

United States Department of Agriculture

Marketing and Regulatory Programs **Cauliflower**

Agricultural Marketing Service

Shipping Point and Market Inspection Instructions

Specialty Crops Program

August 2017

Specialty Crops Inspection Division

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Comments may be submitted to:

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These instructions replace the Shipping point and Market Inspection Instructions for Cauliflower dated January 2000, and include, but not limited to, all previous correspondence, memos, inspection instructions, or procedures.

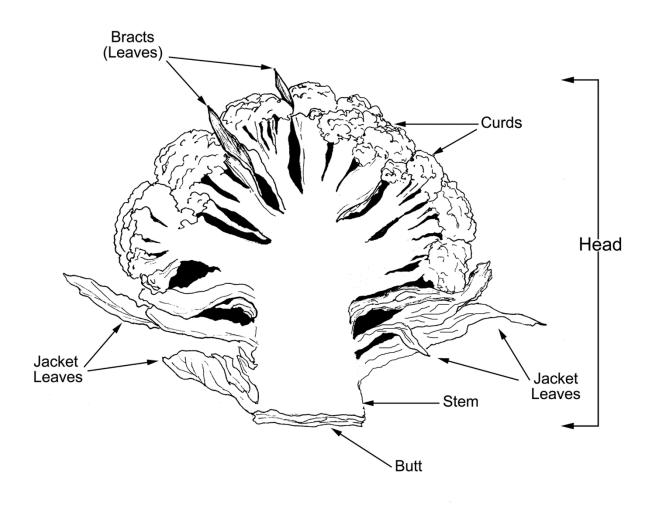
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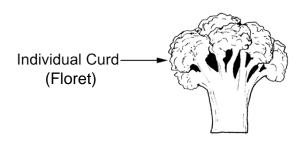
SHIPPING POINT AND MARKET INSPECTION INSTRUCTIONS FOR CAULIFLOWER

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CAULIFLOWER







GENERAL

The U.S. Standards for Grades of Cauliflower covers curds of all colors, such as white, cream, purple, green, or orange. Colors may also be comingled in the same pack when specified.

Product using the trade name "Broccoliflower" may or may not be covered by the U.S. standards. If the product looks like green cauliflower (resembling traditional cauliflower in all but color), apply the standards and report as "Green Cauliflower." Romanesco may also be seen under the name "Broccoliflower," sometimes called Romanesco Broccoli or Romanesco Cauliflower. Romanesco is considered a "no grade" (NOG); its head is composed of spiraled buds of descending size (a repeating pattern of pointed conical spheres, like a small pine tree).

Product using trade terms for size such as "Baby," "Petite," "Mini," etc., may be certified to a U.S. grade when curds are specified to have <u>maximum</u> diameters less than 4 inches.

Cauliflower florets (pieces of curds) are not covered by the U.S. standards and are considered as NOGs.

Any portion of these instructions beginning with §51 and followed with **bold** print is material copied directly from the <u>U.S. Standards for Grades of Cauliflower</u>.

REPRESENTATIVE SAMPLING

Obtaining representative samples is essential. Accurate certification is possible only if the samples examined are truly representative of the entire lot or accessible portion. Sample all portions of a lot or load even if it is difficult to reach all layers or parts. If you cannot access the entire lot for sampling, restrict the inspection and certificate to the accessible portion.

SIZE OF SAMPLE

The tolerances of the U.S. Standards for Grades of Cauliflower for quality and condition defects are determined on the basis of count. Examine the entire contents of the container, except when in bulk bins examine a minimum of 25 heads of cauliflower.

NUMBER OF SAMPLES

As a general rule, examine a minimum of 1% of the lot. For lots of fewer than 300 packages, examine a minimum of 3 samples. For lots over 2,000 packages, sample at the rate of two-thirds of 1%. To ensure an accurate description of the lot, examine additional representative samples when the quality, condition, or size within samples is decidedly different.

TOLERANCES AND APPLICATION OF TOLERANCES

§51.543 Tolerances.

In order to allow for variations incident to proper grading and handling in each of the foregoing grades, the following tolerances, by count, are provided as specified:

- (a) For defects.
 - (1) U.S. No. 1. 10 percent for heads of cauliflower in any lot which fail to meet the requirements of the grade, but not more than one-half of this tolerance, or 5 percent, shall be allowed for defects causing serious damage, including in this latter amount not more than 1 percent for soft or wet decay affecting the curd or butt. (See §51.544.)
 - (2) U.S. Commercial. 20 percent for heads of cauliflower in any lot which fail to meet the requirements of the grade, but not more than one-half of this tolerance, or 10 percent, shall be allowed for defects causing serious damage, including in this latter amount not more than 1 percent for soft or wet decay affecting the curd or butt. (See §51.544.)
- (b) For off-size. 5 percent for heads of cauliflower smaller than the specified minimum curd size and 5 percent for heads of cauliflower larger than any specified maximum curd size. (See §51.544.)

SUMMARY OF TOLERANCES

Defects	U.S. No. 1	U.S. Commercial
A. Total defects	10%	20%
B. Serious damage (included in A.)	5%	10%
C. Decay affecting curds or butts ¹ (included in A.)	1%	1%
Offsize	U.S. No. 1 and U	J.S. Commercial
D. Undersize	59	%
E. Oversize	59	%

¹ Decay affecting jacket leaves is scored against the serious damage tolerance, not the decay tolerance.

APPLICATION OF TOLERANCES

§51.544 Application of tolerances.

The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations:

(a) A package may contain not more than double any specified tolerance except that at least two defective and two off-size specimens may be permitted in any package: Provided, That not more than one specimen which is affected by soft or wet decay occurring on the curd or butt portion of the head may be permitted in any package: And provided further, That the averages for the lot are within the tolerances specified for the grade.

SUMMARY OF APPLICATION OF TOLERANCES

Defects ²	U.S. No. 1	U.S. Commercial
A. Total defects	2 x 10% = 20 %	2 x 20% = 40 %
B. Serious damage (included in A.)	2 x 5% = 10 %	2 x 10% = 20 %
C. Decay affecting curds or butts (included in A.)	2 x 1% = 2 %	2 x 1% = 2 %
Offsize ²	U.S. No. 1 and U	J.S. Commercial
D. Undersize	2 x 5%	= 10%
E. Oversize	2 x 5%	= 10%

²At least 2 defective and 2 offsize specimens may be permitted in any package, but not more than 1 specimen in any package may be affected by soft or wet decay occurring on the curd or butt, provided that the lot tolerances for the grade are not exceeded.

