Turkey is among the most versatile of meats. From roasted whole-body turkeys that are traditionally served during the holidays in North America, to ever-popular turkey cold cuts served in delicatessens the world over, to turkey menu items served in fine restaurants, mechanically separated turkey meat and boneless, skinless thigh meat that are processed into a veritable plethora of products, global consumption of turkey is on the rise.

Turkey is not only nutritious, but it’s versatile and provides great value in consumer, food service and commercial applications. Turkey has less fat and is lower in cholesterol than red meat, while is high in protein and other important nutrients.

This U.S. turkey buyers’ guide is designed to assist in the purchasing and distribution of turkey and turkey products. We have included photographs and descriptions of the most popular and commonly purchased products.

U.S. turkey companies that are members of the USA Poultry & Egg Export Council (USAPEEC) account for more than 95 percent of turkey production in the U.S. These companies market turkey and turkey products to more than 90 countries around the world.
Processed turkey is divided into two main classifications: young turkeys and mature turkeys.

[ Young Turkeys ]
Whole, ready-to-cook hens, weighing 8 to 16 pounds (3.7 to 7.3 kilograms), and young tom turkeys from 16 to 40 pounds (7.3 to 18.2 kg.).

[ Mature Turkeys ]
This classification is typically spent breeder hens that are mechanically deboned for use in products such as turkey bologna, frankfurters and a variety of other processed turkey meats.

THE SLAUGHTER PROCESS
USAPEEC member companies slaughter and process U.S. turkeys in establishments that are inspected by the U.S. Department of Agriculture’s Food Safety and Inspection Service. These highly qualified inspectors ensure that each turkey produced in these facilities meet stringent guidelines and requirements for food safety and wholesomeness.

Turkeys are bled, de-feathered, eviscerated and the head and feet are removed under careful observation by a USDA inspector. In addition, the turkeys can be slaughtered according to Halal or Kosher specifications. After slaughter, turkeys are ready for market as whole or for further processing.

Within eight hours of slaughter, the body temperature of each turkey carcass is reduced to 40°F (4°C.) or below. Temperature is carefully monitored and maintained throughout shipping, processing and handling.

THE WHOLE TURKEY
Turkeys classified as “whole” leave the processing plants in fresh or frozen form, and may be graded. Fresh turkeys may or may not be wrapped, while frozen turkeys are usually packaged. The neck and giblets are typically included with whole turkeys. Those packaged without the neck and giblets may be labeled WOGS (without giblets).

FURTHER PROCESSING
The “further processed” classification designates products other than whole fresh, whole fresh frozen, or ready-to-cook turkeys. Examples of further processing include breading, cooking, curing, cutting, packaging, sizing, smoking and many others.

Further processed products are always USDA-inspected and may be USDA-graded as well. Further processing may often require added labor, time, and materials and generally commands a higher per unit cost.
USDA-INSPECTED VS. USDA-GRADED

[What’s the difference?]

The USDA Mark of Inspection certifies that turkey and turkey products have been properly processed and are certified as wholesome for human consumption.

The USDA grade shield – usually Grade A – indicates quality. Grade A indicates that turkeys are meaty and plump, have smooth skin that is free of bruising, and are not missing flesh and have no broken bones.
PRODUCT DESCRIPTION
[ RAW TURKEY ]

[1] WHOLE TURKEY
Packaged young whole turkeys weighing from 8 to 40 pounds (3.6 to 18.1 kg.) are marketed as either fresh or frozen. Designation as hen or tom is optional, and when indicated in labeling refers to size rather than quality or tenderness. A giblet pack (gizzard, heart, liver and neck) is generally included with each whole turkey. To enhance moisture and tenderness, whole turkeys may be basted. Non-basted whole turkeys are often sold as “natural” turkeys.

[2] BONE-IN TURKEY BREAST WITH RIBS
The whole, bone-in breast is removed from the carcass at the junction of the vertebral ribs and the backbone, which contains the pectoralis major and pectoralis minor muscles, and is totally white meat. Breasts are marketed in fresh or frozen forms. Whole breasts may be sold in 4 to 8 pounds (1.8 to 3.6 kg.) retail and 8 to 20 pounds (3.6 to 9.1 kg.) institutional packages, in 2-pound increments.

