

GRADING MANUAL

Dates and Date Products



UNITED STATES DEPARTMENT OF AGRICULTURE
FOOD SAFETY AND QUALITY SERVICE
FRUIT AND VEGETABLE QUALITY DIVISION
PROCESSED PRODUCTS BRANCH

P R E F A C E

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INSTRUCTIONS FOR INSPECTION
OF DATES AND DATE PRODUCTS

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SECTION 1 GENERAL INFORMATION

I PRODUCTION

A. Origin

The date is one of the oldest cultivated tree crops. Earliest known records in Iraq (mesopotamia) show that its culture was probably already established as early as 3,000 B.C. The date palm has also been in Egypt since prehistoric times, however, its culture did not become important there until some what later than in Iraq. Dates have long been a staple food for the native populations from western Iran across Arabia and North Africa.

Successful date culture requires moderate winter temperatures, long hot summers to develop and mature the fruit. Little rainfall and low atmospheric humidity are required during late summer and fall to ripen the fruit and minimize harvest losses. Thus hot dry desert climates produce most of the world date supply.

The date palm was introduced into the Western Hemisphere by the early Spanish missionaries, who planted date seeds around many of their missions. A few of these original palms or their offshoot survivors, dating from plantings in the late 18th or 19th century, are still found in southern California and below the Mexican border.

B. Domestic Areas of Production

Because of the favorable climatic conditions almost all the commercial dates produced in this country are grown in the Coachella Valley of California. There are some commercial plantings in Death Valley and Imperial Valley, California. In addition there are other commercial plantings in the Colorado River Valley in California and Arizona and some in the Salt River Valley in Arizona.

C. Importance

Date production in this country has increased from 1 million pounds in 1926 to an average annual production of over 40 million pounds. Value of the date crop is now placed at over 15 million dollars. Domestic date production is still below date consumption. An average of over 34 million pounds of dates have been imported during the last several years.

D. Utilization of Date Crop

Although the greatest portion of the date crop is marketed in consumer packages in the whole or pitted form a considerable amount is being converted into forms such as rings, chunks, pieces, butter, etc. that can be utilized in the retail trade or directly in commercial bakery products. Most surplus dates are used in the manufacture of inedible sirups, alcohol, and in stock feed mixes.

E. Date Propagation

Date palms may be grown either from seeds or from suckers that grow out from the roots. Most date palms are propagated by root suckers instead of by seed because offshoots (or root suckers) always produce true to the parent type. Plants from seeds are seldom alike and relatively few produce fruit of good quality.

All varieties of dates are dioecious, that is, the male (staminate) and female (pistillate) flowers are produced in cluster on separate palms. Palms with the male flowers produce the pollen, palms with the female flowers produce the fruit.

One male tree is usually sufficient to pollinate about 50 female trees provided nature is assisted in distributing the pollen. In commercial production of dates the female flowers are pollinated by hand or mechanical dusters. The hand method requires that a worker climb a ladder to or be placed in the crown of the tree by a mechanical boom or crane. There the worker places a sprig of open male flowers or a ball of cotton that has been dusted with pollen into the cluster of female flowers. The ends of the flower strands are tied with string and if the weather is cool or windy a paper bag is placed over the cluster to help raise the temperature of the cluster and keep the pollen from being blown away. Pollination with a modified insecticide duster has been used with good results the last few years. It is generally used to supplement hand pollination. During cool weather the workers are able to keep up with the few female clusters of flowers the palm tree produces. However during a warm or hot period the palm tree produces more bunches than they can pollinate by hand. The bloom duster can then be used to advantage by blowing pollen into the clusters of female flowers while traveling between the rows of palm trees. This procedure is repeated twice a week because the flowers have to be pollinated within 2 to 3 days after they emerge from their protective spathe.

Each female palm produces about 10 to 20 bunches with each bunch thinned to about 35 strands. The dates are attached to the strand and are usually thinned 20 to 35 dates per strand. Each bunch produces 15 to 25 pounds of dates depending upon the variety and vigor of the tree and bunch.

F. Growth and Ripening

The Arabs as well as date growers in the United States distinguish four stages in the growth and ripening of the fruit. These stages are:

- 1st - Kimri - Turgid and green.
- 2nd - Khalal - Turgid and red.
- 3rd - Rutab - Partially softened to completely softened and reddish to brownish.
- 4th - Tamar - Softened, brownish, and cured to point where the fruit will keep.

In the kimri stage the fruit makes its most rapid growth in size and is distinguished by its green color.

Fruit enters the khalal stage when it has almost reached its maximum size. The green color is then replaced by a shade of red, yellow, or a combination of the two colors characteristic of the particular variety at this time.

Fruit enters the rutab stage when the tip begins to soften or lose its khalal color. The date is in the tamar stage when it is fully ripened and dried and will keep without spoiling.

Dates are usually classified into two groups as to the type of sugars present:

1st - Dates that contain sucrose or cane sugar at maturity.

2nd - Dates that contain reducing or invert sugars at maturity.

G. L. Rygg of the Bureau of Plant Industry and Soils of the United States Department of Agriculture indicates that previous to the beginning of ripening, the proportion of reducing sugars to total sugars is about the same in the two groups or close to 20 percent. Upon completion of ripening, reducing sugars increase to about 35 percent of the total sugars in the average cane sugar dates, whereas in the invert sugar type, they increase to about 100 percent. Generally, as soon as ripening begins, part of the sucrose is inverted, the amount undergoing this change depends upon the variety, the environmental condition, and internal variations in the fruit.

During the ripening process of the date, C. W. Coggins, Jr. of the University of California concludes that much cell wall dissolution occurs. As the process progresses intercellular and intracellular membrane systems disintegrate permitting enzymes and substrate molecules to react. At the same time the vascular tissue is still functioning bringing in more sugar to permeate the tissue and be subjected to some degree of inversion.

The rate at which water is lost by dates before and during ripening is an important factor in the quality of the final product. If water is lost too rapidly before the chemical and physical changes accompanying ripening have taken place, the processes will be slowed down or stopped and a poor product will result. Too rapid dehydration in dates that have already softened completely also gives an inferior product. Conversely, too slow a dehydration and excessive darkening may cause fermentation, molding and a loss of flavor.

Packing-house experience shows that Deglet Noor dates (a cane sugar type) ripening at the beginning of the season are likely to be inferior in quality as compared with dates from the same garden ripening later in the season. Early ripening dates tend to darken more quickly and to spoil from molding and fermentation more readily than those dates that ripen later in the season. This fact suggests that the high moisture content of the khalal dates immediately before they ripen may predispose them to these forms of deterioration.

G. Date Fruit Spoilage

Date fruit spoilage refers to any condition which may result in undesirable changes in appearance, taste and food value of the fruit. There are many kinds of fruit spoilage, but they can be classified under two headings.

1st Class - Caused by unfavorable environmental conditions. It includes water injury (checking and tearing), blacknose, sun-burn, shrivelling and mechanical injury and injuries due to insects, birds and other animals (field mice).

2nd Class - Brought about by souring, decay and spots, caused by fungi and bacteria.

Water injury is the first type of spoilage to appear during the growing season. Tiny checks or cracks develop in the skin of the date during midsummer while the dates are still green and growing rapidly. Where checking is severe, the underlying flesh will darken and shrivel to produce blacknose.

A more serious kind of water injury may also occur after the fruit has reached the red or Khalal stage of maturity. This injury, called tearing, occurs during rainstorms when the fruit is wet. The skin is broken and the sugar filled tissues within the date are exposed. Water injury may be reduced by keeping the fruit dry and well aerated, and also by certain methods of fruit thinning. Paper tubes tied about the fruit stalks in late July serve as rain protectors but they also tend to hold moist air about the dates unless some means of ventilation are provided. Wire rings are sometimes used to hold the fruit strands apart and an opening can also be made at the top of the "umbrella" to permit greater circulation of air through the fruit bunch. Dates that are free from checking are also free from blacknose. Dates that are free from tearing are less apt to sour and to become infested with insects. Control of water injury is therefore of great primary importance.

Souring, rot and spots may be caused in dates by a large number of fungus and bacterial species. These fungi and bacteria are found in the soil and all are spread by wind. The air contains millions of fungus spores and bacteria which are deposited with dust, on exposed surfaces. During the growing season the surfaces of the young dates are covered with these microscopic spores which lie dormant until they are awakened by contact with moisture. Spore germination is very rapid when the air is warm. Within a few hours, the date may be covered with many tiny fungus plants seeking entrance through the skin to the sugary flesh beneath. Dates are very resistant to infection when green, but when in the red or khalal stage, they become increasingly susceptible. Only after dates have become fully mature and reasonably dry (19 percent moisture) do they again become resistant to fungus development.