NOTESHEET AND CERTIFICATE

Entries on the notesheet and certificate must be legible and accurate. Support all information appearing on the certificate with information from the notesheet. All information and notations must be properly recorded so that anyone familiar with inspection procedures can understand them and write a certificate. Notesheets and certificates are prima facie evidence and must withstand legal scrutiny.

Detailed instructions about dates, inspection points, places of inspection, types of carriers, lading, and other items not covered by these instructions may be found in the <u>General Shipping Point Manual</u>, <u>General Market Manual</u>, Federal-State Inspection Certificate (FV-184) Handbook, or <u>Fresh Fruit and Vegetable Inspection Certificate (FV-300) Manual</u>. Contact your supervisor for anything not covered in these instructions.

PRODUCT

Use the common name "Cauliflower" to describe this commodity in the product heading. Color may be reported in conjunction with "Cauliflower" or may be reported in the "Description of Products" section on the shipping point inspection certificates or in the "Lot ID" section on market notesheets and certificates.

NUMBER/TYPE OF CONTAINERS

Always report the number of containers. In the market and at shipping point locations for stationary lot certification, always verify the container count provided by the applicant for each lot and report it as the "inspector's count." When the number of containers available for inspection does not match the application, confirm that the amount presented for inspection constitutes the lot. If an accurate count cannot be determined, report the count at someone else's authority, but also report the reason for doing so on the notesheet (e.g., numerous pallets with mixed product).

At shipping point locations for "days-run" certification, the manifest for count typically provided by the applicant is acceptable to use for reporting the number of containers.

Cauliflower is generally film wrapped when packed in open top cartons (flats) or trays. "Eastern" cauliflower may be packed in wirebound crates or cartons.

BRANDS/MARKINGS

Shipping Point

Report the brand, variety, size, color, Positive Lot Identification (PLI), and other important information appearing on the container on the notesheet and certificate in the appropriate sections.

Market

Report the brand, variety, size, color, count, grade, weight, point of origin, and other important information appearing on the container on the notesheet in the "Brands/Marks" section. On the certificate, report only the brand name and other pertinent information in the "Brand/Markings" section.

ORIGIN

Do not make a positive statement about origin on your own authority; rather, quote the container markings that list the state or country of origin in the appropriate space on the notesheet and the certificate. If origin is not marked, try to obtain this information from

the applicant. This policy is necessary because some firms may use one mark on the same product packed in several states.

CONDITION OF PACK

Use the following terms to describe pack:

Very tight: The head is packed so tightly that it usually results in bruising.

Tight: This is the best pack and means that the container is sufficiently filled and that the heads are placed tight enough so that there is no movement within the container.

Fairly tight: This pack allows for slight movement within the container, but not enough to cause bruising under normal handling conditions.

Slack: The container is not sufficiently full and free movement of the heads occurs. Report the amount of slackness in inches or fractions of an inch.

TEMPERATURE OF PRODUCT

Temperatures are not normally determined or reported at shipping point. However, due to the importance of the pulp temperature of fresh fruits and vegetables when in transit or at destination, it is essential that you accurately determine and report the temperature or range in temperatures on each lot. Report pulp temperature regardless of the location of the product, e.g., in the carrier, in a warehouse, or stacked on a platform.

Precool the thermometer to obtain true readings and report all temperatures to the nearest whole degree. Take a minimum of three temperatures for each lot; record the results on the notesheet. Take additional temperatures if the lot is abnormally cold or hot, or if there is a specific request for temperature. Specify the location where you took the temperature in the lot and/or load in greater detail when additional temperatures are taken.

SIZE

The U.S. No. 1 and U.S. Commercial grades require the diameter of the head to be not less than 4 inches unless the <u>maximum</u> diameter is specified to be less than 4 inches. Minimum diameters 4 inches and larger may also be specified. There is a 5% tolerance for undersize and separate 5% tolerance for oversize.

NOTE: The standards do not permit a minimum diameter smaller than 4 inches and a maximum diameter larger than 4 inches in the same container. All of the contents must either be 4 inches or larger in diameter or be specified to have maximum diameters less than 4 inches in diameter.

REPORTING SIZE

§51.548 Diameter...the greatest dimension measured in a straight line which would pass through the center of the curd.

Report size in inches and fractions of inches. If there is a wide range in size, provide a mostly statement to give a better picture of the lot. For example, "Heads range 4 to 10, mostly 6 to 8, inches in diameter."

Report any specified size in connection with the grade. For example, "U.S. No. 1, 3-3/4 inch maximum diameter" or "U.S. No. 1, 8 inch minimum diameter."

MARKING REQUIREMENTS FOR MAXIMUM DIAMETERS LESS THAN 4 INCHES

Marking requirements are not a requirement of the U.S. grade(s) for cauliflower. Therefore, a lot can fail marking requirements and meet the requirements of the grade.

§51.556 Marking Requirements.

When the product is packed to be less than 4 inches in maximum diameter, 90 percent or more of the master containers shall be plainly stamped, labeled, printed, or otherwise marked with the maximum diameter. The term "maximum," or its recognized abbreviation, when following a diameter size marking, means that the heads are of the size marked or smaller.

When heads are specified with a maximum diameter less than 4 inches, 90% or more of the master containers in the lot must be marked with the maximum diameter. The word "maximum" or its recognized (widely accepted) abbreviation, when following a diameter size, may be used (e.g., 3-1/2 inch max. dia.).

The application of tolerances does not apply. If less than 90% of the master containers are not marked, the lot fails to meet the marking requirements. However, a lot can fail marking requirements and still meet grade. For example, "U.S. No. 1, 3 inch maximum diameter. Fails to meet marking requirements."

UNIFORMITY

There is no requirement for uniformity of curd size; however, report the degree of uniformity at applicant's request.

Use the following terms to describe uniformity:

Fairly uniform: The size of the curd in the individual containers does not vary more than 2 inches in diameter.

Irregular: The size of curds in the individual containers varies <u>more</u> than 2 inches in diameter.

