



## Produce Quality and Condition Script



### Slide 1:

Cover slide

*Notes to instructor: Welcome participants to this training session. If this session is part of a larger workshop, tell the participants in this next session, fresh produce quality will be presented and discussed.*

### Slide 2:

*Notes to instructor: Review the learning objectives with the participants.*

### Slide 3:

The Agricultural Marketing Service (AMS) develops descriptions for fresh produce quality and condition called U.S. Grade Standards. This uniform language is used to describe measurable quality and condition defects or absence of defects, such as shape, color, decay, bruising, etc. Grade standards help the buyer and the seller. The buyer knows what he/she is getting for the money. The seller doesn't have to worry about produce being returned and having unhappy customers. Plus, they can demand a higher price for better quality produce.

U.S. Grade Standards can be updated if the industry requests a change due to market demand. For example, in 2010 the industry requested a change to fresh potatoes to allow different varieties to be sold in a box labeled mixed.

### Slide 4:

Without industry requests for changes, grade standards could stay the same for years and years. One of the oldest fruit grades is for blackberries, which grade has not been updated since 1928.

When you receive U.S. No. 1 blackberries, they should be firm, blue or black in color (well colored), not misshapen, not soft, and no caps (also called calyxes). Not more than 10 percent of the blackberries in the lot can fail these requirements. If they do, they cannot be labeled U.S. No. 1 blackberries. Not more than 5 percent may have serious damage: berries that are badly deformed, crushed, leaky, moldy, or decayed. Finally, mold or decay is very detrimental to the grade standard because the product is virtually unusable. Not more than 1 percent of the lot can show signs of mold or decay.

*Notes to instructor: USDA AMS lot definition for fresh produce:*

*There is not a standard definition of lot. The seller may designate or identify the number of packages in a lot and can be separated by, varieties, brands, or markings that would identify the “lot.” At shipping point the “lot” may be a day’s run of a certain grade or brand, and may be thousands of containers, which would together be referred to that as a “lot.” At “market” or at the point of receiving, a wholesaler buyer may also designate a “lot” and it usually refers to a specified number of cartons to identify and reference an inspection that has been requested to a purchase order number, invoice, bill of lading, railroad car or tractor-trailer. The “lot” is used to identify the product (to the shipper) that can then be traced back to the delivery.*

*The lot number should be included in all documentation that can be used to trace the product either one step forward or one step backward in the event of a recall.*

**Slide 5:**

Your specifications may include grades, so you need to understand what the grades mean in order to write good specifications to get the product you desire. Use the specification and grade to train your receiving staff on what to look for during the delivery. You do not have to be a produce inspector, but you do need to know how grade standards relate to your job at the back door in your school or central kitchen.

Think about this question—you know you are supposed to get extra fancy apples because it is on the specification. You received a box from your distributor that says “Extra Fancy.” How do you really know that you got extra fancy apples?

**Slide 6:**

When an inspector assigns a grade, he or she evaluates the produce based on certain types of defects. The inspector deducts points from the “perfect score” for defects, depending on how many of the produce items in the case have that defect and how big the defects are that affect the case. We aren’t going to talk about grading, but we are going to talk about the defects, because they should be visible when you open boxes and look through your produce delivery at the point of receiving.

There are two main types of defects—quality defects and condition defects. Quality defects are those that occur during the growing process or sometime before the product was packed. A condition defect occurs during picking, packing, and shipping, or after the growing process.

We are going to go through five quality defects first, and then five condition defects. As we go through them, we will look at examples and talk about what these defects mean for the produce purchased for your programs.

**Slide 7:**

Produce shape may be altered because it is grown outside in uncertain conditions. It is difficult to control Mother Nature and her armies of insects, excess sun, rain, etc. Quality defects do not get worse over time. Would this cucumber get any more crooked, or would it suddenly become straight? No. This is an important distinction, which we will get to when we talk about condition defects.

Are you ever going to see a cucumber that crooked in a case that you get from your distributor? The farmer, the processor, or the distributor sorts products during grading and packing. For example, all the crooked cucumbers might be separated out from the cucumbers that make the highest grades. They might all get sold at a much lower price to someone who can use them even though they are crooked, maybe to a company that makes vegetable juice or who will run them all through a machine to chop or dice them.

Could you possibly get a cucumber that looks like this from your local farmer?