[3] TURKEY TENDERLOIN
This boneless-skinless white meat is the pectoralis minor muscle that is cut from the inside of the breast adjacent to the keel bone. Turkey tenderloins are marketed as fresh or frozen and weigh between 6 to 16 ounces (170 to 454 grams).

[4] TURKEY DRUMSTICK (SKIN ON)
This cut is the portion between the knee joint and the hock, or the lower portion of the leg quarter, and is all dark meat. Bone-in drumsticks weigh from 1/2 to 2 pounds (0.2 to 0.9 kg.). Tendons are not removed.

[5] BONE-IN TURKEY THIGH (SKIN ON)
The thigh is separated from the drumstick by a cut at the knee and is all dark meat, separated at joint from the backbone. Bone-in thighs with the skin on will weigh from 1/2 to 2 1/2 pounds (0.2 to 1.13 kg.). Thighs are also marketed as boneless and skinless.

[5A] BONELESS TURKEY THIGH MEAT (NOT SHOWN)
More thigh meat is sold boneless than bone-in, usually in 40-pound (18 kg.) bulk packages. Thigh meat is typically used by meat processors as an ingredient in manufacturing further processed products.
[6] BONELESS TURKEY ROAST OR BONELESS WHOLE TURKEY (NOT SHOWN)

Usually marketed frozen, this product sometimes comes encased in skin and netting for ease in roasting. The roast is comprised of white and dark meat in natural proportions. For retail sale the roast generally weighs from 3 to 5 pounds (1.36 to 2.3 kg.). For institutional and food service sale, roasts weigh approximately 9 to 14 pounds (4.1 to 6.4 kg.). Boneless breasts are sometimes netted and also sold at retail.

[7] WHOLE TURKEY WING

Wings are all white meat composed of three sections cut from the carcass at the shoulder joint, and weighing between 1/2 and 2 pounds (0.23 and 0.9 kg.).

[8] TURKEY DRUMMETTE

This is the first section of wing, cut between the shoulder joint and the elbow, composed of all white meat and weighing about 1 pound (0.45 kg.)

[9] TURKEY WING PARTS

This two-joint section is generally the flat middle section and tip, but may also be the drummette and the middle section.

[10] TURKEY NECKS

Necks are marketed without skin, either (A) separately, or (B) with the gizzard, heart and liver as part of the giblet package.
PRODUCT DESCRIPTION [ RAW TURKEY ]

This product includes the complete thigh and drumstick with half the rear back portion attached, and the tail possibly attached. Hind quarters are all dark meat weighing from 2 to 5 pounds (0.9 to 2.3 kg.). Note: though once common, turkey hindquarters are rarely marketed by the U.S. industry anymore.

[12] TURKEY TAILS
Sold fresh or frozen, turkey tails are dark meat that has had the preen gland removed. They are normally packaged in bulk containers weighing 20 to 30 pounds (9.1 to 13.6 kg.).

[13] TURKEY GIZZARD, HEART, AND LIVER
These parts are generally merchandised in bulk containers weighing between 20 and 30 pounds (9.1 to 13.6 kg.).

[14] GROUND TURKEY
This product can be white or dark meat, or a mixture of white and dark. It is marketed in a variety of fresh and frozen forms. For the retail market, ground turkey is generally sold fresh in tray packs or frozen in 1-pound to 10-pound (0.45 to 4.5 kg.) tubes or chubs, and used like ground beef or pork. Ground turkey is also sold in bulk as an ingredient used to manufacture processed products such as sausages, patties, nuggets and deli loaves.

[15] MECHANICALLY SEPARATED TURKEY (MST)
Also called mechanically de-boned meat or mechanically de-boned turkey meat, MST is used as an ingredient in the manufacturing of a wide range of further processed products, such as turkey hams, frankfurters, and other deli meats. MST is widely used as a less-expensive alternative to pork. MST is generally bulk-packaged in 40-pound (18 kg.) round, poly-lined containers or in waxed and/or lined cardboard boxes.
PRODUCT DESCRIPTION

[RAW TURKEY]

[16] TURKEY SKIN
Turkey skin is derived from skin pieces removed from whole turkeys during further processing and is also known as grinding skins. It can also be harvested as a skin pattern for wrapping processed meats. Skins may be emulsified and blended in natural proportions with a variety of turkey meats to produce turkey cutlets, frankfurters, ground turkey, nuggets and patties. Grinding skins are generally packed in bulk quantities of 30 to 40 pounds (13.6 to 18 kg.).