STANDARD SIZING

Standard sizing is not a requirement of the grade(s). Only determine when specifically requested by the applicant.

§51.545 Standard sizing.

- (a) Any lot of cauliflower may be designated as meeting the requirements for standard sizing provided the variation in diameter of the curd in any individual package is not more than 1-1/2 inches.
- (b) In order to allow for variations incident to proper packing not more than 10 percent of the containers in any lot may fail to meet the requirements for standard sizing.

The following points apply to standard sizing:

- The application of tolerances does not apply to standard sizing.
- Not more than 10% of the containers in a lot may fail to meet the requirements of standard sizing.
- A lot of cauliflower can fail the requirements of standard sizing and still meet grade. For example, "U.S. No. 1. Fails to meet requirements of standard sizing."
- In the "Remarks" section of the certificate and notesheet state: "Standard sizing reported at applicant's request."

MARKING AS TO COUNT

Cauliflower cartons are generally marked as to the count of heads. When containers are marked to count and do not conform to count, report in the "Other" section on market certificates and in the "Description of Products" section on shipping point certificates. Report the range and the average of heads per container as well as percentage of containers not conforming to count. For example, "Counts range from 10 to 12, average 11 heads per carton; 50% of cartons fail to meet count as marked." This may be a misbranding violation. For further instructions see "Misbranding Under PACA" in the General Market Manual.

DEFECTS (QUALITY AND CONDITION)

Statements pertaining to freshness, maturity, shape, color, the amount and type of defects, and the amount of decay are shown under the appropriate headings.

Factors noted with **(Q)** are considered as **QUALITY** only. Quality or "permanent" defects are those that do not change during storage or shipment (e.g., shape and scars).

Report factors noted with **(C)** as **CONDITION** on market certificates. Condition defects are factors subject to change during shipment or storage (e.g., bruising, discoloration, shriveling, and decay).

Factors noted with (Q or C) may be considered as QUALITY or CONDITION, depending on the circumstances.

Unless otherwise specified, scoring guides are based on a cauliflower head 6 inches in diameter. Allow corresponding larger or smaller areas on larger or smaller heads.

NOTE: Remove all film wrapping when examining for defects.

BRACTS (Q)

ENLARGED BRACTS

§51.554 Damage...(d) Enlarged bracts when leaves growing up through and extending above the curd materially detract from the appearance of the head;

Enlarged bracts refer to the light green leaves that originate from the base of the main stem and grow up through the curd. In some cases, these enlarged bracts separate sections from the main part of the head. At other times these bracts can cover the curd.

Scoring Guide

Damage: When exceeding 5 in number.

Serious damage: When exceeding 10 in number.

Visual Aids: Refer to Photos No. 3, 4, and 5.

SMALL BRACTS

In some lots of cauliflower, heads may be found which show numerous small white bracts, mostly from 1/8 inch to 1/2 inch in length, extending up through the curd.

Scoring Guide

Damage: When so numerous that the appearance of the head is materially affected.

Serious damage: When the bracts seriously detract from the appearance.

Bruising (Q or C)

§51.554 Damage...(a) Bruising when the size or color of the affected area materially detracts from the appearance or marketing quality, or when more than a small portion of the curd has broken off;

When packing cauliflower, heads may be bruised or broken by rough handling if reasonable care not used. The curd is usually very tender and if pressure is applied, discolored, bruised spots will show on the curd. Bruising which occurs after packing, such as crushing of the flowers, indented or discolored spots, is a condition factor.

Scoring Guide

Damage: When materially detracting from the appearance of the head. Allow larger areas for lighter bruises. As a guide, score as damage, bruises which are dark brown or darker when the affected area exceeds 5/8 inch in diameter or when portions of the curd are broken, indented or crushed to the extent as to materially detract from the appearance.

Serious damage: When seriously detracting from the appearance of the head. Allow larger areas for lighter bruises. As a guide, score as damage, bruises which are dark brown or darker when the area affected exceeds 1-1/4 inches in diameter or when portions of the curd are broken, indented, or crushed to the extent as to seriously detract from the appearance.

CLEANNESS (Q)

The U.S. grades for cauliflower require curds to be "clean" and jacket leaves to be "fairly clean."

§51.546 Clean...the curd is practically free from dirt or other foreign matter.

§51.551 Fairly clean...the jacket leaves are not caked or badly smeared with dirt or other foreign matter.

Scoring Guide

Damage: When the appearance of the curd is materially affected by dirt or other foreign material or when the jacket leaves are caked or badly smeared with dirt or other foreign material. Report curd as "Not clean" and jacket leaves as "Not fairly clean."

Serious damage: When dirt or other foreign material seriously detracts from the appearance of the curd.

NOTE: Never score unclean jacket leaves as serious damage.

Color (C)

CURD

All colors of cauliflower may be certified to a U.S. grade.

§51.540 U.S. No. 1...(a)(3) Color -- white, creamy white, or cream, unless otherwise specified;

If not otherwise specified, cauliflower must be white, creamy white, or cream color. Use the following terms to report color:

White: The curds show practically no cream color.

Creamy white: The general appearance of the curds are white, with a creamy cast.

Cream: The curds are a light to rich cream color (white with a tinge of yellow), but the cream color does not detract from the fresh appearance of the curd.

Any color such as orange, purple, or green, or comingling of colors in the same pack, may be specified. Color may be reported in general terms.

NOTE: See <u>Curd Discoloration</u> section for white/cream colored curds showing a noticeable yellow color.

JACKET LEAF

All grades of cauliflower require jacket leaves to be "fresh."

Fresh: The jacket leaves are of normal color and are not wilted. Normal color means they are green color.

NOTE: See <u>Wilted/Freshness</u> section for wilted leaves and <u>Jacket Leaf Discoloration</u> section for yellow or other types of discolored leaves.

COMPACTNESS (C)

Each grade requires cauliflower curds to be compact. Use the following terms when describing compactness:

Compact: Flower clusters are closely united and the curd is solid.

Spread: Growth of the stem has caused more than slight separation of the clusters.

Badly spread: Clusters are widely separated and the head has a loose, open texture.

Scoring Guide

Damage: When curds are spread score against the total tolerance for both grades. Report as "Spreading."

Serious damage: When curds are badly spread.

Cuts (Q)

§51.554 Damage...(b) Cuts when materially detracting from the appearance or marketing quality, or when any cut exposes the flower stem.