Would you still be able to use that cucumber?

*Notes to instructor: Time permitting, allow participants to share information on receiving produce direct from the farm.*

What if you don't want to get crooked cucumbers? How could you make sure these are not delivered to you?

*Notes to instructor: Answer: Ask for straight cucumbers in your bid specifications, or choose a grade that does not allow crooked cucumbers in the case.*

Quality defects do not affect taste. When your specifications state the apple must meet U.S. No. 1 requirements, the apple in the picture on this slide does not make the grade. It will taste exactly the same as a U.S. Extra Fancy apple. However, it may not fit through your fruit sectioning equipment. If you are planning to make applesauce, it may be acceptable.

**Slide 8:**

Our next quality defect is texture. Again, taste is probably not affected, just marketability. But, if you are going to make lemonade, you may not care whether the shape of this lemon is perfect or not. Intended use should drive what you purchase. You don't always need to buy the best or most perfect product. You can, but if you do, you will have to pay more.

**Slide 9:**

The next quality defect is scarring. This scar did not happen in the box; it happened in the field. When immature fruits or vegetables are injured, or the skin or rind gets a

scrape on it, the fruit or vegetable will try to heal itself. Just like when you get a scrape, your body may scar during the healing process. The scars will not get bigger, and they are not harmful.

Ask: So, does the scar matter to you? Will a student choose this (point to screen) apple on the lunch line? What if you are peeling all of the apples anyway? What if you are going to slice the apple? Will the scar be as noticeable on the serving line?

These are the questions you should ask yourself when writing specifications. Produce in a higher grade will not have excessive scarring—you may get an apple with a scar once in a while, but certainly not on every apple. But, again, you pay more to get apples without scars.

### **Slide 10:**

Color is also a quality defect, if the produce does not have the color considered to be characteristic of that particular product. The color requirement depends on the variety and the grade.

Strawberries must have three-fourths or more of the surface area a pink or red color to be considered a high grade. That means there might be a lot of white color (25%) on your U.S. No. 1 strawberries. Is that okay with you? What if you want your strawberries to be all red? Could you write that in your specifications? Keep in mind that anytime you ask your supplier to sort or pack your produce in a specific way, you will pay more.

Lower grade strawberries may have more white color on the surface. If you specify a lower grade strawberry, such as U.S. No. 2, you may receive strawberries that are mostly white or are misshapen. However, a U.S. No. 2 strawberry may be completely acceptable to use if you are slicing and placing them in fresh fruit cups.

These grapes are supposed to be red grapes. They would be considered poorly colored and not U.S. No. 1 by inspectors. However, would you still eat them? They may have a great taste and could be served with fresh red apple sliced for contrasting color. Both of these apples are probably acceptable in your school meals program. The well-colored red apple in this photo may grade higher and cost more just because it is considered to be “more red” according to the grade standards. Again, the intended use is key when you consider appearance and quality defects.

### **Slide 11:**

This is the fifth, and last quality defect that we will talk about today. These are healed over cracks that occurred during the growing process. For example, the potato might have grown next to a rock or vine or maybe grew too fast, and somehow an injury occurred. Just like your body heals, plants heal, too, after they are injured. As the produce continues to grow, cracks may form during the healing process.

Looking at these two vegetables, you probably would not serve either of these items in this form. If you wanted to cut those carrots into sticks, you might have to cut the defect off, and waste some of the carrot. But if you were going to chop the potato into pieces and roast them, then the crack and the removed scar might not be a problem.

To summarize quality defects, remember, the higher the grade, the better product quality will be based on appearance, not taste. There will be fewer defects in shape, texture, color, and scars that occurred during the growing process with higher grade products.

### **Slide 12:**

Now we are going to talk about condition defects. This is our first of five condition defects—bruising.

A farmer has to pick the product, put it in a container, process it, and put it on a truck, airplane, or train to get to you. Through these steps, the product may get bumped, banged, or dropped and bruised.

Condition defects may get progressively worse over time—either between the point at which it is graded and when the produce gets to you, or after the produce gets to you and is stored in the refrigerator. Remember, quality defects will not get worse over time, but condition defects will. Bruises may get softer or bigger over time, or may change the taste or texture of the product.

Do you want to get produce with bruises all over it? Do you want to pay the same price as you would non-bruised produce? No, of course not. Plus cutting out and throwing away the bruised produce will cost you more money.

