative extension work in agriculture and home economics, acts of May 8, and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Gordon E. Guyer, Director, Cooperative Extension Service, Michigan State University, East Lansing, Michigan 48824. Price 5 cents, Single Copy Free, TP-2-77-50M-LJP

Michigan State University Printing