UNITED STATES DEPARTMENT OF AGRICULTURE
CONSUMER AND MARKETING SERVICE

PEACHES FOR CANNING, FREEZING, OR PULPING

INSPECTION INSTRUCTIONS

June 1966

FOR USE OF FRESH FRUIT AND VEGETABLE INSPECTORS

FRUIT AND VEGETABLE DIVISION
FRESH PRODUCTS STANDARDIZATION AND INSPECTION BRANCH
WASHINGTON, D. C.

INSPECTION INSTRUCTIONS

HANDBOOK CONTROL RECORD

DIVISION LETTERS OR OTHER REFERENCES

Reference	Date	Page and Paragraph

Delete			Insert		
Page	Paragraph	Dated	Page	Paragraph	Dated

TABLE OF CONTENTS

* * * * * * * *

UNITED STATES DEPARTMENT OF AGRICULTURE
CONSUMER AND MARKETING SERVICE
FRUIT AND VEGETABLE DIVISION
FRESH PRODUCTS STANDARDIZATION AND INSPECTION BRANCH

INSPECTION INSTRUCTIONS FOR FRESH FREESTONE PEACHES FOR CANNING, FREEZING OR PULPING 1/

GENERAL

The inspector will be guided by these instructions and by any additional instructions from his Supervisor, oral or written. When there is any doubt as to procedure the inspector will ask the Supervisor in advance if possible. If immediate action is necessary the inspector will use his best judgement and advise the supervisor as soon as possible so that if the procedure was not proper, it will be possible for the supervisor to make necessary corrections. (1)

Each inspector should become thoroughly familiar with the requirements of the U. S. Standards before attempting to make inspections or issue grade memorandums. (2)

There are two particularly important points to bear in mind when inspecting peaches for processing as contrasted to inspecting for fresh shipment: (3)

1. Peaches are usually left on the tree a number of days longer when destined for processing than when picked for long distance shipment to fresh market. Thus peaches for processing may generally be more susceptible to bruising.

2. Processors frequently deviate from or make exceptions to contract specifications.

It is necessary that the Federal Supervisor receive and the inspector carefully study the GROWER-PROCESSOR CONTRACT and any modification thereof before starting inspection. (4)

The Federal Supervisor should insist that the processor give written notice of any change in contract terms sufficiently in advance of the effective date so that all inspectors can be notified. If the inspector is notified of any change by the processor the inspector must advise the Supervisor and receive instructions regarding procedure before inspections are made on the basis of exceptions or changes in specifications. (5)

1/ These Instructions supersede Shipping Point Inspection Handbook for Peaches for Processing, revised August 1957.

(6) In no case will the Inspection Service assume the processor's responsibility for notifying growers of variations from or return to contract specifications.

EQUIPMENT FOR INSPECTION

(7) The following equipment is needed:

1. Inspection Memoranda.
2. Sizing Gauge.
3. Three Direct rading scales.
4. Three suitable weighing containers.
5. Grading table - preferably slatted bottom, partitioned in 3 or more compartments, and dump top construction (most canners require separate percentages for various defects).
6. Slide rule or computation chart.
7. Paring knife.

(8) The memorandum form will have spaces for recording the weights and percentages of U. S. No. 1, U. S. No. 2, U. S. No. 3 and Culls. Spaces for recording percentages of certain defects is also often desirable.

(9) The Grading table should be of the type specifically designed for peaches for canning. Specifications for the special table for canning peaches may be obtained from the Federal-State Inspection Service, Macon, Georgia.

INSPECTION PROCEDURE

1. Sample

(10) Representative Sampling. The selection of a representative sample is fully as important as correct grading of the sample. Peaches delivered to processors are generally ungraded as to quality or size, and individual containers will vary with the quality and size produced

on individual trees. The efficiency of individual pickers may also cause variation in quality and size in containers. The Inspector should make a casual examination of all accessible containers in a lot and select a sample that he believes to be truly representative of the average quality of the lot.