At times, a cut or slice may be made in the curd during harvesting or when jacket leaves are being trimmed.

NOTE: Portions of the curd that are indented or broken due to rough handling would be considered bruising (see <u>Bruising</u> section).

Scoring Guide

Damage: When cuts exceed 5/8 inch in diameter on a cauliflower 6 inches in diameter (correspondingly lesser or greater areas on smaller or larger heads), or when cuts expose the flower stem.

Serious damage: When cuts exceed 1 inch in diameter on a cauliflower 6 inches in diameter (correspondingly lesser or greater areas on smaller or larger heads), or when the exposed area exceeds 5/8 inch in diameter.

DISCOLORATION (C)

CURD DISCOLORATION

§51.554 Damage...(c) Discoloration when yellow or other abnormal color materially detracts from the appearance of the curd...

On some varieties of white/cream colored cauliflower, a purple tint is characteristic. It is not scorable, but may be described using general terms in the "Remarks" or "Other" section, as not affecting grade, reported at applicant's request.

Also, cream colored curds may show a tinge of yellow blended or mixed with whiter areas. These are not scorable unless the yellow color is noticeable (materially detracting).

Scoring Guide

Damage:

- When yellow or other color not characteristic of the variety, such as purple or pink blotches on white/cream colored curds, is noticeable (materially detracts from the appearance), or
- When a single dark brown or black spot exceeds 5/8 inch in diameter on a cauliflower 6 inches in diameter (correspondingly lesser or greater areas on smaller or larger head), or
- When numerous small (5/8 inch or less in diameter) dark brown or black spots detract from the appearance to a greater extent than that allowed for a single spot, or
- When discoloration lighter than dark brown or black affect the appearance to a greater extent than that permitted for dark brown or black discoloration.

Serious damage:

- When a single dark brown or black spot exceeds 1-1/4 inch in diameter on a cauliflower 6 inches in diameter (correspondingly lesser or greater areas on smaller or larger head), or
- When numerous small (5/8 inch or less in diameter) dark brown or black spots detract from the appearance to a greater extent than that allowed for a single spot, or

• When discoloration lighter than dark brown or black affect the appearance to a greater extent than that permitted for dark brown or black discoloration.

JACKET LEAF DISCOLORATION

§51.554 Damage...(c) Discoloration when yellow or other abnormal color materially detracts from the appearance...of the jacket leaves of closely trimmed cauliflower, or seriously detracts from the appearance of the jacket leaves of cauliflower not closely trimmed.

The yellowing of jacket leaves may be slight or full yellow color and affect only a few outer leaves to all leaves surrounding the curd. In most cases, yellowing is due to aging or deterioration of the plant, although in some cases it is due to poor growing conditions, freezing injury, or disease.

There are various diseases affecting cauliflower leaves that cause discoloration. The following diseases are described for informational purposes; do not name the disease, but instead describe all discoloration on notesheets and certificates.

Alternaria Leaf Spot

Alternaria Leaf Spot is also known as Black Leaf Spot. It has been reported as causing Black Mold Rot under favorable conditions. The first symptoms appear as small, grayish brown to black specks, which soon enlarge and become sunken and black. Spots vary in size from 1/20 of an inch to 1 inch or more in diameter. They may remain single but frequently coalesce, especially in storage or transit. The spots may be marked by concentric brown zones or may be covered by moldy growth until the leaves turn yellow or shed.

Bacterial Leaf Spot

This is a minor disease of cauliflower characterized by abundant speckling, spotting and blotching of the leaves. The spots first appear water-soaked and then brownish to purplish gray. The lesions are usually very small and are circular when in early stages, but soon take on an angular appearance and often coalesce.

Ring Spot

Ring Spot first appears as small circular spots having a dark center surrounded by a greenish-yellow watersoaked border. The spots are visible on both sides of the leaves. As the spots enlarge, they usually maintain the circular outline and have light brown to grayish-brown centers surrounded by a narrow olive-green or olive-gray border. The leaves eventually turn yellow and the spots retain their greenish border and become very conspicuous against the yellow background. The black pycnidia (pimples) may

appear in concentric rings towards the center part or the central region or be scattered over it. The pycnidia are sometimes so abundant that the whole spots appear black.

Virus Mottling

Virus mottling greatly reduces the yield and apparently is responsible for some of the excessive yellowing of the jacket leaves during transit and marketing.

Use the following scoring guide for discoloration affecting jacket leaves:

Scoring Guide

Damage only:

- When yellow, brown, black, or other abnormal color materially detracts from the appearance of the jacket leaves of closely trimmed cauliflower, or
- When yellow, brown, black, or other abnormal color seriously detracts from the appearance of the jacket leaves of cauliflower <u>not closely trimmed</u>.

INNER LEAF DISCOLORATION

At times small tender leaves nearest the curd will show marginal discoloration. The exact cause of this discoloration is unknown, although a late heavy application of fertilizer may be a factor.

NOTE: Disregard any small inner leaves which are pale color or blanched.

Scoring Guide

Damage only: When inner leaves show a distinct brown to black marginal discoloration that materially detracts from the appearance, report as "Inner leaf discoloration."

MIDRIB DISCOLORATION

Occasionally jacket leaves will have discoloration affecting the midribs only. This may be caused by field freezing. However, since this cannot be verified, describe the defect rather than identifying it as field freezing.

Scoring Guide

Damage only: When the midribs of more than two jacket leaves are <u>light brown or darker in color for their entire length</u>. If only portions of the midribs are affected, score when the equivalent of more than two entire midribs are affected by discoloration.

FREEZING AND FREEZING INJURY (C)

Use the term "frozen" only when ice crystals are present. Frozen portions of cauliflower will be darker and glassy in comparison to the rest of the head, with a distinct line of demarcation between the affected and the unaffected portion.

Use the term "freezing injury" when it is evident the cauliflower has been frozen, but is not in a frozen condition at the time of inspection. The cauliflower may be discolored, watersoaked, and dull in appearance.

Scoring Guide

When an obvious pattern of freezing or freezing injury is present: Provide the following information in a freezing narrative statement on the certificate:

- Record pulp temperatures taken at various locations.
- Determine and record extent of the injury in the load.
- Determine and record extent of the injury in the containers.
- Determine and record degree to which individual specimens are affected.
- Describe the pattern of freezing or freezing injury in clear, concise terms.