[17] WHOLE COOKED TURKEY
Pictured here is a fully cooked roasted turkey, which is also available baked or smoked, and marketed in a plastic bag with labeling. Weights typically range from 6 to 16 pounds (2.7 to 7.3 kg.). Whole cooked turkeys are ready to heat and eat.

[18] CANNED TURKEY MEAT
This product is removed after cooking from carcass and packed tightly in cans. This skinless, boneless, defatted, canned meat is available as all white or all dark meat. This product is typically consumed in salads or sandwiches.

[19] TURKEY ROLL
Turkey rolls are made from all white meat, or a mixture of white and dark meat at a ratio of 60% white to 40% dark meat. This product may be sliced and diced for cold cuts and salads, or heated as an entrée.
**PRODUCT DESCRIPTION**

**[MORE PROCESSED TURKEY PRODUCTS]**

**[20] COOKED TURKEY BREAST**
This product is marketed both skin-on as well as skinless and available barbequed, oven-roasted, smoked and many other flavors. A fully cooked whole turkey breast weighs approximately 8 to 10 pounds (3.6 to 4.5 kg.). Half breasts at 4 to 5 pounds (1.8 to 2.2 kg.) are also available. This product offers a wide range of hot or cold uses including salads, sandwiches, or an array of entrees. Prices of these products will vary depending upon product content and application. **Three categories are:**

- Premium whole-muscle breasts for center-of-the-plate applications.
- Mid-range breasts from large breast chunks for general usage.
- Lower-end multi-piece breasts for shaving applications.

**[21] TURKEY FRANKFURTERS**
Also known as “franks” or “hot dogs,” this product is a blend of MST light and dark meat. Frankfurters are seasoned, cured, smoked and peeled, then packaged at 8 or 10 per pound, or in larger institutional packs.

**[22] BREADED TURKEY NUGGETS**
This breaded turkey item is an example of a product having more than 30% breading.

**[23] TURKEY SAUSAGE**
A blend of light and dark meat, raw or fully cooked, turkey sausage is made in several varieties: breakfast, Italian, Polish, smoked, or summer. It available in bulk tray packs, links, or tubes. Turkey sausage is often up to 50% lower in fat than sausages from other meats, and conforms to dietary standards of various religions that would not otherwise consume other sausage varieties.
PRODUCT DESCRIPTION

[ MORE PROCESSED TURKEY PRODUCTS ]

[24] DICED TURKEY
These cubes range in size from 1/4 to 1/2 inch (0.635 to 1.25 centimeter) and are cut from all white meat, all dark meat, or mixed white and dark meat turkey rolls. This product is generally packed in 5 to 10 pound (2.2 to 4.5 kg.) bags and may be used from the bag to salads, soups, or as a snack.

[25] JULIENNE TURKEY
These 1/2 inch to 1 1/2 inch (1.25 to 3.8 centimeter) lengths of thin strips of cooked turkey meat are available as all white, all dark, or mixed, frozen and typically packed in 5 or 10 pound (2.2 to 4.5 kg.) poly bags. The versatility of this product ranges from salad bars, chef’s salads, garnish, stir-fry and chipped turkey sandwiches.

[26] TURKEY BOLOGNA, HAM, PASTRAMI, & SALAMI
A Turkey bologna is cured, seasoned, and mechanically separated turkey meat.
B Turkey ham is cured, smoked, boneless thigh meat which varies in form or shape depending upon method of processing or preparation.
C Turkey pastrami is boneless, skinless, ground thigh or drumstick meat that has been cured with peppercorns and smoked.
D Turkey salami is cured dark meat that contains up to 50% less fat than other salami.
VACUUM PACK
Vacuum packing in the form of preservation is used for processed chilled, raw and cooked turkey products. The products are packaged in synthetic bags, all environmental air (oxygen) is removed and a vacuum is formed inside the bag after packaging. This removal of oxygen retards the growth of aerobic bacteria.