Three types of fungus fruit spoilage may be mentioned. The first type is known as souring. It is caused mostly by wild yeasts and bacteria which gain entrance to the date through breaks in the skin during and after rainstorms or else they find their way into the open end of the date after it is picked. The souring process includes both the alcoholic fermentation of sugar and the fermentation of acetic acid from the alcohol. It does not rot the flesh, but it causes undesirable odors and flavors which, in the later stages, spoil the fruit for human consumption.

The second and third types of fungus spoilage may also follow water injury, but they commonly originate in unwounded dates. Calyx-end rot, the second type, is caused by the black mold, *aspergillus niger*, and several of its relatives. These molds find entrance to the date by growing through the tender, uncutinized skin beneath the calyx. They cause a soft, watery rot of the flesh which develops very rapidly. The date loosens from the fruit stalk and often becomes infested with insects. Black, green, or yellow masses of mold spores develop in the seed cavity or between layers of the flesh. Infested fruits are definitely spoiled in appearance and taste.

The third type of fungus spoilage is the side spot (*alternaria*) which is quite prevalent some years. It is caused by *Alternaria citri* and several related species. These fungi are able to penetrate directly through the unbroken skin of the date at any point on the surface when the date is at a certain stage of maturity. During the rutab stage of maturity when the flesh is softening, the mycelial threads developed from the fungus spores during germination, grow directly into the skin through the waxy cuticle. A tiny fungus colony, originating at each point of entry, produces a side spot which is microscopic at first but continues to enlarge until the fruit is fully mature and dehydrated.

Side spots are usually circular in outline, rather shallow in depth, and range in color from light brown to reddish brown or brownish black. The consistency of infected flesh is soft and watery at first but it becomes firm as the fruit ripens. Side spots usually do not involve the entire fruit because the disease process is relatively slow and it is usually interrupted before a large proportion of the date is affected. The infected tissue is not greatly disorganized but it undergoes chemical changes resulting in discoloration and loss of sugar. The flavor of fruits with small side spots is not noticeably changed and the appearance of such fruits is only slightly impaired. The principal difficulty in packing slightly affected fruit is the danger that the spots will continue to develop after the fruit is removed from cold storage and placed on a shelf at room temperature.

H. Harvesting

The stage of maturity at which fruit is picked may vary considerably depending on local weather conditions, consumer preference, variety, processing techniques and picking method. As a rule the date bunches on a palm tree mature at different times. In addition not all the dates on any one bunch may ripen at the same time. This requires picking several times during the season or waiting until all the bunches and dates have ripened and matured. This period can last from 3 to 4 weeks for early varieties and 3 to 5 months for late varieties.

Picking dates becomes a problem as the trees become older and grow higher each year. Aluminum extension ladders are used by some pickers to get to the crown of the tree. The worker attaches a saddle to the tree and swings from bunch to bunch. He strips the dates from the bunches into a bucket which he lowers to the ground where the dates are placed in flats or lugs. Some pickers cut the entire bunch from the tree and lower it to the ground. The bunch is then placed in a hydraulic vibrator and the dates are shaken off into lugs or bins.

Mechanical harvesting has taken over much of the date harvest. Mobile platforms and truck mounted booms are being used to place the worker near the date bunch. He cuts the bunch and drops it into a basket to be lowered to a shaker where the dates fall into bins. On some machines the bunches are lowered by ropes or slide down chutes to the shaker.

Wood bins with an 800 to 1,000 pound capacity are used with most mechanical harvesting operations. Lug boxes are still being used in hand picking operations and when soft and higher moisture dates are picked.

After being picked the dates are transported to the packing House. Here the dates are placed in air tight rooms or stacked in blocks and covered with polyethylene tarps. Then the dates are fumigated with Methyl Bromide to kill any insect forms present.

II DESCRIPTION OF DATE VARIETIES

A. Barhee

A soft date from Iraq, which has been increasing in popularity in recent years, through commercial plantings in Coachella Valley, California. Fruit has been moderately damaged by rain and high humidity. Fruit small to medium; ovate to nearly round; yellow, ripening to amber, curing to a deep golden brown; has relatively little astringency in the khalal stage as compared with other varieties; late ripening. Heavy yields, frequently over 300 pounds per palm, are characteristic.

B. Deglet Noor

A semi-dry date from Algeria; the leading commercial variety in the United States, grown chiefly in the Coachella Valley, California, where it accounts for about 85 percent of the total date acreage. In most parts of Arizona it has failed, largely because of the susceptibility of the fruit to damage from rain and high humidity. The Deglet Noor is apparently not adapted to the heavier soils on which it has been planted. Fruit medium to rather large; ovate-oblong; coral red, ripening to amber, curing to a deeper brown; late ripening. Yields of 200 to 300 pounds per palm under favorable conditions.

C. Halawy

A soft date from Iraq; grown in all the date-producing districts, it has been relatively little damaged by occasional rains and high humidity. Its principal disadvantage is a tendency to shrivel during ripening, although this objection is not usually serious on the heavier soils with adequate irrigation. Fruit small to medium; narrowly oblong; yellow, ripening to light amber, curing to translucent golden brown; early ripening. Yields 150 to 200 pounds per palm.

D. Khadrawy

A soft date from Iraq; grown in commercial planting in California and Arizona; more well adapted to a rather wide range of conditions. Palm smaller than any other commercial variety. Fruit small to medium; oblong, with broadly rounded apex; light yellow, ripening to greenish amber, curing to reddish brown; early ripening. Yields light, seldom more than 100 to 150 pounds per palm.

E. Medjool

A soft date from Morocco; grown in a few plantings in the Coachella and Imperial Valleys and Bard, California. The more or less translucent, reddish brown fruit is very large; broadly oblong-oval to somewhat ovate; early ripening. Light yields, seldom more than 100 to 150 pounds per palm.

F. Zahidi

A semi-dry date from Iraq; planted to some extent in all date-producing districts in California and Arizona. Growers of this variety claim its fruit can be handled more economically than that of most of the other varieties, although it is generally regarded as somewhat lacking in quality. Fruit is a little less tolerant to rain or high humidity than Halawy and Khadrawy. Fruit small to medium; obovate; yellow, ripening to amber, curing to deep brown, except for dull-yellow or straw-colored areas of dry flesh retained at the base of many fruits; mid-season in ripening. Yields 200 to 300 pounds per palm.

III DATE PACKING OPERATIONS

A. Cleaning

Fumigated field-run dates are cleaned by a number of different methods or by a combination of methods. The dates first pass over a shaker, slotted slide, special slotted rollers or an open mesh belt to remove loose debris and dirt. From this point the dates can be cleaned by different ways.

The oldest method used and found in some small packing plants or used to clean soft, high moisture dates is the shaker belt. Dates are dropped on a sloping mechanical shaker that is lined and covered with damp toweling. The date shakes between the towel layers and is cleaned as it travels to the end of the shaker. This method has limited use because of the small volume cleaned and inefficiency in removing residual insecticides and dusts now being used by the industry.

Another cleaning method is a series of rotating nylon brushes that brush and polish the dates as it moves them from one end to the other. Dust and debris are drawn off with a vacuum system as the brushing action loosens the material.

Date washers are also used and are equipped with water sprays using chlorinated water or a germicidal detergent. Some washers utilize revolving brushes to further clean the dates. Clear water sprays rinse the dates and then excess water is removed from the dates by an airstream.

B. Sizing

After the cleaning process some plants employ mechanical sizers to help facilitate their grading operation. This step is especially helpful when the plant is grading fruit that has been picked mechanically. This method of picking brings in many small deformed and worthless dates. These dates can be eliminated from the grading process very readily with sizers.

C. Sorting and Grading

After being cleaned and in some cases sized, the dates are separated into several texture, moisture and appearance categories. These separations are classed as follows:

1. Natural dates

Natural dates are generally soft and pliable and require no addition of moisture to pack and market. These dates may require some maturation and dehydration to properly prepare them for packing.

2. Waxy Dates

Waxy dates are generally firm but slightly pliable, translucent and cured at least one-half the length of the date and have smooth or panelled surfaces. Waxy dates usually require some hydration before packing.

3. Number 1 Dry Dates

Dry dates in this class are usually firm, translucent and cured less than one-half the length of the date and have at least a reasonably smooth or panelled surfaces and/or may be slightly wrinkled. Proper hydration is required to prepare these dates for packing.

4. Number 2 Dry Dates

Dry dates in this class are firm, not translucent or cured and may be wrinkled. Rubbery textured dates are also included in this class. Dry dates in this group usually require a great deal of hydration to prepare them for packing or for use in by-products.

5. Utility Dates (Substandard)

Dates in this class are dates that do not meet the criteria for the above classifications but are edible and can be used for human consumption. These

These include dates that may be poorly developed by some defect or injury. Dates in this group are used in date by-products or disposed of through cull channels if date supplies exceed the demand.

6. Cull Dates

Dates in this classification are dates that are so poorly developed or ripened that they are worthless for human consumption or are dates that have been damaged, contaminated or affected by foreign material, rodents, insects, mold or bacteria which would render them unfit for human consumption. Dates in this group are used in animal feed, the manufacture of alcohol and inedible syrup and any other outlets not intended for human consumption.