State where or when the freezing occurred if indicated by the location of injury. For example: "Location of freezing injury indicates it occurred after packing but not in present location," or "Location of freezing injury indicates it occurred in the trailer."

When no pattern of freezing or freezing injury is present: Score heads as serious damage and report as "Frozen (or "Freezing injury"), scattered throughout pack and lot."

Fuzziness (C)

§51.554 Damage...(e) Fuzziness when more than 1/3 of the curd surface has a distinct fuzzy appearance.

Fuzziness is caused by the lengthening of the leafy floral bracts of the bud or flower giving the surface of the curd a velvety or hairy appearance. It frequently develops around the edges of the curd before appearing on other portions.

Scoring Guide

Damage: When more than 1/3 of the head has a distinctly fuzzy appearance.

Serious damage: When 2/3 of the head has a distinctly fuzzy appearance.

Visual Aid: Refer to <u>CAU-IDENT-6</u>.

HOLLOW STEM (Q)

§51.554 Damage...(f) Hollow stem when the opening extends into the curd, or when the opening is more than slightly discolored or watersoaked.

Under certain growing conditions, hollow spaces may appear in the butt of the head and extend up or through the length of the main central stem.

Scoring Guide

Damage only: When the opening extends into the curd, or when the opening is more than slightly discolored or watersoaked.

INSECT INJURY (Q OR C)

§51.554 Damage...(g) Insects when any feeding on the curd is evident, or when the curd is more than slightly infested or the jacket leaves are more than moderately infested with aphids or other insects.

Several types of insects, one of the most common being the Aphid, may cause insect injury. The damage may be found on the curd and/or the jacket leaves.

In transit or at destination, if damage is fresh, or if live insect(s) are present, or a combination of live and dead, report as a condition factor. Report as a quality factor when the damage is old or if the insect(s) are dead.

Scoring Guide

Damage:

- When any feeding injury on the curd is evident, or
- When more than 5 insects are on the jacket leaves, or
- When jacket leaves ragged from insect injury materially detract from appearance of the head.

Serious damage:

When feeding injury seriously detracts from the appearance of the head, or

- When more than 5 insects are on the curd, or
- When more than 15 insects are on the jacket leaves, or
- When jacket leaves ragged from insect injury seriously detract from appearance of the head.

Mold (C)

§51.554 Damage...(h) Mold when the aggregate area of all spots exceeds that of a circle three-eighths inch in diameter, or when the area of any individual spot exceeds that of a circle one-eighth inch in diameter. Mold which causes disintegration of the curd shall be considered soft decay...

One of the more common defects to affect cauliflower is surface mold. When mold is found on the curd it appears as small, grayish to black spots.

Scoring Guide

Damage: When any single spot exceeds 1/8 inch in diameter or if any spots aggregate more than 3/8 inch in diameter.

Serious damage: When any single spot exceeds 3/8 inch in diameter or if any spots aggregate more than 5/8 inch in diameter.

NOTE: If any spot of mold shows wet or soft breakdown, score as decay.

RICEY (C)

§51.554 Damage...(i) Riciness when causing the surface of the curd to be abnormally rough or granular.

Riciness is caused by the elongation of the branches of the curd, which gives it a granular appearance. The curds also tend to lose their compactness. Riciness is an indication of over-maturity and will be scored when causing the surface of the curd to be abnormally rough and granular.

Scoring Guide

Damage: When the curd has an abnormally rough and granular appearance <u>and</u> more than 25% of the surface is affected.

Serious damage: When the curd has an abnormally rough and granular appearance and more than 50% of the surface is affected.

TRIMMING (Q)

The U.S. grades for cauliflower require heads to be "closely trimmed" unless otherwise specified.

§51.550 Closely trimmed...the butts are smoothly trimmed and jacket leaves do not exceed the number and length necessary for protection against bruising, and do not extend above the crown of the curd. No jacket leaves are required on heads which are individually wrapped, or packed with cushions, partitions or other protective means.

Cauliflower is generally shipped individually film wrapped in open faced single layer cartons. No jacket leaves are required in these types of pack or when they are packed with cushions or other protective means. However, when jacket leaves are present, report number of jacket leaves in general terms in the "Other" section on market certificates and in the "Description of Products" section on shipping point certificates. For example, "Generally no jacket leaves, few heads show 3 to 5 jacket leaves extending 2 to 4 inches above curd."

It is not possible to establish a definite length or number of jacket leaves necessary to protect the curd against bruising. Take into consideration the size and coarseness of leaves. When the midribs are small, a greater number of leaves would be required for proper protection of the curd. The jacket leaf midribs should form a complete or continuous ring around the curd since it is the midribs which provide protection from bruising. In general, two thickness of coarse and large leaves are necessary to protect the curd.

The applicant may specify other degrees of trimming, such as "tops clipped" to a specified length and/or the number of jacket leaves. When reporting degrees of trimming other than closely trimmed, report the length of jacket leaves in inches in connection with the grade. For example, "U.S. No. 1, jacket leaves range from 10 to 16 per head and extending 4 to 8 inches above the curd."

Scoring Guide

Damage only: When not meeting the requirements of the grade, report as "Not closely trimmed" and score against the total tolerance for the grade.

WILTING/FRESHNESS (C)

JACKET LEAVES

All grades of cauliflower require jacket leaves be "fresh."

Fresh: The jacket leaves are of normal color and are not wilted.

Scoring Guide

Damage only: When jacket leaves are wilted (loss of turgidity and succulence).

CURDS

Heads that are more than slightly wilted will be spongy and rubbery. Wilted heads are undesirable and usually do not ship well.

Scoring Guide

Damage: When materially detracting from the appearance or edible quality.

Serious damage: When seriously detracting from the appearance or edible quality.

DECAY (C)

All grades require that cauliflower be free from decay. There are various types of decay that affect cauliflower, such as Bacterial Soft Rot, Gray Mold Rot and Watery Soft Rot.

Do not report the type of decay on the certificate. However, when the decay is in excess of the tolerance, report the degree of advancement as early, moderate, or advanced.

CURDS OR BUTTS

Scoring Guide

Always Serious damage: Score decay affecting <u>curds or butts</u> against the 1% tolerance for soft or wet decay. Report separately from decay affecting jacket leaves.

