



May 23, 2007

Standardization Section
Fresh Products Branch, Fruit and Vegetable Programs
Agricultural Marketing Service
U.S. Department of Agriculture
1400 Independence Avenue S.W.
Room 1661 South Building, Stop 0240
Washington, D.C. 20250-0240

Re: Docket No. AMS-FV-2007; FV-06-310; 72 Fed. Reg. 14709, March 29, 2007

Dear Docket Clerk:

The California Avocado Commission (Commission) strongly supports the proposed revision of the United States Standards for Grades of Florida Avocados (Florida standard) by the U.S. Department of Agriculture's Agricultural Marketing Service (AMS). The Commission represents California's 6,500 avocado growers who produce avocados on about 65,000 acres from Monterey to San Diego. These growers predominantly produce Hass avocados—which account for approximately 90 percent of all domestic avocado production—a variety not addressed in the Florida standard. At times, however, the Florida standard is used to grade Hass avocados. In the Commission's view, this alone is sufficient reason to modify the standard.

Revising the Florida standard to be applicable to the Hass variety should greatly improve the marketability of avocados sold in the U.S. One of the keys to building avocado consumption in the U.S. is ensuring that consumers have a positive product experience. According to studies conducted for the Commission by an independent third-party market research firm, consumers who purchase poor quality avocados refrain from buying avocados again for a period averaging nine weeks. By including Hass avocados in the U.S. Grade Standard, buyers will be assured of a more consistent and uniform pack. In addition, the AMS proposal affords industry the opportunity to elevate the quality of the pack and protect consumer health and safety.

Attached is a proposed standard for U.S. Grades of Hass Avocados developed by the Commission. This document largely conforms with the existing Florida standard, which served as a starting point for development of the industry draft. Several significant modifications were made, however, to enhance the marketability of graded avocados, particularly those designated U.S. Number 1. For example, the Commission's draft

Standardization Section

Page 2

May 23, 2007

includes a minimum maturity requirement, based on percent dry matter, for Hass avocados along with an appropriate methodology for sampling and testing. Further, the Commission adopted a "zero-tolerance" approach for cuts or skin breaks on avocados graded as U.S. Number 1 or 2, for reasons of consumer safety. The same approach has been taken with respect to hitchhiking arthropods and spray residues, which not only impair the cosmetic appearance of the fruit and overall consumer experience, but potentially present plant and human health issues. In the Commission's opinion, U.S. Number 1 must connote a safe, mature, premium quality product if consumer acceptance of avocados is to be assured.

The revised standard should not only apply to domestically-produced Hass avocados but to imported Hass avocados as well. The Agricultural Marketing Agreement Act of 1937, specifically 7 U.S.C. § 608e-1, requires that certain enumerated commodities (avocado included) comply with the marketing requirements applicable to the same domestic commodities as set forth in a federal marketing order. Presently, imported avocados must meet the requirements in the federal marketing order for Florida avocados (Avocados Grown in South Florida, 7 C.F.R. § 915). Imported Hass avocados must presently grade at least U.S. Number 2 as defined by the Florida standard, but the South Florida marketing order explicitly exempts Hass avocados from the maturity requirements applicable to most other varieties. The Commission believes that domestic producers and importers of Hass avocados should be held to the same standards, including a minimum maturity requirement, to ensure uniform treatment and marketability of the fruit.

The Commission appreciates this opportunity to comment on the AMS proposal. Further, the Commission requests that AMS remain fully engaged with the domestic industry as the development of the Grade standards progresses.

Sincerely,



Tom Bellamore

Senior Vice President & Corporate Counsel

Before The
U.S. Department of Agriculture
Agricultural Marketing Service

UNITED STATES STANDARDS
FOR GRADES OF FLORIDA
AVOCADOS

Docket No. AMS-FV-2007-0008;
FV-06-310

COMMENTS OF THE
CALIFORNIA AVOCADO COMMISSION

Submitted By:

Thomas A. Bellamore
Senior Vice President & Corporate Counsel
California Avocado Commission
38 Discovery, Suite 150
Irvine, CA 92618

United States Standards for Grades of Hass Avocados ¹

DEFINITIONS

Badly misshapen.
Clean.
Damage.
Fairly well-colored.
Fairly well-formed.
Hass avocado.
Lot.
Mature.
Overripe.
Serious damage.
Very serious damage.
Well colored.
Well formed.
Well trimmed.