In most grading operations the grading belt or table is divided into 3 to 5 lanes and the graders separate the dates into the different classifications or combinations of classifications. Additional classifications may be picked out and deposited in containers or chutes leading to other collection belts.

After being graded the various date classifications are collected by different methods depending on what is to be done with the dates. Some natural dates are packed from the grading lines in 15 pound wood or fiber cases. Other natural dates are placed on wire mesh trays or in wood or plastic lugs to be further ripened while others are collected in lug boxes and held in storage until needed.

Waxy and number 1 dry dates are either spread on wire mesh trays or in plastic lugs for processing or collected in lug boxes or bins and held in storage until needed.

Number 2 dry and utility dates are collected in lug boxes or bins to be held in storage or transported to the processing and by-product operations.

Non-marketable and cull dates are also collected and held in lug boxes and bins until disposed of.

D. Processing

1. Maturation or Curing

Green, slightly imature and high moisture natural dates should be cured and/or dehydrated before being packed. Keeping quality, texture and date quality are improved by the process.

Small handlers place these dates on wire mesh trays or in shallow lugs and place them in a storage area where air can circulate around the containers. Several days to several weeks may be required to cure or dehydrate the dates depending on temperature, humidity and air circulation.

In larger plants the dates are spread on trays and then stacks of trays are placed in a tunnel or room. Atmospheric conditions in the tunnel or room are controlled to imitate desert ripening conditions. Air temperature of 100° to 110° Fahrenheit and a low relative humidity are maintained. Dates are held from several hours to a few days in this type of system. The time depending upon how much moisture reduction and curing the dates required.

Some plants prefer to hold dates that need maturation or dehydration in well-ventilated cold storage rooms for several weeks. Storage in this manner slowly cures and dehydrates the dates into an excellent natural date.

2. Hydrating

Dates that require the addition of moisture to soften and help ripen them are spread on wire mesh trays or in plastic lugs and placed in a steam room. Steam is admitted into the room through perforated pipes along the floor. A temperature of around 140° Fahrenheit is maintained during the process. Some plants utilize blowers and fine water sprays to maintain a uniform temperature and humidity in the rooms.

Hydration time can vary from 1 to 18 hours depending upon how much softening and ripening the dates will need before packing or further processing. However, most date hydration can be accomplished in 2 to 6 hours.

Another hydration system, called Rickert's Process is used to some extent by the industry. In this method dates are conveyed into a tank of water and siphoned from this tank to another tank. During the siphon stage a vacuum removes air from the pit cavity and air spaces between tissue layers. Water enters into these spaces when the vacuum diminishes and the dates flow into the second tank. From here they are conveyed and spread on wire mesh trays or in plastic lugs and then held in warm rooms or steam hydration rooms to complete the softening and ripening process. Dates gain about 7 percent by weight of moisture through the process. This reduces hydration time measurably because it gets moisture into the date immediately instead of slowly working in through the date skin and tissue. This method is very effective on dry woody type dates that are hard to hydrate with just steam hydration.

E. Pitting

More than half the domestic dates sold in consumer packages are pitted dates. To accomplish this, Ashlock pitting machines are used exclusively by the industry. Properly textured dates are dumped or conveyed into one end of the machine. An endless placement conveyor places the dates into cups on an endless belt. These pass under a pitting head that punches the pits out of 8 dates at a time. The dates are then collected and conveyed to wire mesh trays or plastic lugs to be used in the packing operation or held in storage until needed.

F. Packing

Properly processed dates on wire mesh trays or in plastic lugs are brought from the grading, maturation, hydrating, pitting or storage facilities to the packing operation. There the dates are dumped on a spreading belt where usually a final inspection is made to eliminate any defective or improper units. From this point, depending upon the plant and operation, the dates can go to a hand filling, weighing, and sealing operation to a completely automated weighing, filling and sealing operation.

1. Containers

Various container sizes and types are used to package dates. Some of the commonly used containers are listed below.

Cartons of fiber or plastic with heat sealed cello type overwrap in 8, 10, 12, 16, 24 and 32 ounce sizes.

Bags of clear or printed cello type film or pliofilm in 10, 12, 16, and 24 ounce sizes. Bags may be heat sealed, have a heat sealed flap label or stapled flap label. Some bags may be placed in a window top fiber carton.

Cups of clear or printed plastic with polyethylene lids in 8, 10, 12, 16, and 24 ounce sizes.

Cases of corrugated fiber, solid fiber or wood in 12, 15, 25, and 30 pound sizes. These containers are sealed by gluing, stapling, taping, or nailing.

2. Preservatives

For some export orders a few plants may add a commercial fungicide or in-package fumigant to retard fermentation, mold growth, and insect infestation. A measured amount of the ingredient is automatically added to the package just prior to sealing.

Some plants are fumigating the finished date packages in their fiber shipping containers with methyl bromide to insure against spoilage by microorganism and insect infestation.

3. Casing

Cartons, bags, and cups are placed in corrugated fiber cases by hand and sealed by hand or machine with glue, staples or tape. The cases are then coded manually or automatically and placed on pallets for shipment or storage.

SECTION 2 APPLICATION

I SCOPE

These instructions shall be used in the following cases:

- A. Inspection of dates regulated by the Order in the California county of Riverside to determine compliance with Date Marketing Order No. 987, as amended. Inspection of dates regulated by the Order anywhere else within the continental United States to determine compliance with the Date Marketing Order No. 987, as amended.
- B. Inspection of dates not regulated under the Date Marketing Order.
- C. Inspection of dates at receiving markets or wherever an inspector or licensed sampler is available and the facilities and conditions are satisfactory for the conduct of such service.

Instructions for inspection of imported dates can be found in File Code 157-0-5.

II WHERE INSPECTION IS TO BE MADE.

A. Under Date Marketing Order

Inspections under the Date Marketing Order shall be made at established handler's processing, warehouse or storage facilities. Where facilities for making a complete inspection are not available, samples shall be drawn and inspection completed in a laboratory where necessary facilities for making proper inspection are available.

B. Other Than Under Marketing Order

Inspection Service may be furnished wherever any inspector or licensed sampler is available and the facilities and conditions are satisfactory for the conduct of such service.

III WHEN INSPECTION MAY BE DECLINED

- A. If the product is not accessible to permit proper sampling.
- B. If abuse, intimidation, or threats of bodily harm are made against the inspector.
- C. If undue interference is made with the inspection operation.

- D. If the inspection service has been notified by State or Federal Regulatory Authorities that the lot being tendered for inspection was prepared, stored, or handled under unsanitary conditions, rendering such lot in violation of State or Federal laws and regulations.
- E. For non-payment of inspection fees.
- F. When the product is not properly identifiable by code or other marks.
- G. Inspection may be declined for any other reason cited in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables and Related Products", as a basis for rejecting an application for inspection.

IV FOOD AND DRUG REQUIREMENTS

No specific standards or identity of quality have been established by the Food and Drug Administration for dates. Date products, however, are subject to the same general requirements for all foodstuffs: namely, they must be packed under sanitary conditions, must not be adulterated, must not be contaminated with decay, insects, filth or any deleterious substance; and they must be truthfully labeled.

SECTION 3 REQUIREMENTS FOR DATES REGULATED BY MARKETING ORDER NO. 987,
AS AMENDED.

I DATE VARIETIES COVERED UNDER THE MARKETING ORDER

Only Deglet Nour, Zahidi, Khadrawi, and Halawi dates are regulated under Order No. 987, These dates are divided into two categories, marketable dates and surplus dates.

A. Marketable Dates

Marketable dates are whole or pitted dates of the four varieties that are certified as equal to or higher than the applicable minimum grade provided for in the order and any additional, applicable requirements which may be in effect for any crop year or period. U. S. Grade C of the U. S. Standards for Grades of Dates is the minimum grade requirement for marketable dates now. Exhibit 1 summarizes the current effective grade and size regulations covering all marketable dates under the marketing order. These regulations may change from season to season and within seasons. A new summary will be issued when ever major changes occur. Notification will be made whenever any other changes or requirements occur.

There are several designations under the marketable date category.

1. Free Dates

These are dates which are free to be handled pursuant to any free percentages established by the Secretary of Agriculture in accordance with the provisions of the order. Such dates are packed and utilized for general consumer consumption and not for manufacturing or by product use.

Dates of this classification are designated as "DAC" dates on the reporting certificate.

Such shipping container shall be marked to indicate the lot number, designation and handler or distributor. In addition the container shall be marked with the letters "DAC", the date of inspection and "U. S. Department of Agriculture." One of our modified shielded stamps is usually used for this purpose.

2. Further Processing Dates

These are cleaned and graded dry dates. Dates of this classification are inspected and must meet the same grade and size requirements as free dates

except for the character factor associated with moisture. Further processing dates are usually sold by one handler to another who will process and package the dates for shipment and sale.