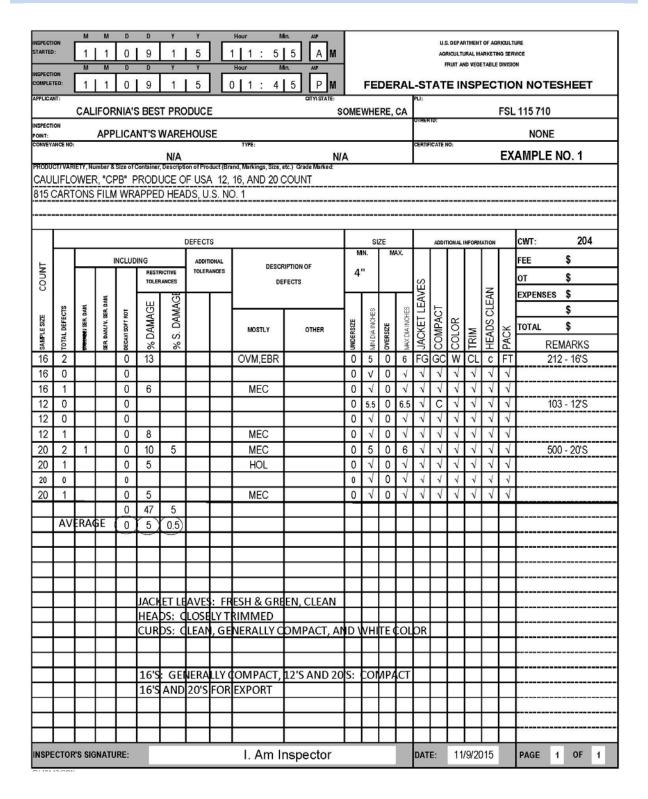
JACKET LEAVES

Scoring Guide

Always serious damage: Score decay affecting only the <u>jacket leaves</u> against the 5% tolerance for serious damage. Reported separately from decay affecting curds or butts.