Method of Sampling. The sample should be a composite drawn from many containers throughout the load. From 10 to 20 percent of the containers should be sampled in order to adequately represent the "tree" and "picker" variations mentioned above. The amount of fruit drawn from each crate should be approximately the same in sampling any one load. Usually about a dozen peaches of average size will be enough to give the total volume of sample needed. In taking the peaches from the container, the inspector should take several handfuls of fruit from one spot in the container as they run. Peaches should be taken from the bottoms of some containers in order to be sure that the sample is representative. (11)

Minimum Size of Samples. A sample of approximately 40 to 50 pounds should be selected from a lot containing 75 to 100 bushels or field boxes. The sample should be increased proportionately on larger lots, going as high as 200 or more pounds on large trailer truck loads. These suggested figures are to be considered as minimums, and the sample should be larger when conditions seem irregular. (12)

Restricted Sampling. Unloading of large truckload lots may reveal in the lower layers of the load a quality different from that found by the inspector in his sample taken from the accessible portion of the load. For this reason it is the policy of the service to insist that when the inspector is located at the processing plant the applicant should make it possible for the inspector to obtain samples from all parts of the loads either before or during unloading. If, however, the inspection is made at a point which is distant from the plant and the applicant is unable or unwilling to make the entire load accessible, the inspector must restrict the memorandum by a statement under "Remarks" to that portion of the load which was sampled. A definite understanding to this effect should be had with the processor before the work begins. It should also be understood that the processor may send back a load for regrading if, in the process of unloading, there is found to be a material difference between the upper and lower portions of the load. (13)

(14) If a load is sent back to the inspection platform for the examination of portions not accessible for sampling at the time of the first inspection and the portion returned for resampling is to be weighed, a new memorandum should be issued on this portion of the load and treated as a new inspection without reference to the first inspection. The number of containers shown on the first memorandum should be reduced to agree with the number unloaded before the second weighing.

(15) If the portion of the load returned for resampling is not to be weighed, the weighted average of two inspections should be given for the load as a whole, and the first memorandum should be voided.

(16) Samples selected by other parties. In some cases, growers will bring loads in after the inspection station is closed and request a processor's employee to select samples to be graded the next day. Such a sample may be inspected and the grade and number of containers restricted to the sample only. Remarks may show that the processor's employee states that the sample was from a certain lot.

2. Grading the Sample

(17) Importance of Rapid Inspection. It is absolutely necessary that the inspector work very rapidly at times in order that factory operations or growers may not be unnecessarily delayed. The inspector should be on hand to make inspections whenever deliveries are made. When practical, definite hours should be established for receiving peaches for inspection.

(18) Sorting the Sample. The sample should be emptied into the proper compartment on the grading table. The peaches must be poured out gently with great care to avoid bruising. They are then segregated into the various grade and defects compartments. It is a good practice to first pick out those peaches that are distinctly U. S. No. 1, U. S. No. 2, U. S. No. 3, or culls. After most of the peaches have been segregated in this way, it will be less difficult to place borderline specimens properly by comparison with those already graded.

(19) Special Segregations. Some grower-processor contracts contain a clause limiting the amount of undersize, worm damage, or possibly other defects. When contracts contain such specifications the inspectors should segregate the undersized, worm damaged, or other specifically mentioned defects from other culls in the sample so that the percentages may be correctly reported on the memorandum.

3. Recording Weights and Percentages

The weights on the memorandum should be recorded in whole pounds. Exact half pounds are treated as whole pounds. Less than half pounds are ignored. (20)

In computing percentages on the slide rule or computation chart, add or subtract from the No. 2 grade when adjustment is needed to make the percentage total 100. (21)

GRADE INTERPRETATIONS

Maturity, Firmness and Ground Color. These factors are most important in determining the grade of peaches and their interpretation and classification should be on approximately the same basis as used in inspecting peaches for shipment to market except that peaches judged "mature" for the standards for processing must have ground color not greener than yellowish-green. Attention is called to the definitions of maturity stages in the Shipping point Handbook on Peaches. The inspector is warned against confusing bruising with the "soft" stage. Peaches which are in the more advanced stages of the "ripe" classification will almost invariably show from one to many bruises after delivery to the processing plant. Scraping away the bruised tissue will usually reveal normal flesh beneath. Unless the flesh has become mushy and is beyond the usable stage, the peach should not be classed as "soft". (22)

Bruises. In deciding how to handle bruises, the inspector should be guided more by their depth than by their width, number, appearance or breaking of the skin. Bruises are practically unavoidable when peaches are picked in the riper stages of maturity desired by the processors. However, if the fruit is carefully handled, as it should be, the bruises are usually shallow and superficial. In many cases, bruises will not prevent the making of reasonably well formed halves, and, in still more cases, they will not cause over 10 percent waste. (23)

Some bruising occurs in the containers while the fruit is being moved from the orchard to the processing plant. With proper handling this type of bruising will be held to a minimum, and should be ignored by the inspector. However, if numerous peaches in the tops of containers are bruised due to excessive filling, or if many peaches in the bottoms of the containers are crushed due to rough handling or too rapid hauling over rough roads, the inspector should include a proportionate number of bruised peaches in his sample. (24)

(25) Decay, Worms or Worm Holes: All grades state that the peaches shall be free from these defects. Inspectors should be alert to detect spots of decay or the earliest stages of worm development, as those factors create a serious problem for the processors. Any peach with decay, worms or worm holes which is also undersize is scored as defective account decay, worms or worm holes rather than as undersize.