FP dates, as they are commonly called, are held in fiber cases, lugs or bins. Each container shall be marked to indicate the lot number, designation and handler. If the dates are stored at the place of inspection the lot is usually marked with a card to show that the dates meet the FP requirements. If the dates are to be moved each container shall be marked with the letters "FP", the date of inspection and "U. S. Department of Agriculture".

Again one of our shielded stamps is used for this purpose. The dates are designated as "FP dates on the reporting certificate.

After the FP dates are processed and packed they are inspected to insure that they have been properly processed and meet the requirements for free dates. Thus they are handled, inspected, and reported in the same manner as free dates.

3. Restricted Dates

Restricted dates are dates that are withheld from normal free date marketing channels by handlers. These dates must be utilized in markets that don't compete with free dates or be marketed as a by-product or an approved form that doesn't directly compete with free dates.

The percent or amount of restricted dates withheld is determined each crop year. Generally it is based on whether the demand for dates is adequate to utilize the supply of dates. Any excess of supply is restricted or withheld from the free date markets. Sales of dates in all the date categories has approached or exceeded the supply of dates during the past several years and no restricted percentages have been imposed by the marketing order.

Restricted dates are inspected and identified as "EXPORT", "PRODUCTS" or "FIELD-RUN" dates.

Export dates are dates packed and shipped to countries other than the United States and Canada. These dates are designated as "EXPORT" dates on the reporting certificate. Each shipping container shall be marked to indicate the lot number, designation and handler. The containers shall also

be marked with the letters "EXPORT", the date of inspection and "U. S. Department of Agriculture". In addition, containers exported to Mexico must be marked "EXPORT MEXICO".

Product dates are dates packed for manufacturing or by-product use. These dates are designated as "PRODUCT" dates on the reporting certificate.

Product dates are usually packed in fiber cases, lugs or bins. Each container shall be marked to indicate the lot number, designation and handler unless inspection is concurrent with conversion into an approved product. Each lot shall be tagged with a Date Administrative Committee Restricted card showing the lot number, number of containers, date of inspection and the inspectors name.

Field-run restricted dates are field-run dates set aside in lugs or bins for disposition under the supervision of the Date Administrative Committee through approved manufacturers or feeders.

Inspection is made of the lot to determine the amount of dates it contains that would meet the effective minimum requirements for restricted dates if properly cleaned. These dates are designated as "FIELD-RUN" dates on the reporting certificate.

Each lot shall be tagged with a Date administrative Committee Restricted Card showing the lot number, number of containers, date of inspection and the inspector's name.

B. Surplus Dates

Surplus dates are dates that fail to meet the requirements of Marketable dates. These dates can be divided into two classifications.

1. Utility Dates (Substandard)

These are dates which fail to meet the requirements for marketable dates but are not cull dates.

Utility dates may be utilized in certain products for human consumption that the Date Administrative Committee and the Secretary of Agriculture approve. These dates are designated as "UTILITY" on the reporting certificate. Each lot shall be tagged with a Date Administrative Committee Restricted card showing the lot number, number of containers, date of inspection and the inspectors name.

2. Cull Dates

These are dates which fail to meet the requirements (with respect to freedom from defects) prescribed in section 798 of the Agricultural Code of California for dates for use in products or by-products other than alcohol, brandy and products not intended for human consumption and any dates residual from field or packing house grading operations. Cull dates generally are dates affected by food and drug defects such as but not limited to:

Insect infestation or excreta, decay, mold, fermentation or souring, dirt or other foreign material. Also included are dates damaged by black scald, side spot and improper ripening.

Under the Marketing Order all accounting and disposition of cull dates are handled by the Date Administrative Committee.

II OTHER SERVICES UNDER THE MARKETING ORDER

A. Notification of Failing Lot

Whenever a lot of dates fails to meet the requirements under the Marketing Order a serially numbered Notification of Failing Lot is issued to the packer. All the pertinent information regarding the lot is to be filled in on the form. The packer's part of the form is to be attached to the lot. The part of the form that notifies the Date Committee of the failing lot is usually sent to the Date Committee with the certificate covering the lot.

B. Surveillance and Reconditioning of Failing Lot

The inspector shall make and maintain surveillance of the rejected lot to the fullest extent practical. The handler may desire to recondition or segregate some of the rejected lot in order to bring the entire lot, or portion thereof, up to minimum grade and condition requirements.

When a lot that has been previously failed is reconditioned, or when any portion of a failed lot has been reconditioned to bring it up to minimum grade and condition requirements, such reconditioned lot, or portion thereof, shall be considered a new lot.

C. Disposition of Failing Lot

When a failing lot has been reconditioned or disposed of in appropriate channels the packer completes the disposition portion of the Notification of Failing Lot. The inspector then completes the verification section of the form and returns the completed form to the Date Committee to verify compliance with the Marketing Order.

D. Violations of the Marketing Order

Any violations of the Marketing Order of which the inspector may be aware or has observed relative to non-compliance of minimum grade and condition requirements or disposition of failed lots shall be reported to his supervisor.

III APPEAL INSPECTIONS UNDER THE MARKETING ORDER

If an appeal inspection is requested under the Date Marketing Order, the request for such appeal shall be referred to the supervisor immediately upon receipt of application. The inspector handling the appeal shall draw a duplicate check sample that shall be retained for further review as may be warranted.

SECTION 4 INSPECTION PROCEDURE

I GENERAL

The inspector shall use equipment, methods of tests, and reporting forms as directed by his supervisor and which are adequate for determining the grade and condition of the dates and for reporting the grade and condition thereof.

Special forms and reports as specifically mentioned in these instructions for use under the Date Marketing Order would not be used in the inspection of dates in areas not covered by these programs.

Inspection will be accomplished in one of the following ways:

1. On unofficially submitted samples.
2. On officially drawn samples from lots in which the packing operations have not been observed.
3. By in-plant inspection during the process of preparation and packing and on the packed product.

II INSPECTION EQUIPMENT OR MATERIALS

The following basic equipments and materials are required for the inspection of dates.

Scale measuring in one-tenth ounce gradation.
Gram scale.
Short-bladed cutting knife.
U. S. Standards for Grades of Dates,
Federal Specification
Dates and Instructions for Inspection of Dates.
Score sheets, certificates or report forms.
Inspection identifying stamps.

Additional equipment may be necessary to perform special analysis and shall be available to the inspector or suitable arrangements shall be made to have such analysis made in a Processed Products laboratory.

III CERTIFICATES, RECORDS, AND REPORT FORMS

See separate section of these instructions on "Preparation of Certificates, Records, and Reports".

A. Score Sheets

The purpose of the score sheet is to record all necessary data derived from examination of the date samples. All the information on the score sheet should be complete so a person with the inspectors power-of-attorney could write the inspection certificate from the score sheet. Exhibit 3a, score sheet for dates (Form FV-364-78 can be used to record inspection data.

Score sheets may be specially designed to accomodate different plant and inspection situations. Space and headings should be provided for all necessary data. Any other information pertinent may be recorded in any suitable place on the score sheet.

B. Form Letters

Special form letters may be necessary to coordinate and expedite inspection and certification of dates where large volumes or many items are handled. Exhibit 2, Daily Certification Request, is one type of form.

C. Certification Forms

Forms of an official nature, such as for certification, shall be those that are officially approved for such use. The certification forms used in the inspection of dates are:

1. Those forms normally used for the certification of all processed fruits and vegetables, as explained in file code 165-A-1, Instructions for Certification of Processed Products, and include the current Form FV-146, Form FV-149, Form FV-66, and letter reports.
2. Special certificate forms, such as Form FV-101 for specific use under the Date Marketing Order No. 987, as amended".

IV IDENTIFICATION OF LOT

Each lot of dates offered for inspection must be identified in order that it may be properly inspected and certified.

A. Definition of Lot

"Lot" for the purpose of inspection and certification other than under the Date Marketing Order shall be defined in the "Regulations Governing the Inspection and Certification of Processed Fruits and Vegetables and Related Products".

"Lot" for the purpose of inspection and certification under the Date Marketing Order means dates of the same variety, style, type and grade, in any number of like containers.

B. Recording Identification of Lot

The following information shall be recorded on the worksheets or score sheets covering all lots of dates inspected:

Name and address of handler or distributor.
Label or brand name.
Declared net weight.
Code marks -- required on all shipping containers
under the Date Marketing Order.
Variety, if shown.
Type
Style.
Pertinent markings on shipping containers.

V Count and Net Weight

The inspector should record the count and net weight as declared by the applicant. If the lot appears to contain more or less than declared by the applicant or if the fill of container appears to contain less than the declared net weight the inspector should make a physical count of the number of containers in the lot and a sufficient number of containers should be weighed to determine the accuracy of the net weight declaration.

VI Sampling

Samples shall be drawn in accordance with the effective "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables and Related Products." Exhibit 4, Sampling Plans For Dates is drawn from the "Regulations" and shows single sampling plans for various container and lot sizes.