GRADES

U.S. No. 1.
U.S. No. 2.
U.S. No. 3.

STANDARD PACK

APPLICATION OF TOLERANCES

MATURITY TESTING AND SAMPLING PROCEDURE

DETERMINATION OF DRY MATTER

CONTAMINANTS

¹ Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act, or with applicable States laws and regulations.

DEFINITIONS

Badly Misshapen – The term “badly misshapen” means that the Hass avocado is so badly curved, constricted, pointed or otherwise deformed that the appearance is very seriously affected.

Clean – The term “clean” means that the Hass avocado is practically free from dirt, staining or other foreign material.

Damage – The term “damage” means any defect which materially affects the appearance, or the edible or shipping quality of the individual fruit, or the general appearance of the avocados in the container. Any one of the following defects, or any combination of defects, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as damage:

Bronzing or similar discoloration when the appearance of the Hass avocado is affected to a greater extent than that of a Hass avocado which has light brown surface discoloration aggregating 10 percent of the fruit surface.

Discrete patches, scars or skin spotting when the appearance of the Hass avocado is affected to a greater extent than that of a Hass avocado which has light brown superficial, fairly smooth scars aggregating 10 percent of the fruit surface.

Sunburn or sunblotch when the appearance of the Hass avocado is affected to a greater extent than that of a Hass avocado which has yellow-reddish colored sunburn or white-reddish sunblotch aggregating 10 percent of the fruit surface.

Fairly well colored – The term “fairly well colored” means that the Hass avocado shows a shade of color which is fairly characteristic of the variety.

Fairly well formed – The term “fairly well formed” means that the Hass avocado may be slightly abnormal in shape but not to the extent that the appearance is seriously affected.

Hass avocado – The term “Hass avocados” means the fruit of the species *Persea americana* Mill., or any other type of avocado fruit that the Secretary determines is so similar to the Hass variety avocado as to be indistinguishable to consumers in fresh form.

Lot – The term “lot” means one group of containers of the same variety, count/size, and grade or brand. A lot shall not exceed 50 containers or, when unitized, the amount present on a pallet.

Mature – The term “mature” means that the Hass avocado meets the minimum maturity standards (as measured by percentage of dry matter) for sale to a consumer of the State of California, as required by regulations issued pursuant to chapter 9 of division 17 of the California Food and Agricultural Code or any succeeding provision of California law governing the minimum maturity standards of Hass avocados for sale to a consumer. The method of determining such dry matter content is specified in Section 7 herein.

Overripe – The term “overripe” means that the Hass avocado is dead ripe with flesh soft or

discolored and past commercial use.

Serious damage – The term “serious damage” means any defect which seriously affects the appearance, or the edible or shipping quality of the individual fruit, or the general appearance of the Hass avocados in the container. Any one of the following defects, or any combination of defects, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as serious damage:

Anthracnose when any spot exceeds the area of a circle one-fourth inch in diameter, or when more than 3 spots each of which exceeds the area of a circle three-sixteenths inch in diameter.

Shrivel when ridging is moderate, extending beyond the fruit shoulder and wrinkling occurs around the neck region.

Bronzing or similar discoloration when the appearance of the Hass avocado is affected to a greater extent than that of a Hass avocado which has light brown surface discoloration aggregating 25 percent of the fruit surface.

Discrete patches, scars or skin spotting when the appearance of the Hass avocado is affected to a greater extent than that of a Hass avocado which has light brown superficial, fairly smooth scars aggregating 25 percent of the fruit surface.

Sunburn or sunblotch when the appearance of the Hass avocado is affected to a greater extent than that of a Hass avocado which has yellow-reddish colored sunburn or white-reddish sunblotch aggregating 25 percent of the fruit surface.