APPENDIX I – CERTIFICATE EXAMPLES

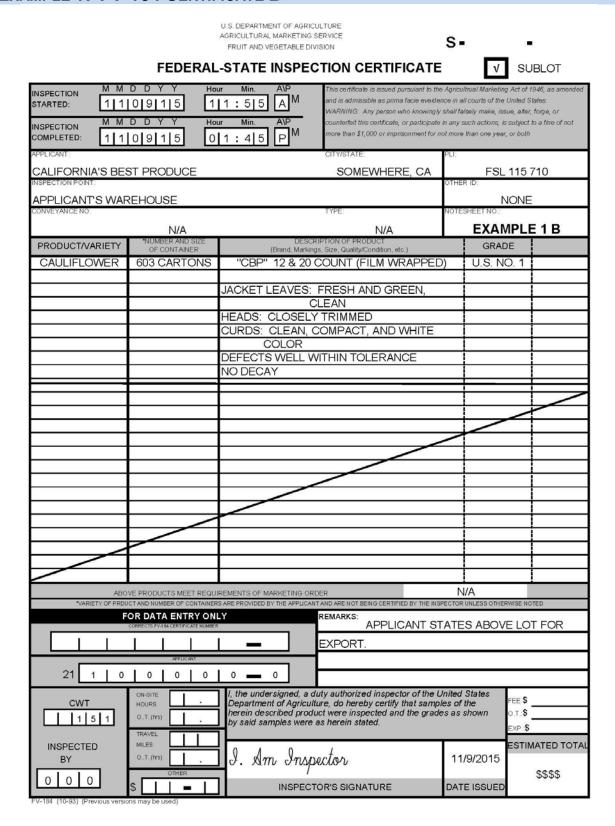
EXAMPLE 1: FV-184 NOTESHEET



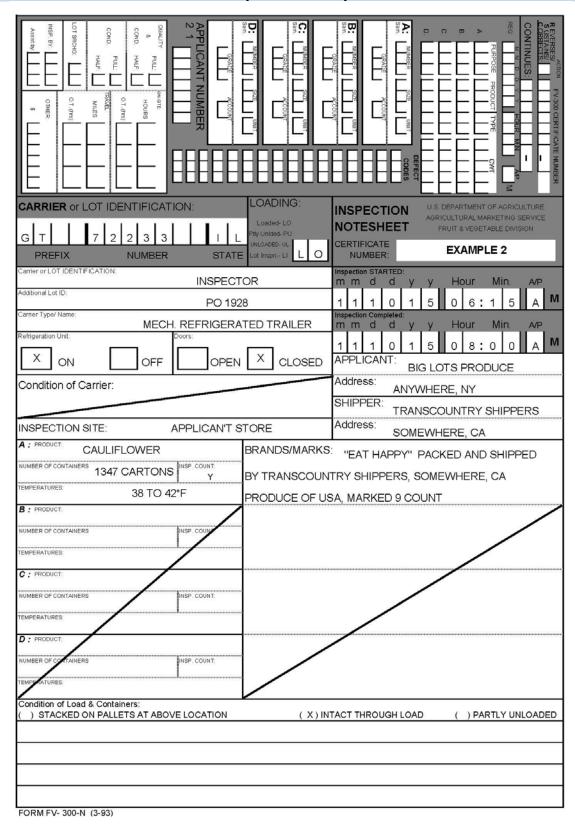
EXAMPLE 1: FV-184 CERTIFICATE A

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE S-FRUIT AND VEGETABLE DIVISION FEDERAL-STATE INSPECTION CERTIFICATE SUBLOT INSPECTION A^{M} 1 1 0 9 1 5 1 1 1 : 5 | 5 nd is admissible as prima facie eveidence in all courts of the United States STARTED: WARNING: Any person who knowingly shall falsely make, issue, after, forge, or MMDDYY Min. Α\P Hour ounterfeit this certificate, or participate in any such actions, is subject to a fine of not INSPECTION ΡМ nore than \$1,000 or imprisonment for not more than one year, or both COMPLETED: 1 1 0 9 1 5 0 1:4 5 CALIFORNIA'S BEST PRODUCE SOMEWHERE, CA FSL 115 710 APPLICANT'S WAREHOUSE NONE **EXAMPLE 1 A** DESCRIPTION OF PRODUCT (Brand, Markings, Size, Quality/Condition, etc.) PRODUCT/VARIETY GRADE CAULIFLOWER 212 CARTONS "CBP" 16 COUNT (FILM WRAPPED) U.S. NO. 1 JACKET LEAVES: FRESH AND GREEN, CLEAN HEADS: CLOSELY TRIMMED CURDS: CLEAN, GENERALLY COMPACT AND WHITE COLOR DEFECTS: AVERAGE WITHIN TOLERANCE NO DECAY N/A ABOVE PRODUCTS MEET REQUIREMENTS OF MARKETING ORDER FOR DATA ENTRY ONLY REMARKS 21 0 | 1 I 0 0 | 0 0 the undersigned, a duty authorized inspector of the United States EE \$ Department of Agriculture, do hereby certify that samples of the herein described product were inspected and the grades as shown by said samples were as herein stated. CWT O.T.:\$ 5 3 O..T. (hrs) XP S INSPECTED MILES ESTIMATED TOTAL I. Am Inspector O.T. (hrs) 11/9/2015 \$\$\$\$\$ INSPECTOR'S SIGNATURE DATE ISSUED

EXAMPLE 1: FV-184 CERTIFICATE B



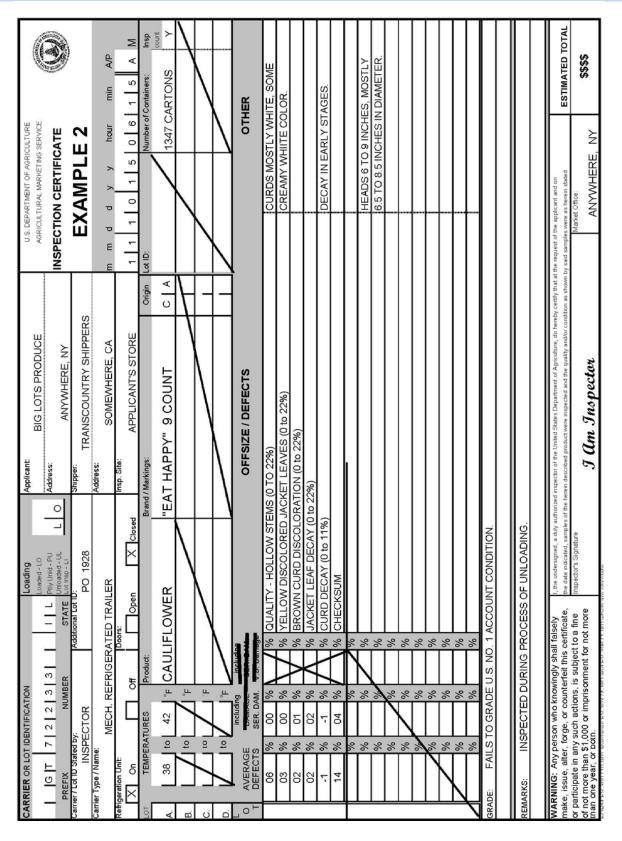
EXAMPLE 2: FV-300 NOTESHEET (FRONT SIDE)



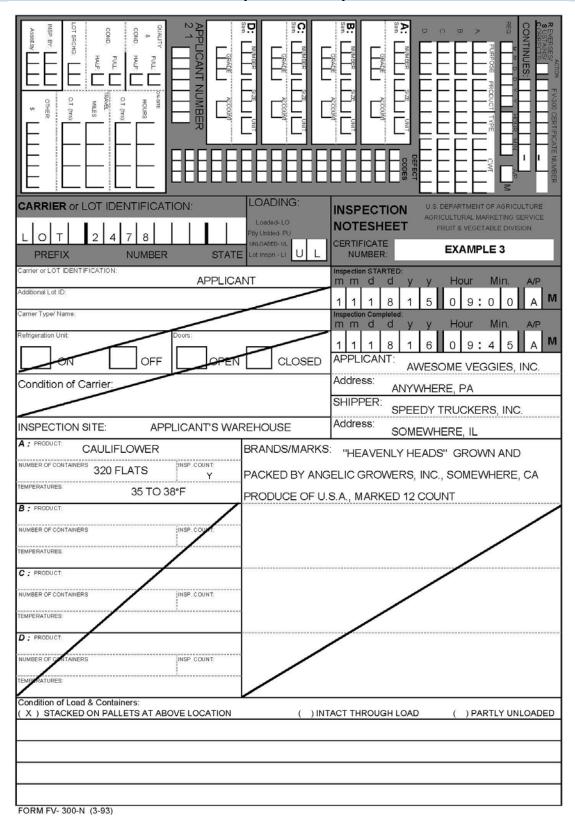
EXAMPLE 2: FV-300 NOTESHEET (BACK SIDE)

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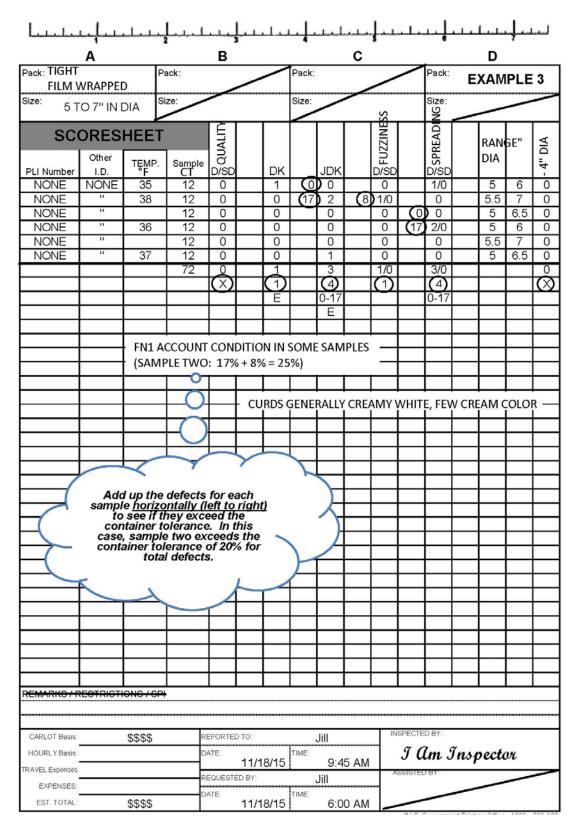
EXAMPLE 2: FV-300 CERTIFICATE