A. Size of Sample

Samples consist of 25 ounce sample units, each of which may be a composite of dates from a sufficient number of individual containers from 1 case to make up the weight. When previous inspection results from a particular source so indicate, 1 composite sample of 25 ounces of dates may be formed from the 3 sample units in the smallest sample size and 2 composite samples of 25 ounces each may be formed from the 6 sample units in the next to smallest sample size.

Whenever composite sample units are utilized to determine grade and condition no deviants can be allowed. Therefore the acceptance number in the sampling plans can only be used with individual sample units.

VII MOISTURE DETERMINATION

Although moisture testing is not yet used universally in the date industry it is apparent that optimum moisture content has a direct bearing on quality, consumer acceptance and the shelf life of the product. As a result the industry is using the moisture content of dates to determine picking, grading, storage, processing and packing operations.

Two types of moisture testing machines are used. One is the Dried Fruit Association Moisture Tester which has been used for many years in the dried fruit industry. The other is an electronic type put out by the Moisture Register Company, Alhambra, California.

Other methods for determining the moisture content of dates are the vacuum oven and refractometer.

VIII VERIFICATION OF VARIETAL TYPES

The varietal date type shall be recorded on the work sheet.

If in doubt, the inspector shall ascertain the type from the applicant and qualify as "Applicant states: _____ variety."

Under the Date Marketing Order, only those varietal types of dates regulated under the order are to be inspected.

IX VERIFICATION OF "Dry" DATES

Since the United States Standards for Grades of Dates include separate grades of "U. S. GRADE B (Dry) or U. S. CHOICE (Dry) and U. S. GRADE C (Dry) or U. S. STANDARD (Dry)," inspectors in the producing and processing areas shall become familiar with the characteristics of dry dates for processing to which these grades apply.

In areas other than the producing and processing areas, the dates shall be inspected on the basis of criteria applicable to the other grades in the standards.

SECTION 5 DETERMINATION OF GRADE AND CONDITION

I GENERAL

Each inspector is furnished with the latest United States Standards for Grades of Dates and the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables and Related Products. The Lot Certification Tolerance statement in the August 26, 1955 issue of the grade-standards for dates is amended by the current "Regulations".

II SCORING FACTORS

The United States Standards for Grades of Dates describe and establish requirements for the quality factors on a scoring basis. In order to apply the grade-standards as uniformly as possible, it is necessary for each inspector to gain experience under supervision of those familiar with the inspection of dates.

Inspectors should be guided by their supervisors when there is any doubt as to the correct interpretation of any requirement of the standards. This is particularly important whenever unusual conditions are encountered or when an error in the interpretation of a requirement will change the product from one grade to another. Quality requirements which involve judgment as to the extent to which the appearance and eating quality is affected should always be checked with the supervisor unless there is reasonable assurance that the proper interpretation is being applied.

A. Color

Detailed procedure for scoring the factor of color is outlined herein; however, when the sample very definitely falls within any given grade classification, score points may be assigned without making the detailed separation. If in doubt with respect to the score for color, always make the detailed separation for determining the score.

1. Grade A Color

The basic requirement of the Date sample for the score in the Grade A Classification is that it possess a "good color". This color may be any shade of amber that is typical of the variety, and if this color is practically uniform, not only between dates, but over the surface of the sample, a score in the Grade A range may be given.

2. Grade B or B (Dry) Color

If the basic color of the date sample is a reasonable uniform, typical amber but some of the whole or pitted dates are quite variable, lighter or darker amber, than the overall appearance of the sample, a score in the grade B range may be assigned.

If date samples score in the (B) classification of 16 or 17 points, they may not be graded above Grade B, regardless of the total score.

3. Grade C or C(Dry) Color

The basic criteria for this grade is that the date sample be a fairly uniform, typical amber in respect to whole and pitted dates and the highest color assigned date pieces or macerated dates.

Dates that have been burned to a cherry-red color through over-hydration, should not be down graded under the factor of color but rather, under defects. This also, applies to damaging by sunburn, and damaging by discoloration as defined in the U. S. Standards for Grades of Dates.

If date samples score in the (C) classification of 14 or 15 points, they may not be graded above Grade C, regardless of the total score.

4. Assigning the Score and Grade

In addition to the foregoing color requirements for each scoring classification, the following table may be used as a guide in assigning the score.

Classification	Score Points	Marked Variation (By Count)	
A	20	Over 0% to 1%	Variation
	19	Over 1% to 3%	"
	18	Over 3% to 5%	"
B and B (Dry)	17	Over 5% to 8%	"
	16	Over 8% to 10%	"
C and C (Dry)	15	Over 10% to 15%	"
	14	Over 15% to 20%	"
SSTD.	13 or less	Over 20%	"

* Limiting rule.

TABLE FOR SCORING DEFECT FACTORS FOR GRADES OF DATES
(Percent By Weight)

Grade	Score Points	Date Affected by	Dates Damaged by	Dates Damaged by	Dates Damaged by	
A		Decay	Improper ripening	Side spot or black scald.	Discoloration, broken skin, scars, checking, deformity, puffiness, sunburn, insect injury, improper hydrating, mashing, mechanical injury, lack of pollination, black nose, serious checking or puffiness. Maximum including defects at left 10%.	
	30	Max 1% 0%	Maximum including defect at left 4%	Maximum including defects at left 6%		1-2%
	29	2%				3-4%
	28	3%				5-7%
B		Decay	Improper ripening	Side spot, black scale, black nose, lack of pollination	Deformity, puffiness, scar, insect injury, improper hydrating, mashing, mechanical injury, serious puffiness Maximum including defects at left 15%.	
	26	1%	Maximum including defect at left 5%	Maximum including defects at left 10%		1-5%
	25	1%				6-10%
	24	1%				11-15%
C		Decay	Improper ripening	Side spot, black scale, black nose, lack of pollination	Deformity, scars, sunburn, insect injury, improper hydrating, mashing, mechanical injury, serious puffiness. Maximum including defects at left 20%	
	23	1%	Maximum including defect at left 5%	Maximum including defects at left 10%		1-5%
	22	2%				6-10%
	21	2%				11-15%
* (Special)		Decay	Improper ripening	Side spot, black scale, black nose, lack of pollination	Deformity, scars, sunburn, insect injury, improper hydrating, mashing, mechanical injury, serious puffiness. Maximum including defects at left 20%	
	23	1%	Maximum including defect at left 5%	Maximum including defects at left 10%		1-5%
	22	2%				6-10%
	21	2%				11-15%

* Scoring rule

B. Uniformity of Size

Only "whole" and "pitted" styles of dates are scored as to uniformity of size. For other styles, follow the USDA grade-standards in the application of this factor with respect to other scoring factors.

1. Grade A Classification - Score 9 or 10 points

Score as 10 points when practically all of the dates appear visually to be of the same size even though some may be slightly larger or smaller than the average size.

Score as 9 points when by visual examination approximately 10 percent of the dates appear to be conspicuously larger or smaller than the average size. If the proportion seems noticeable, or border-line, ascertain the percentage by weight those dates that are definitely and conspicuously not of average size.

2. Grade B Classification - Score 8 points

When by visual examination approximately 10 to 15 percent of the dates are definitely and conspicuously not of average size, score as 8 points. When the sample appears to be borderline, ascertain the percentages by weight since a score of 8 points limits the sample to Grade B, regardless of the total score.

3. Grade C Classification - Score 7 points

Score as 7 points when 15 to 20 percent by weight of the dates visually vary definitely and conspicuously from the average date size. Date samples that score 7 points are limited to Grade C, regardless of total score.

4. SSTD Classification - Score 0 to 6 points

Before scoring the size of dates in this range, ascertain from an adequate sample the percentage by weight of those that are definitely and conspicuously smaller or larger than the average size. If the proportion of not-average size dates approaches 50 percent score as 0 to 1; approximately 45 percent as 2 or 3; approximately 40 percent as 4 or 5; and approximately 30 percent as 6 points.

C. Defects

Although numerous defects are common to dates, only a few predominate from year to year. As an example, insect injury or damage by the "red spider mite" may appear in such prominence as to ruin the quality of an entire garden, if poor control of the pest is practiced. A particularly humid season may result in an excess of "black nose" or "serious damage by checking"; or an improperly thinned garden in a windy area may result in the fruit being "damaged by scars." Rainy years usually result in considerable quantities of moldy dates. Date gardens with excessive decaying dates and organic material on the soil, and where poor control or improper timing of insecticide applications are practiced, usually end up with a serious insect problem.

Each scoreable defect is defined in detail in the USDA grade-standards and should be followed together with supervisory instruction that may be necessary for proper interpretation. As a ready reference and work sheet use the reverse side of the Score Sheet for Dates, (Form FV-364-78 Reverse, Exhibit 4b), which contains a summary of the maximum allowances for defects in the various categories.