GAS FLUSH TECHNOLOGY OR MAP GAS-FLUSH PACKAGING
Carbon dioxide or nitrogen gas is sometimes introduced (without harmful effects) to assist in oxygen removal. The key to extended shelf-life of vacuum packed products is the maintenance of correct temperature and the “oxygen free” environment. Vacuum packed turkey products normally have a shelf-life of 16 days when maintained at 32°F (0°C) or 21 days when maintained at 28°F (-2.2°C).

BULK FROZEN
Bulk freezing is a process of freezing the product in the carton. The shipping container is kept at 0°F (-17.8°C) or colder. Products are frozen within 72 hours (also referred to as block frozen). Unless special individualized packaging has been used, all pieces are frozen together and removed only when the entire container is defrosted. For the best quality, lock frozen turkey products have a typical shelf-life of up to 12 months if properly packaged, shipped and stored at 0°F (-17.8°C) or below.

FROZEN
Most often used with whole turkeys, this is a method of freezing products individually, to approximately 0°F (-17.8° to -15°C), then shipping them in packaging containers which are placed in a freezer at 0°F (-17.8°C) or below for storage. Products are not frozen together and each can be removed while in a frozen state. For the best quality, individually frozen turkey products also have a typical shelf-life of up to 12 months if properly packaged, shipped and stored at 0°F (-17.8°C) or below.

INDIVIDUALLY QUICK FROZEN (IQF)
Individually quick frozen turkey parts and further processed products are rapidly frozen to approximately 0°F to 5°F (-17.8° to -15°C) within 60 minutes or less of the start of the freezing process. Pieces are frozen separately and each can be removed while in the frozen state.

The term “quick” frozen, as governed by the USDA, requires products to be placed in a freezer immediately after initial chilling. If not frozen immediately after chilling, the products may be held up to 48 hours at a temperature of 36°F (2.2°C) and then frozen to 0°F (-17.8°C) or lower within 72 hours of the start of the freezing process.

For the best quality, individually “quick” frozen turkey products have a shelf-life of up to 12 months or more if properly shipped and stored at 0°F (-17.8°C) or below.

LAYER PACK OR HONEYCOMB STYLE FROZEN
This is a technique of packing some turkey products in layers interleaved with polyethylene in such a manner that individual pieces can be removed without defrosting the entire case.

FROZEN STORAGE
The optimum shelf-life for plant frozen or commercially frozen turkey products packaged and stored under proper conditions is normally 12 months. However, testing has proven that poultry, especially raw poultry, can be stored for several years without significant loss of shelf-life or flavor.

Frozen turkey products, however, can experience various stages of damage such as freezer burn, dehydration, chemical and/or nutritional deterioration during shipping. Variables during shipping and storage that affect shelf-life include the deviation from the constant maintenance of 0°F (-17.8°C) or lower temperature, time, protection against air contamination, package rips and tears and freezer air velocity.

On-site preparation of food is a complex process whereby food is most exposed to possible pathogenic contamination. Therefore, the turkey and turkey product preparation process should always follow these guidelines:

A. Strict sanitary personal hygiene should be maintained by all food handlers.
B. Precautions should be taken for minimal handling of all products before, during and after preparation.
C. Procedures for continuous sanitary food handling should be established.
D. Strict adherence to proper handling, cooking and reheating procedures.
E. Cooked turkey or turkey products should never be stored near raw uncooked turkey.

THAWING
Frozen turkey and turkey products should be thawed using one of the following methods:

A. In the original packing, in a tray or pan, in a refrigerator with a temperature no higher than 40°F (4°C). Follow the formula of 24 hours thaw time for each 4.5 pounds (2.0 kg.) of turkey.
B. Under cold potable running water at a temperature no higher than 50°F (10°C). Allow 30 minutes per pound for thaw time. Water volume and velocity should be sufficient to agitate and float all loose particles into the overflow. Breaded products or pre-stuffed turkeys should not be thawed in water.
C. In a microwave oven as part of an uninterrupted cooking process. Turkey may be completely cooked in a microwave and transferred to a conventional oven as part of a continuous cooking process. The turkey should be turned several times during the thawing process and liquid removed from the dish so the turkey will not cook in its own juices. The microwave power level should be reduced to medium or low when thawing turkey.
D. In a conventional oven as part of an uninterrupted cooking process that starts with a frozen turkey or turkey products. The giblets require careful removal midway through the roasting process.