(26) Damage. Damage is defined as:

(a) Any injury or defect which prevents removal of the skin by efficient commercial peeling operations; or

(b) Which causes waste to the extent that the fruit, after trimming, will not yield two reasonably well formed halves; or

(c) Which materially affects the processing quality of the peach, or materially impedes preparation of the peach for processing. Necessity for more than 2 shallow cuts is considered as materially impeding preparation.

NOTE: Specific defects considered as damage are certain degrees of scab and bacterial spot which fall under (a), (b) or (c) above.

(27) Serious Damage is defined as:

(a) Any injury or defect which affects the skin so that it cannot be removed by efficient commercial peeling operations without excessive hand trimming; or

(b) Which causes waste of more than 20%, by weight, of the flesh in excess of that which would occur if the peach was not defective; or

(c) Which seriously affects the processing quality of the peach, or seriously impedes preparation of the peach for processing.

(28) Estimating Waste. In estimating the amounts of waste on a peach as affecting the U. S. No. 1 grade, consideration should be given to the location of the blemish on the peach and the amount that will be removed in an efficient commercial operation. For example, a blemish on the side of a peach may require trimming to the extent that the half would not be "reasonably well formed". On the other hand, the same blemish located at the seam might be removed in such a way as to leave two reasonably well formed halves.

Factory trimming operations are of necessity performed very rapidly and will usually involve more waste than a deliberate, careful trimming such as would be made in a home kitchen. The inspector's judgment of the amount of waste should be based upon the factory operation, provided it is not excessively wasteful. (29)

Split pits. Removal of halves or pieces of split pits materially or seriously impede preparation of the peach for processing. For this reason the U. S. No. 1 grade requires peaches "free from" split pits. In determining the presence of split pits the inspector should cut all peaches which are difinitely suspected of containing split pits. (30)

Machinery is now available which removes split pits which are in two halves with little or no time loss. Where such machines are used the buyer may have no objection to split pits which are not in small pieces, and in such case should so stipulate in the contract, or in writing to the inspection service so that this factor can be handled in a satisfactory manner. (31)

Blemishes and Peeling. Certain blemishes such as Bacteriosis, Sprayburn, and limbrub are usually firmly attached to the flesh of the peach and will not be removed in the usual lye peeling operation. Hail injury or deeply developed scab spots are often in the same category. Such defects are classed as damage because considerable costly time is usually necessary for hand trimming. Where larger areas are affected by these blemishes so that a great amount of hand peeling is required, the peaches are classed as seriously damaged because the cost of preparing them probably more than offsets their final value. The inspector should try to familiarize himself at the earliest possible time with the way in which the blemished peaches react to the peeling operation. When he has seen how these peaches come through the peeler he will be much more competent to judge whether they should be passed as undamaged or scored as damaged or seriously damaged. (32)

REINSPECTION AND APPEAL INSPECTION

Growers or Processor occasionally request reinspections. These requests are usually based either upon the claim that (1) the sample examined was not representative, or (2) that the inspector's scoring of the sample was incorrect. (33)

(1) When Adequacy of Sampling Questioned. When a grower or processor questions the accuracy of an inspection because the sample was not representative due to extreme irregularity in the quality or size in various containers, it will be permissible for the inspector to select and grade another sample. When this sample has been graded, the results of the two inspections should be combined in a weighted average and shown on the inspection memorandum. If a memorandum covering the first inspection has been issued previously it should be voided. (34)

(35) (2) When Accuracy of Scoring is Questioned Make an Appeal Inspection. If either the grower or processor questions the accuracy of an inspector's scoring of the sample, he may request an Appeal inspection. The Inspector can often adjust the difficulty by taking additional samples and giving a detailed explanation of the reasons for his scoring. If the grower or processor is still not satified with the inspector's interpretation of grade factors, the inspector should call the Supervisor and give him a copy of the memorandum and a full explanation of the case. It then becomes the duty of the supervisor to either personally inspect a new sample or assign another inspector to make the appeal inspection.

(36) A memorandum issued on an appeal inspection should include only the results of the second examination and the following should be written across the face of the memorandum: "Appeal Inspection - This memorandum supersedes memorandum No. ____".

(37) Delayed Appeal Handled as New Inspection. If sufficient time has elapsed since the first inspection was made for a material change to have taken place in the condition of the fruit or the load has been out of the inspection yard, a second inspection should be treated as a new inspection and no reference should be made to the first memorandum.

* * * * * * * *