The most time consuming part of the examination for defects is the determination for wholesomeness. These are the "Food and Drug Defects" that affect the dates by souring, mold, dirt, insect infestation, foreign material or decay. Each date in the sample is examined and opened up for this determination.

An alternate method for determining the Food and Drug defects can be found in the "Instructions For Inspection of Imported Dates," file code 157-0-5. This is a sequential method of examining 25 dates at a time to determine if the sample is accepted or rejected. This method can be a time saver if the lot of dates has very few or very many Food and Drug defects.

1. Assigning the Score and Grade

Score for defects may be assigned in accordance with the groupings on the table, Scoring Defect Factors for Grades of Dates, and as further outlined in the USDA grade-standards and these instructions.

These score points depend upon the kind of defects found and in accordance with the limitations within the total allowance for each grade classification.

As an explanation of the "Defect Table", score as 27 points when the total of all defects for Grade A

is 10 percent, including not more than 6 percent side spot or black scald, of the 6 percent not more than 4 percent can be souring, mold, insect infestation, dirt, foreign material or improper ripening and of the 4 percent not more than 1 percent can be decay.

Score corresponding points whenever the total percent of applicable defects indicates a particular score and the limitations of the more serious defects are within the allowances.

Whenever a date sample is scored into a lower grade because of defects the sample may not be graded above that grade regardless of the total score.

D. Pit Determination

Whole pitted dates, date pieces and macerated dates must meet the criteria for absence of pits or pit pieces. The tolerance is two pit fragments, (2 mm or longer, measured in the longest dimension) or one whole pit per 25 ounces of dates or date material on a sample average basis. This determination can usually be accomplished while cutting the 25 ounce sample for Food and Drug defects.

E. Character

The character of dates depends on several factors which are inter-related. The main points to consider are the degree of development, fleshiness, softness, ripeness, dryness and the presence of semi-dry and dry calyx ends. Character, therefore, does not refer only to maturity or ripeness, as such, but to a combination of characteristics that establishes the degree of the dates excellence by eating. It is important that the varying degree of these individual features be considered in relation to the maturity and ripeness for the variety inspected. "Development" relates to the stage of growth in fruit size and maturity.

"Fleshiness" refers to the thickness of the date material, in relation to the size of the date.

"Softness" refers to the lack of firmness in the texture of the date flesh and is generally reflected by the moisture content, whether natural or induced through a hydration process. Softness is also associated with the breakdown of the cell wall structure of the date flesh permitting the date to ripen completely.

"Ripeness" is the degree by which the cell wall structure of the date flesh has been broken down. A completely ripened date is translucent, pliable and has no woodyness to the flesh. In the final stage of ripeness the date is "cured" by partial drying and will not ferment or sour. If the drying process proceeds too far the texture of the date will be too firm and will require some hydration to increase its moisture and soften the texture.

Texture, firmness or dryness of the date is generally referred to as semi-dry or dry end. A semi-dry end date means that the flesh at the stem end of a date, constituting not less than one-eighth and not more than one-fourth of the date is noticeably firm and materially more dry than the balance of the date. A dry end date means that the flesh at the stem end of a date, constituting more than one-fourth of the date is hard and materially more dry than the balance of the date.

When grading dry dates for processing, the moisture and texture factors are disregarded and a "dry" grade is assigned based on the other factors prescribed. Dry classifications are usually utilized only in production and processing areas between packers, processors and manufacturers.

1. Grade A Classification

In this classification are score WHOLE OR PITTED dates which possess "good character" and are not "dry dates for processing". To score 36 to 40 points not less than 75 percent, by weight, of the dates are well-developed and plump with fleshy portions of good cellular structure and of a softness characteristic for well-ripened, properly matured dates of the variety. In this grouping the dates may have semi-dry varietal characteristics if they are otherwise of "good character."

If the dates at time of packing are not of a "well-ripened" stage, consideration shall be given to their state of ripeness that will develop into such "good character" within 15 days.

Assignment of the score points in the (A) classification shall depend on the remainder of the sample which may not be of good character and the moisture or texture factors. The following guide may be used to assign score points for dates that fall into the (A) Classification:

PERCENT BY WEIGHT

<u>Score Points</u>	<u>Reasonably good Character</u> (Maximum)	<u>Semi-dry Calyx ends</u>	<u>Dry calyx ends</u>
40	10%	None	None
39	10% including	1%	None
38	15% "	2%	None
37	20% "	2%	None
36	25% "	2%	None

2. Grade B. Classification

In this classification, WHOLE or PITTED dates are scored on the basis of whether they are dry or whether they are not dry dates for processing.

Those dates which are not "dry dates for processing" are scorable as 32 to 35 points if practically all the dates are pliable. This means that the texture may be approaching dryness but the fleshy portion of the dates are generally pliable even though some dates may possess a slight firmness in a portion of the date. In addition, no less than 75 percent, by weight, of the dates are reasonably well-developed and reasonably well-fleshed with a degree of plumpness and cell wall breakdown of reasonably well-ripened dates for the variety.

If the dates at time of packing are not of this stage of being "reasonably well-ripened", consideration shall be given to their state of ripeness that will develop into such "reasonably good character" within 15 days.

The assignment of score is further based on the presence of dates which do not meet such "reasonably good character" including dates with semi-dry and dry calyx ends.

The character of "dry dates for processing" in this classification permits them to be definitely firm and dry instead of pliable. Disregarding the moisture content, no less than 75 percent, by weight, shall otherwise possess a "reasonably good character" with respect to development and ripeness for the variety. There is no limit for dates with semi-dry or dry calyx ends in "dry dates for processing."

The following guide may be used to assign score points for dates that fall into the (B) Classification:

Percent by Weight

DATES, not "dry for processing"	<u>Score Points</u>	<u>Fairly good Character (maximum)</u>	<u>Semi-dry Calyx ends</u>	<u>Dry calyx ends</u>
	35	10% including	4%	and 1%
	34	15% "	6%	and 1%
	33	20% "	8%	and 2%
	32	25% "	10%	and 2%

DATES, "dry for processing"	<u>Score Points</u>	<u>Fairly good character (maximum)</u>	<u>Semi-dry or dry calyx ends</u>
	35	10%	No limit
	34	15%	No limit
	33	20%	No limit
	32	25%	No limit

3. Grade C Classification

Whole or pitted dates that are not "dry dates for processing" are scored in this classification if definitely firm though pliable. In addition no less than 80 percent, by weight, of the dates are fairly well developed, fairly well fleshed and fairly well ripened.

If the dates at time of packing are not of this character, consideration shall be given to their state of ripeness that will develop into such "fairly good character" within 15 days.

Dates that are otherwise of "fairly good character" may possess semi-dry calyx ends and not more than 20 percent dry calyx ends in combination with other dates that are not of fairly good character.

The character of "dry dates for processing" in this classification permits them to be definitely firm and dry instead of pliable. The development and fleshiness of the dates, disregarding the lack of moisture, shall be fairly well developed, fairly well fleshed and fairly well ripened. There is no limit on semi-dry calyx ends or dry calyx ends for "dry dates for processing."

The following guide may be used to assign score points for dates that fall into the (C) classification:

Score Points	<u>Percent by Weight</u>		
	<u>Fairly good character</u>	<u>Semi-dry calyx ends (maximum)</u>	<u>Fails to meet fairly good character including "dry calyx ends" (maximum)</u>
31	95% to 100%	25%	5%
30	90% to 95%	50%	10%
29	85% to 90%	75%	15%
28	80% to 85%	100%	20%

WHOLE or PITTED DATES not "dry dates for processing"

WHOLE DATES "dry dates for processing"

Score as above, disregarding factors associated with moisture and without regard to semi-dry calyx ends or dry calyx ends.

4. Substandard Classification

Dates scored less than 27 points are those which definitely do not meet the foregoing requirements; and include but are not necessarily limited to dates that are immature, fleshless, deeply wrinkled and rubbery.

SECTION 6 PREPARATION OF RECORDS AND REPORTS

I WORK SHEETS

The inspector will be furnished with appropriate work sheets for recording all pertinent information relative to the inspection including the detailed inspection results. The inspector shall record in this work sheet such information indicated by the specific headings as may be applicable to the inspection involved. He shall also record any other information that may be pertinent and useful for issuing inspection reports.

Work sheets shall be attached to the inspector's file copy of inspection report as soon as issued and maintained in an appropriate file for reference.

The inspector shall manually sign the work sheets.

II INSPECTION CERTIFICATES

A. Not Under Order

These forms should be used for certification of lots of dates not regulated under the Marketing Order, for export shipment, for delivery to Government procurement agencies (Federal, State, or city), or any other instance in which the applicant needs a regular inspection certificate.

These certificates should be prepared in accordance with existing instructions furnished all processed fruit and vegetable inspectors.

1. Distribution

These forms shall be distributed in accordance with existing instructions furnished all processed fruit and vegetable inspectors.