WHOLE TURKEY COOKING TIMES

<table>
<thead>
<tr>
<th>Weight (lbs.)</th>
<th>Unstuffed</th>
<th>Stuffed</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 - 12 lbs.</td>
<td>2 3/4 - 3 hrs.</td>
<td>3 - 3 1/2 hrs.</td>
</tr>
<tr>
<td>12 - 14 lbs.</td>
<td>3 - 3 1/2 hrs.</td>
<td>3 1/2 - 4 hrs.</td>
</tr>
<tr>
<td>14 - 18 lbs.</td>
<td>3 1/4 - 4 1/4 hrs.</td>
<td>4 - 4 1/4 hrs.</td>
</tr>
<tr>
<td>18 - 20 lbs.</td>
<td>4 1/2 - 4 1/2 hrs.</td>
<td>4 1/4 - 4 1/2 hrs.</td>
</tr>
<tr>
<td>20 - 24 lbs.</td>
<td>4 1/2 - 5 hrs.</td>
<td>4 3/4 - 5 1/4 hrs.</td>
</tr>
</tbody>
</table>

SERVINGS PER POUND (.45 KG.)

<table>
<thead>
<tr>
<th>Description</th>
<th>Servings Per Pound (.45 kg.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wing</td>
<td>1.5</td>
</tr>
<tr>
<td>Whole Turkey</td>
<td>2.0 (w/o giblets &amp; neck)</td>
</tr>
<tr>
<td>Drumstick</td>
<td>2.25</td>
</tr>
<tr>
<td>Breast</td>
<td>2.5</td>
</tr>
<tr>
<td>Thigh</td>
<td>2.5</td>
</tr>
<tr>
<td>Boneless/Skinless Cuts</td>
<td>4.0</td>
</tr>
</tbody>
</table>

REHEATING
Turkey that has been cooked and then refrigerated should be reheated rapidly to a minimum of 180°F (73.9°C) before serving, utilizing an oven or microwave, rather than steam tables or other slow-heating food-holding equipment.

HOLDING & SERVING
The following internal temperatures, for fully cooked turkey and turkey products should be maintained during serving:

| Cold Foods | 40°F (4°C) |
| Hot Foods  | 140°F (60°C) or higher |

COOKING
Depending on the portion, weight, thickness, and method of cooking, exact cooking times will vary greatly. Bone-in turkey and turkey products should be cooked to result in all of the meat reaching 170°F (76.7°C). Dark meat should be typically cooked at a slightly higher temperature of 180°F (82.2°C). A meat thermometer should always be used in cooking large cuts or whole turkeys. The thermometer should be inserted into thickest part of the thigh muscle for a whole turkey without touching the bone and the thickest part of the breast for a turkey breast. The inner thigh is the area which cooks most slowly.

Approximate cooking time, method of cooking and cooking temperatures for selected turkey parts are as follows:

- Turkey steaks, 1/2-inch to 1-inch thick, broiled, barbequed, or braised require 5 to 7 minutes per side at 325° to 350°F (162.8° to 176.7°C).
- Drumsticks, wings, and thighs, braised, barbequed, or baked require 1 to 1 1/2 hours 325° to 350°F (162.8° to 176.7°C).
- Ground turkey (3 1/2-ounce burger), pan fried, grilled or broiled require 3 to 6 minutes per side.
- Whole turkeys (fresh, thawed, or unstuffed) require that the oven be preheated to a minimum of 325°F (162.8°C).
USA Poultry & Egg Export Council

This manual is published as a representative guide to a wide variety of turkey commodity and further processed products produced in the U.S. It is not intended to be a complete catalog of all turkey products available, however, because of the large number of processors and the independent structure of the industry. Questions concerning specific turkey products or a supply source may be directed to any of the USA Poultry & Egg Export Council offices listed.

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