### **Slide 13:**

The second condition defect is called “sunken discolored areas” or SDAs. This is a general term that describes any areas that look sunken and discolored for any reason. We may not always know the cause of sunken discolored areas, but they are considered condition defects that may affect the grade of the product.

They may also become bigger, more sunken, or more discolored over time. You will probably have to cut these out or discard the product if the defect is too large. Again, this will cost you money.

Another concern of SDAs is bacterial contamination. Bruised or damaged produce creates an entry point for pathogens. Damaged produce is more likely to be contaminated because the plant’s natural defenses are destroyed.

**Slide 14:**

Shriveling is our third condition defect. Produce contains a lot of water—for example, watermelon is 95% water. As produce gets older, it loses moisture and it starts to shrivel.

One reason produce might shrivel is due to temperature fluctuations. If you have ever taken plums out of the refrigerator to ripen and then placed them back in the refrigerator, they shrivel up. Maintaining the cold chain helps to prevent dehydration and shriveling.

You may be tempted to soak produce in water or ice water to “crisp” it. This practice is not recommended because contaminants could be in the water, which the produce will soak in.

If you get a box of produce from your distributor that is all shriveled, what might have happened? Could it have been temperature abused? Maybe the produce is older that you would like it to be? So what can you do about it?

**Slide 15:**

This condition defect is called surface discoloration. Has anybody ever seen an eggplant like this one? What would happen if you stored it for a few days, then decided to use it. The brown spots will be bigger. It may even be brown inside and soft. It will definitely deteriorate to the point where you have to throw it away before an eggplant without surface discoloration.

Unfortunately some surface discoloration only shows up after shipping. What would you do if you got a case of apples and several looked like this one? Again, if the produce does not meet your standards, talk to your vendor. Remember, you can get produce with little or no defects, but it may cost you a bit more money.

**Slide 16:**

The last condition defect that we are going to discuss is decay. No matter how large or small the decay area affected, it will be scored decayed and the grade will be affected.

Decay worsens rapidly. Decay may happen in storage and transit. You may open a case of produce and find decay. If there are two to three pieces of fruit with evidence of decay in the case, you are probably not going to want to refuse everything. However, do remove the decayed fruits or vegetables immediately because decay spreads. It is realistic to expect some decay. Every U.S. grade standards even the highest grades have a very small tolerance for decay, usually 1-2 percent. However if one third of the box is decayed, or even 5 percent (or whatever number you decide in your standards), then you should not accept the product and call the distributor. You may decide to cut off and throw away decayed portions of produce. If the product is severely decayed, throw it away.

Now that you have grading information in your toolkit, talk to your distributors about the quality and condition you expect of the produce they deliver. Include this information in your specifications. Document poor quality and condition of produce on vendor complaint forms and, best of all, reject poor quality and condition produce that does not meet your specifications.

**Slide 17:**

Why do you think it is important to know and understand the major quality and condition factors of fresh produce?

USDA produce grade standards are based on the quality and condition defects we have just discussed. Typically, the higher the quality and better condition of the fruit or vegetable the higher the price you will pay. School district buyers should include specific grades in bid documents for each produce item purchased. Consider how the product will be used in your school meals program. It is possible that a lower grade would be suitable and well accepted by your customers. If you write your specifications wisely, then you will save money, possibly purchase more fresh fruits and vegetables, and get a quality product for your customers.

**Slide 18:**

*Notes to instructor: As an option, hand out one of the fact sheets developed for Produce Safety University (PSU) to help explain using grades in your specifications.*

Finally, to ensure that you receive what you ordered, train your staff to know what the produce should look like based on the specifications. Site-based staff is the eyes and ears of a good procurement system. Your staff must have access to the written specifications. If your specifications only state the specific grade standard, you should consider providing written descriptions. Pictures and demonstrations may also be helpful during training.

Implement a product complaint procedure to make it easy for managers to document and reject unacceptable produce. You may be surprised at how much your produce quality improves when you start inspecting and rejecting product that does not meet your specifications.

Additional activities:

1. Invite your produce supplier to discuss produce quality. Ask the supplier to show examples of high quality produce.
2. Discuss Produce Information Sheets, available at [www.nfsmi.org/producesafety](http://www.nfsmi.org/producesafety).