Very serious damage – The term “very serious damage” means any defect, which very seriously affects the appearance, or the edible or shipping quality of the Hass avocado. Any one of the following defects, or any combination of defects, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered very serious damage:

Cuts or other skin breaks when not healed and penetrating into the flesh of the fruit, or any skin break very seriously affecting the appearance, or the edible or shipping quality;

Bronzing or similar discoloration when the appearance of the Hass avocado is affected to a greater extent than that of a Hass avocado which has light brown surface discoloration aggregating 50 percent of the fruit surface;

Discrete patches, scars or skin spotting when the appearance of the Hass avocado is affected to a greater extent than that of a Hass avocado which has light brown superficial, fairly smooth scars aggregating 50 percent of the fruit surface;

Sunburn or sunblotch when the appearance of the Hass avocado is affected to a greater extent than that of a Hass avocado which has yellow-reddish colored sunburn or white-reddish sunblotch aggregating 50 percent of the fruit surface.

Well colored – The term “well colored” means that the Hass avocado has the color characteristic of the variety.

Well formed – The term “well formed” means that the Hass avocado has the normal shape characteristic of the variety.

Well trimmed – The term “well trimmed” means that the stem, when present, is cut off fairly smoothly at a point not more than one-fourth inch beyond the shoulder of the Hass avocado.

GRADES

U.S. No. 1.

“U.S. No. 1” consists of Hass avocados which are mature but not overripe, well formed, clean, well colored, well trimmed and which are free from decay, shrivel, anthracnose, chilling or freezing injury, arthropods, spray residue, and cuts or other skin breaks, and are free from damage caused by bruises, skin spotting, bronzing or similar discoloration, scars, sunburn, sunblotch or other disease, or mechanical or other means.

(a) **Tolerances.** In order to allow for variations incident to proper grading and handling, not more than a total of 10 percent, by count, of the Hass avocados in any lot may fail to meet the requirements of this grade; provided, that not more than one-half of this amount, or 5 percent, shall be allowed for Hass avocados affected by decay, shrivel or anthracnose, including therein not more than 1 percent for Hass avocados affected by decay. There shall be zero tolerance for arthropods, spray residue, and cuts or other skin breaks.

U.S. No. 2.

“U.S. No. 2” consists of Hass avocados which are mature but not overripe, fairly well formed, clean, fairly well colored, well trimmed and which are free from decay and chilling or freezing injury, arthropods, spray residue, and cuts or other skin breaks, and are free from serious damage caused by shrivel or anthracnose, bruises, skin spotting, bronzing or similar discoloration, scars, sunburn, sunblotch or other disease, or mechanical or other means.

(a) **Tolerances.** In order to allow for variations incident to proper grading and handling, not more than 10 percent, by count, of the Hass avocados in any lot may fail to meet the requirements of this grade; provided, that not more than one-half of this amount, or 5 percent, shall be allowed for Hass avocados affected by decay or seriously damaged by shrivel or anthracnose, including therein not more than 1 percent for Hass avocados affected by decay. There shall be zero tolerance for arthropods, spray residue, and cuts or other skin breaks.

U.S. No. 3.

“U.S. No. 3” consists of Hass avocados which are mature but not overripe, which are not badly

misshapen, and which are free from decay and are free from serious damage caused by shrivel or anthracnose and are free from very serious damage caused by chilling or freezing injury, bruises, cuts or other skin breaks, spray residue, skin spotting, bronzing or similar discoloration, scars, sunburn, sunblotch or other disease, arthropods, dirt or mechanical or other means.

- (a) **Tolerances.** In order to allow for variations incident to proper grading and handling, not more than a total of 10 percent, by count, of the Hass avocados in any lot may fail to meet the requirements of this grade, including therein not more than 2 percent for Hass avocados affected by decay.

STANDARD PACK

- (a) The Hass avocados shall be packed in accordance with good commercial practice and the pack shall be at least fairly tight. The weight of the smallest fruit in any container shall not be less than 75 percent of the weight of the largest fruit in the container. Size of the Hass avocados may be specified by count.
- (b) In order to allow for variations incident to proper sizing and packing, not more than 5 percent, by count, of the Hass avocados in any container may weigh less than 75 percent of the weight of the largest fruit; provided, that no fruit in any container shall weigh less than 60 percent of the weight of the largest fruit in the container. In addition, not more than 5 percent of the containers in any lot may fail to meet the requirement as to tightness of pack.