B. Inspection Reports Under Marketing Order (Form FV-101)

The inspector shall issue a Date Inspection Report, FV-101 (Exhibit 5) covering the daily inspection of lots of dates for each handler.

1. Completion of Form FV-101

In order to assure a uniform method of reporting results of inspection under the Marketing Order, the following instructions and entries should be followed:

All entries shall be typewritten or printed with a ball-point pen. All headings shall be completed except where an entry is not applicable, in which case a dash should be entered in lieu of information data. An example of this would be when the lot consists of 30 pound wood lugs no net weight range would be shown.

When completing Form FV-101, insert the certificate number in the space provided on the corresponding work or score sheet(s).

Fill in the appropriate information as indicated for the applicable headings of this report form as follows:

No..... The certificate number must be inserted on each form as it is used. A 2 letter handler code is followed by the number in numerical sequence. (Example: KE-297) KE stands for Alamo Ranch Company and 297 is the 297th certificate used for the Alamo Ranch Company. Your supervisor will inform you of handler prefixes or code and correct numbers.

Date..... The date of the day inspection was completed. (Example 9-1-76 or Sept. 1, 1976.)

Applicant... The name of the packer or processor requesting the inspection as the exact operating name.
(Example: Alamo Ranch Co.)

Address..... The main office address of the applicant (packer or processor requesting the inspection). Some packers or processors have more than one plant location; be sure to report that of their main office.

Item No..... A particular certification lot as it appears on the report so it can be identified on the report.

Variety..... Enter whichever applies:
Examples: "Deglet Noor" or under remarks
"Applicant states: Zahidi

Style..... Enter whichever style applies:
(Examples: Whole
Pitted
Pieces or Macerated)

Market Order

Designation.. Enter applicable term:
Examples: DAC FP
 EXPORT PRODUCTS
 FIELD-RUN

Handler's

count ... Check the count of containers (or cases) if practical. Make the entry clear and legible, and use numbers only, separating counts over 100 by a comma.
(Examples: 300
3,000)

Size and
type of

containers .. Record accurately as to size and types.
(Examples: 24/8 oz. ctns.
24/250 g plastic cups
12/24oz. film bags
12 lb. fiber cases
15 lb. wood flats
30 lb. L.A. lugs)

Net weight .. Record the total net weight (of product) of the lot(s). Double check multiplication, and show the total figure (of lbs.) clearly.

Label

(if any) Enter only the principle title of the label, such as the brand name:

(Examples: Desert Sweets
Desert Dates
Redi-Date)

If not labeled, enter the word "UNLABELED".

Code or
other
identi-

fication Record exactly as it appears on the container. If more than one code is covered on one lot insert "See remarks" and record under remarks.

Type If natural or dry, enter the letter "N".
If hydrated, enter the letter "H".

Net weight
range

If net weights of the individual packages meets applicable net weight criteria enter the word "Meets". Otherwise show net weight range. (Example: 11 - 12.5)

Count per

pound Show the range of counts per pound.
(Example: 45 to 51)

- Points Show average of score points.
(Example: 85)
- Grade Enter the appropriate grade statement.
(Examples: B
C (Dry)
SSTD)
- Remarks..... (1) To be used if the code space is too small.
- (2) To describe special types of packaging.
- (3) In cases where lots are regraded or repacked, record the original certificate number and pertinent information:

(Example: "Previously certified as F.P. Certificate No. KE-000)
- (4) If inspection occurs at place other than applicant's plant, record location under the space for "remarks".
- Signature... Sign your official signature exactly as it appears on your appointment papers.

2. Distribution of Date Inspection Report FV-101

Original to the applicant.
1 copy to Date Administrative Committee.
1 copy with score sheets.
1 copy for Indio Inspection sub-office.
1 copy for special file (Export)

3. Correction of Inspection Reports

If the inspector detects an error in a memorandum report, or if an error is called to his attention and a review of inspection records confirms such error, he should immediately issue a corrected Inspection Report. In the upper right hand corner of the report write in the word "CORRECTED CERTIFICATE". Under "Remarks" add a statement as follow:

"This report supersedes Report No. _____
dated _____ which was issued in error."

Distribute the corrected report in the same manner as the report that it supersedes.

C. Report Ledger

All dates inspected in the production area and certified on the Date Inspection Report FV-101 are to be entered in the Report Ledger for billing purposes. Macerated dates, date pieces or other forms of dates inspected and certified on

FV-149 and FV-146 certificates shall also be entered on the Report Ledger. Each handler shall have a separate ledger for any poundage reported during each accounting period.

1. Completion of Report Ledger

Plant Name of handler and plant
(Example Calif. Date Growers Ass'n, Plant 2)

Page Page number in ledger in numerical sequence.

Number Certificate number for which entry is to be made.

(Example: KE-297
FV-146 K 10000)

Date used.... Date the certificate was actually written.
(Example: 6-16-69)

Pounds..... Enter total number of pounds covered by the certificate.
(Example: 11,500)

Designation.. Enter appropriate Date Committee designation or other indication of date inspection.
(Examples: DAC, FP, PRODUCTS, Macerate, Miscellaneous)

Inspector..... Enter inspectors initials.

At end of period total all poundage and report for the period.

2. Distribution of Report Ledger

Original stays in ledger for inspectors file.

1 copy for Indio sub-office.

1 copy to Los Angeles Area Field Office through Indio sub-office.

Exhibit 1

DAC Date Grade, Size and Container Regulations

The effective grade, size and container regulations covering the date varieties under Federal Marketing Order No. 987, as Amended, are as follows:

FREE DATES - Whole or pitted dates packed for domestic handling and shipping (DAC Dates). Cases stamped with "DAC" stamp. Designate as "DAC" on report. Dates shipped to Canada are FREE DATES and are not designated in "EXPORT" category.

MINIMUM DATE GRADE	<u>Deglet Noor</u>	<u>Zahidi</u>	<u>Khadrawi</u>	<u>Halawi</u>
Color	16	16	16	16
Size	8	8	8	8
Defects	24	24	24	24
Character /	<u>32</u>	<u>32</u>	<u>32</u>	<u>32</u>
Total Score	80	80	80	80
Grade	B or B(Dry)	B or B(Dry)	B or B(Dry)	B or B (Dry)

/1 May include not more than 25 percent, by weight, of the dates that posses semi-dry calyx ends: provided that not more than 5 percent, by weight, of the dates may posses dry calyx ends.

MINIMUM DATE SIZE	<u>Deglet Noor</u>	<u>Zahidi</u>	<u>Khadrawi</u>	<u>Halawi</u>
Natural and Hydrated				
Whole	6.5 grams	(MINIMUM DATE SIZE)
Pitted	none	(NOT APPLICABLE)

Size tolerance: 10 percent, by weight, of the dates may weigh less than specified weight.

FP DATES - Whole or pitted dates for further processing (graded dates - dry dates). Cases, lugs or bins stamped with "FP" stamp. Designate as "FP" on report.

MINIMUM DATE GRADE	<u>Deglet Noor</u>	<u>Zahidi</u>	<u>Khadrawi</u>	<u>Halawi</u>
Color	16	16	16	16
Size	8	8	8	8
Defects	24	24	24	24
Character	<u>32</u>	<u>32</u>	<u>32</u>	<u>32</u>
Total Score	80	80	80	80
Grade	B or B(Dry)	B or B(Dry)	B or B(Dry)	B or B(Dry)

MINIMUM DATE SIZE	<u>Deglet Noor</u>	<u>Zahidi</u>	<u>Khadrawi</u>	<u>Halawi</u>
Natural and Hydrated				
Whole	6.5 grams	(MINIMUM DATE SIZE)
Pitted	none	(NOT APPLICABLE)

Size Tolerance: 10 percent, by weight, of the date may weigh less than specified weight.

Exhibit 1a

RESTRICTED DATES - Whole or pitted dates for Restricted Credit. Dates for by-product use. Designate as "PRODUCTS" on report.

MINIMUM DATE GRADE	<u>Deglet Noor</u>	<u>Zahidi</u>	<u>Khadrawi</u>	<u>Halawi</u>
Color	14	14	14	14
Size	7	7	7	7
Defects <u>/1</u>	21	21	21	21
Character	<u>28</u>	<u>28</u>	<u>28</u>	<u>28</u>
Total Score	70	70	70	70
Grade	C or C(Dry)	C or C(Dry)	C or C(Dry)	C or C(Dry)

/1 Dates damaged by broken skin, mashing, and mechanical injury (not affecting eating quality) shall not be considered when determining the defect factor.

MINIMUM DATE SIZE	<u>Deglet Noor</u>	<u>Zahidi</u>	<u>Khadrawi</u>	<u>Halawi</u>
	NO MINIMUM DATE SIZE			

EXPORT DATES - Whole or pitted dates packed and exported for Restricted Credit - EXPORT. Cases or lugs stamped "EXPORT". Designate as "EXPORT" on report. Dates packed and certified DAC may be shipped export, except to Mexico, without restamping. Copy of FV-146, FV-149, or notification certificate covering lot required by DAC. Dates shipped to Mexico must be marked "EXPORT MEXICO" and stamped with "EXPORT" stamp.