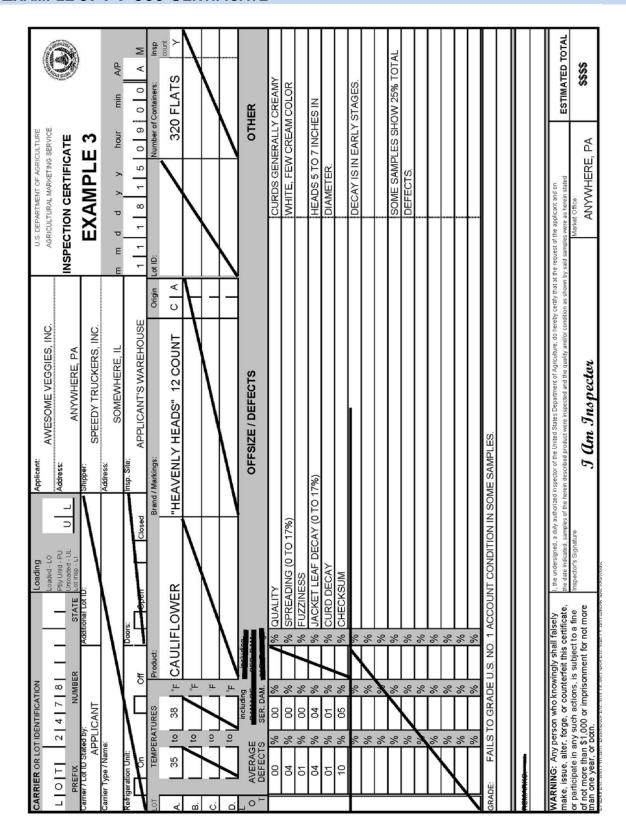
EXAMPLE 3: FV-300 NOTESHEET (FRONT SIDE)



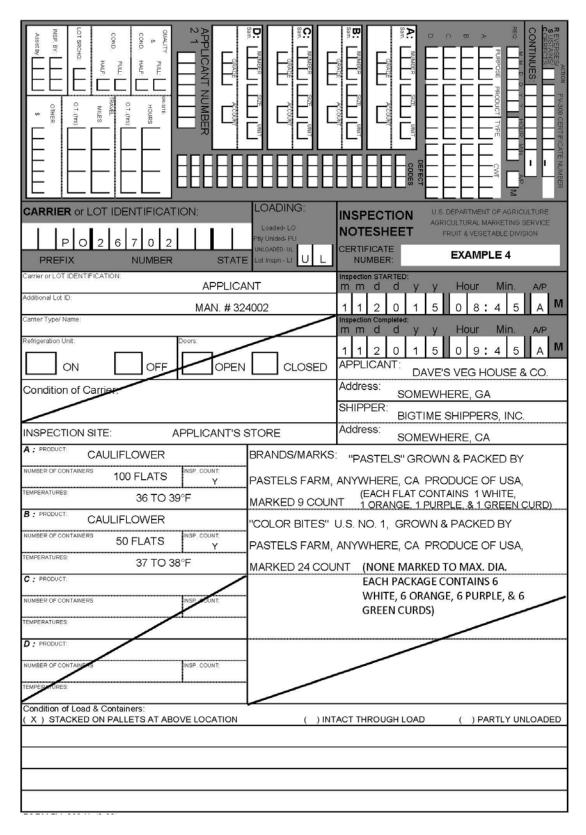
EXAMPLE 3: FV-300 NOTESHEET (BACK SIDE)



EXAMPLE 3: FV-300 CERTIFICATE



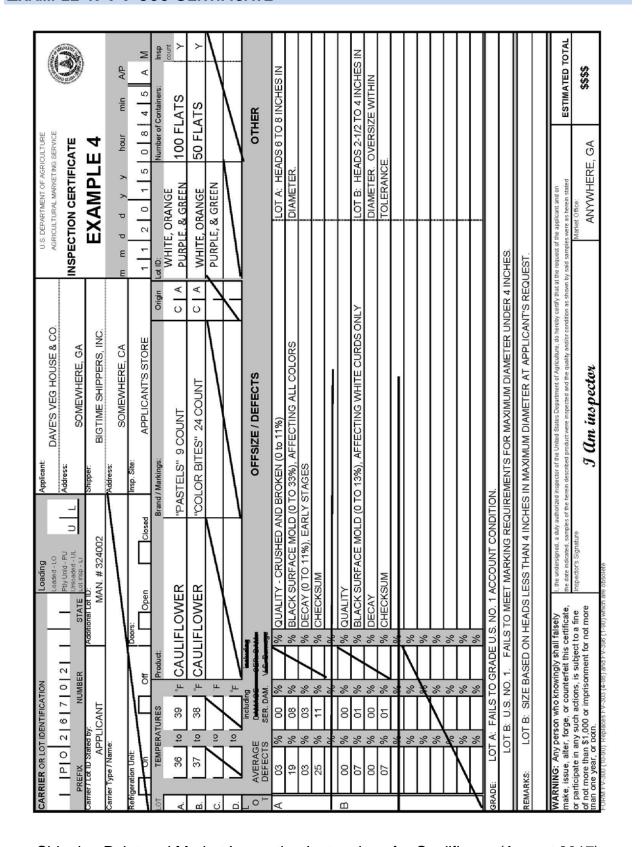
EXAMPLE 4: FV-300 NOTESHEET (FRONT SIDE)



EXAMPLE 4: FV-300 NOTESHEET (BACK SIDE)

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EXAMPLE 4: FV-300 CERTIFICATE



EXAMPLE 5: FV-300 FEIRS CERTIFICATE

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STAGES OF DECAY (JACKET LEAVES): EARLY

I, the undersigned, a duly authorized inspector of the United States Department of Agriculture, do hereby certify that at the request of the applicant and on the date indicated, samples of the herein described product were inspected and the quality and/or condition as shown by said samples were as herein stated.

Warning: Any person who knowingly shall falsely make, issue, alter, forge, or counterfeit this certificate or participate in any such actions, is subject to a fine of not more than \$1,000 or imprisonment for not more than one year, or both. FORM FV-E300 (1.0.14.3)

Signature: 0000 - INSPECTOR, I AM

Date: 11/20/2015