APPLICATION OF TOLERANCES

- (a) The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations; provided, that the averages for the entire lot are within the tolerances specified for the grade:
 - 1. For packages which contain more than 20 Hass avocados and a tolerance of 10 percent or more is provided, individual packages in any lot shall have not more than one and one-half times the tolerance specified. For packages which contain more than 20 Hass avocados and a tolerance of less than 10 percent is provided, individual packages in any lot shall have not more than double the tolerance specified, except that at least one defective and one off-size specimen may be permitted in any package; and,
 - 2. For packages which contain 20 Hass avocados or less, individual packages shall have not more than double the tolerance specified, except that at least one defective and one off-size specimen may be permitted in any package.

MATURITY SAMPLING AND TESTING PROCEDURE

- (a) The following procedure shall be used to determine whether Hass avocados in a lot are mature. For the purposes of this section, a lot is defined as one group of containers of Hass avocados of the same variety, same count size, if packed, and same grade or brand.
- (b) Sample containers shall be selected at random in accordance with the table below. One Hass avocado shall be randomly selected from each sample container. Where the number

of sample containers is four or less, additional avocados shall be selected for a total sample of five avocados. The Hass avocados selected from the sample containers shall comprise the total sample to be tested.

Number of Containers in Lot	Sample Containers Required
50 containers or less.....	2
51 to 100.....	3
101 to 200.....	4
201 to 500.....	5
501 to 1,000.....	10
1,001 to 1,500.....	15
1,501 to 2,000.....	20
2,001 to 2,500.....	25

For lots of over 2,500 containers, an additional five sample containers shall be selected for each additional 500 containers or fraction thereof.

- (c) The Hass avocados selected in accordance with the above subsection shall be tested in accordance with the procedures in the following section. Notwithstanding the foregoing sampling procedures, the least mature appearing fruit shall be selected when avocados from different growing seasons or bloom sets in the same growing season have been intermixed.
- (d) The sample Hass avocados selected shall be randomly separated into two equal official test samples, hereafter referred to as Test No. 1 and Test No. 2, and tested as follows:
 1. The Hass avocados in Test No. 1 shall be tested for percent dry matter. If the percent dry matter from the test is equal to or greater than the minimum maturity standard established by the State of California, the fruit passes and no further testing shall be required.
 2. When the percent dry matter from the test is less than the minimum maturity standard established by the State of California, the avocados in Test No. 2 shall be tested for percent dry matter. If the percent dry matter from the test is equal to or greater than the minimum maturity standard established by the State of California, the fruit passes and no further testing shall be required. If the percent dry matter from the test is below the minimum maturity standard established by the State of California, the lot shall be rejected and no further testing shall be allowed.

DETERMINATION OF DRY MATTER

Dry matter of avocados shall be determined by weighing the fresh weight and dry weight of a

sample of Hass avocados. The testing procedures and method of calculating the percent of dry matter shall be as follows:

- (a) At the widest circumference of the avocado, remove a core from the entire width of the avocado. Discard the seed portion, and remove the seed coat and skin to the depth of the edible portion from the remaining core pieces. Cut each core piece in half. The core sample shall be removed with a coring device having an inside diameter of five-eighths inch, plus or minus one sixteenth inch.
- (b) Repeat the above for the number of sample fruit required.
- (c) The cored pieces shall be immediately placed in a sealed plastic bag if there is a delay in completing the procedures below.
- (d) Weigh a clean petri dish and record the weight (P).
- (e) Place all cored pieces on the preweighed petri dish; reweigh the petri dish with the sample and record the weight (F).
- (f) Place the petri dish with the sample in a 1,000 watt microwave oven and dry the sample at 50% power for 40 minutes, adjusting the power down as necessary to avoid charring the tissue. Remove the sample from the microwave oven and note the weight. Place the sample back in microwave oven for 5 minutes. Remove the sample again and compare weight. If weight is the same, record it as dry weight. Whenever there is a weight difference, repeat this step until there is no weight loss. After the sample reaches a constant weight, record the weight (D).
- (g) Calculate the percent of dry matter using the following example:

$$D-P (/) F-P \times 100 = \text{ ______ } \% \text{ dry matter}$$

All weights shall be recorded to the nearest 0.01 gram.

CONTAMINANTS

- (a) Hass avocados shall comply with those maximum residue limits established by the U.S. Environmental Protection Agency.