MINIMUM DATE GRADE FOR ALL COUNTRIES EXCEPT CANADA AND MEXICO	<u>Deglet Noor</u>	<u>Zahidi</u>	<u>Khadrawi</u>	<u>Halawi</u>
Color	14	14	14	14
Size	7	7	7	7
Defects <u>/1</u>	24	21	21	21
Character	<u>31</u>	<u>28</u>	<u>28</u>	<u>28</u>
Total Score	76	70	70	70
Grade	C	C	C	C

/1 May include not more than 40 percent, by weight, of the dates that are damaged by broken skins.

MINIMUM DATE SIZE FOR ALL COUNTRIES EXCEPT CANADA AND MEXICO	<u>Deglet Noor</u>	<u>Zahidi</u>	<u>Khadrawi</u>	<u>Halawi</u>
	NO MINIMUM DATE SIZE			

Exhibit 1b

MINIMUM DATE GRADE AND SIZE FOR CANADA

Dates shipped to Canada have same requirements as "FREE DATES".

MINIMUM DATE GRADE AND SIZE FOR MEXICO

Dates shipped to Mexico have same requirements as "RESTRICTED DATES" and/or "UTILITY DATES".

EXPORT DATES - Program covering dates exported to France, Belgium, Spain, Netherlands, West Germany, Italy, Greece, Morocco, Algeria, Tunisia, Libya, Egypt and Sudan for processing and packaging operations.

EXPORT FP - Cleaned graded dates for further processing operations. Containers stamped "EXPORT", designate as "EXPORT FP".

MINIMUM DATE GRADE	<u>Deglet Noor</u>	<u>Zahidi</u>	<u>Khadrawi</u>	<u>Halawi</u>
Color	14	14	14	14
Size	7	7	7	7
Defects/1	24/2	21	21	21
Character	<u>31</u>	<u>28</u>	<u>28</u>	<u>28</u>
Total Score	76	70	70	70
Grade	C or C(Dry)	C or C(Dry)	C or C(Dry)	C or C(Dry)

/1 Dates with defects that can be removed by washing shall not be considered when determining the defect factor.

/2 May also include not more than 40 percent, by weight, of the dates that are damaged by broken skins.

MINIMUM DATE SIZE	<u>Deglet Noor</u>	<u>Zahidi</u>	<u>Khadrawi</u>	<u>Halawi</u>
	NO	MINIMUM	DATE	SIZE

UTILITY DATES - Dates for By-Product use or Export to Mexico that fail requirements of other categories for reasons other than F and D defects. Designate as "UTILITY".

LIMITATIONS	<u>Deglet Noor</u>	<u>Zahidi</u>	<u>Khadrawi</u>	<u>Halawi</u>
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Utility dates may not contain more than a total of 10% of dates affected by side spot, black scald, improper ripening (shrivel) fermentation or souring, mold, insect infestation, dirt or other foreign material and decay. Of the total not more than 5% can be affected by fermentation or souring, mold, insect infestation, dirt or other foreign material and decay. Of the 5% F and D defects not more than 2% can be decay.

MINIMUM DATE SIZE	<u>Deglet Noor</u>	<u>Zahidi</u>	<u>Khadrawi</u>	<u>Halawi</u>
	NO	MINIMUM	DATE	SIZE

Exhibit 1c

CONTAINERS

ALL REGULATED VARIETIES

EXPORT DATES - No container regulation.

FREE DATES - Dates packed for domestic use.

Whole dates - Plastic containers, other than bags limited to; 8 ozs., 12 ozs., 24 ozs., or in excess of 32 ozs.

Pitted dates - Plastic containers, other than bags limited to; 10 ozs., 16 ozs., 24 ozs., or in excess of 32 ozs.

Whole or pitted dates packed in other than plastic containers may be handled without regard to the net weight content.

DAILY CERTIFICATION REQUEST

Applicant _____

NO.	CODE	VARIETY	STYLE	TYPE	COUNT AND SIZE	NET WEIGHT	REPORT NO.	DAC DESIGNATION	REMARKS
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

EXHIBIT 2

SIGNED _____ DATE _____

U. S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

NAME AND ADDRESS OF APPLICANT

**SCORE SHEET FOR
DATES**
(EFFECTIVE AUGUST 26, 1955)

CONT. NO.

CERT. FORM

P. O. NO.

CERT. NO.

REF. NO.

NO. SIZE AND KIND OF CONTAINER

LABEL

CONTAINER MARK OR IDENTIFICATION	CARTONS	
	CASES	
NET WEIGHT (OUNCES)		
VARIETY		
STYLE		
COUNT PER POUND (UNPITTED)		
NO. OF PITS (PITTED) $\frac{1}{1}$		
MOISTURE (PERCENT) (IF DETERMINED)		
FACTORS	SCORE POINTS	
COLOR	(A) 18-20. (B) (B-Dry) 16-17* (C) (C-Dry) 14-15* (SStd) 0-13*	
UNIFORMITY OF SIZE	(A) 9-10 (B) (B-Dry) 8* (C) (C-Dry) 7* (SStd) 0-6*	
ABSENCE OF DEFECTS	(A) 27-30 (B) (B-Dry) 24-26* (C) (C-Dry) 21-23* (SStd) 0-20*	
CHARACTER	(A) 36-40 (B) (B-Dry) 32-36* (C) (C-Dry) 28-31* (SStd) 0-27*	
TOTAL SCORE	100	

EXHIBIT 3

OFFICIAL INSPECTOR

DATE

PRINCIPAL REASONS FOR DEGRADING PRODUCT

CHARGE ON CERTIFICATE

FEE

EXPENSES

Limiting rule. $\frac{1}{1}$ Two pit fragments equal one pit.

U. S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

NAME AND ADDRESS OF APPLICANT

SCORE SHEET FOR

DATES

(EFFECTIVE AUGUST 26, 1955)

CONT. NO.	CERT. FORM
P. O. NO.	CERT. NO.
REF. NO.	

NO., SIZE AND KIND OF CONTAINER

LABEL

CONTAINER MARK OR IDENTIFICATION	CARTONS	CASES	SCORE POINTS	
			FACTORS	SCORE POINTS
NET WEIGHT (OUNCES)				
VARIETY				
STYLE				
COUNT PER POUND (UNPITTED)				
NO. OF PITS (PITTED) $\frac{1}{1}$				
MOISTURE (PERCENT) (IF DETERMINED)				
COLOR	20		(A) 18-20 (B) (B-Dry) 16-17* (C) (C-Dry) 14-16* (SStd) 0-18*	
UNIFORMITY OF SIZE	10		(A) 9-10 (B) (B-Dry) 8* (C) (C-Dry) 7* (SStd) 0-6*	
ABSENCE OF DEFECTS	30		(A) 27-30 (B) (B-Dry) 24-26* (C) (C-Dry) 21-28* (SStd) 0-20*	
CHARACTER	40		(A) 36-40 (B) (B-Dry) 32-35* (C) (C-Dry) 28-31* (SStd) 0-27*	
TOTAL SCORE	100			

OFFICIAL INSPECTOR

DATE

PRINCIPAL REASONS FOR DEGRADING PRODUCT

CHARGE ON CERTIFICATE

FEE

EXPENSES

* Limiting rule. 1/ Two pit fragments equal one pit.

EXHIBIT 4

SAMPLING PLANS FOR DATES

CONTAINER SIZE	Lot Inspection Sample Size	3	6	13	21	29
	Lot Inspection Acceptance No.	0	1	2	3	4
	On-Line In-Plant Sample Size	3	6	6	13	21
	On-Line In-Plant Acceptance No.	0	1	1	2	3
1 pound or under, 24 containers per case	100 or less cases	101 to 400 cases	401 to 1,300 cases	1,301 to 2,800 cases	2,801 to 4,833 cases	
Over 1 pound to 5 pounds, 12 containers per case OR 1 pound or under, 36 containers per case	66 or less cases	67 to 266 cases	267 to 866 cases	867 to 1,866 cases	1,867 to 3,222 cases	
12 pound case.	333 or less cases	334 to 1,333 cases	1,334 to 4,333 cases	4,334 to 9,333 cases	9,334 to 16,111 cases	
15 pound case	266 or less cases	267 to 1,066 cases	1,067 to 3,466 cases	3,467 to 7,466 cases	7,468 to 12,889 cases	
25 pound case	160 or less cases	161 to 640 cases	641 to 2,080 cases	2,081 to 4,480 cases	4,481 to 7,733 cases	
30 pound case CR 1 pound or under, 18 containers per case	133 or less cases	134 to 533 cases	534 to 1,733 cases	1,734 to 3,733 cases	3,734 to 6,444 cases	

