

**THE VISUAL AIDS ON THE FOLLOWING  
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**TO PURCHASE OFFICIAL VISUAL AIDS PLEASE CONTACT  
THE SPECIALTY CROPS INSPECTION DIVISION'S  
EQUIPMENT AND FORMS DEPOT**

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**[EQUIPMENT CATALOG](#)**

It is often necessary to remove the dry outer scales to properly judge whether an onion is damaged or seriously damaged by watery fleshy scales. The following two photos of the same onion illustrate this point.



Presence of dry brown outer scale gives impression that onion is damaged by discolored watersoaked fleshy scales.



Removal of dry brown outer scale shows onion to be damaged.

C-1  
Cut Onion: Scale Present & Removed  
March 1990 (previously undated)

**THESE PICTURES ILLUSTRATE CHARACTERISTICS OF DORMANT AND GROWING ONIONS**

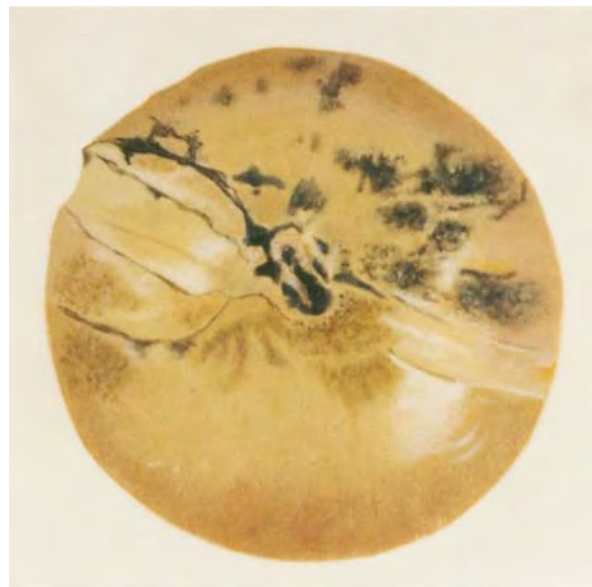


The onion on the left has a completely white heart, characteristic of a dormant onion, while the onion on the right has a yellow, growing onion.



A thin slice (1/16 to 1/8 inch) was removed from the bottom of each of two onions. The vascular bundles are not noticeable in the dormant onion on the left, but enlarged vascular bundles are evident in the onion on the right, indicating that growth has started.

**C-2**  
**Cut Onions Showing Dormancy & New Growth**  
**March 1990 (previously undated)**



**C-10**  
**APPRECIABLY STAINED**  
**MARCH 1990 (previously undated)**



**C-11**  
**BADLY STAINED**  
**MARCH 1990 (previously undated)**

SHAPE ON ONIONS



SCORE AS DAMAGE



SCORE AS DAMAGE



SCORE AS DAMAGE

Ons-CP-3  
Shape  
April 1990  
(Previously October 1971,  
Side I)

## SHAPE ON ONIONS



**LOWER LIMIT  
FAIRLY WELL SHAPED**



**LOWER LIMIT  
FAIRLY WELL SHAPED**

**ONS-CP-3-A  
Shape  
April 1990 (Previously October 1971, Side II)**

## **STAINING**



## **APPRECIABLY STAINED**

**(onions with appearance affected to a lesser degree would not be considered appreciably stained)**



## Examples of Damage by Dry Sunken Areas on Northern (Other than) Onions

Condition: Until October 31 of the year of production; imports year round. Quality: November 1 until the end of the crop year.  
Onions not covered by outer papery scales, score as damage when exceeding the equivalent of a circle 1/2 inch in dia. (shown below).  
Onions covered by outer papery scales, score as damage when exceeding the equivalent of a circle 3/4 inches in dia. (not shown).  
Scoring guide based on an onion 2-3/4 inches in dia. (shown below).



Circles show location of dry sunken areas.

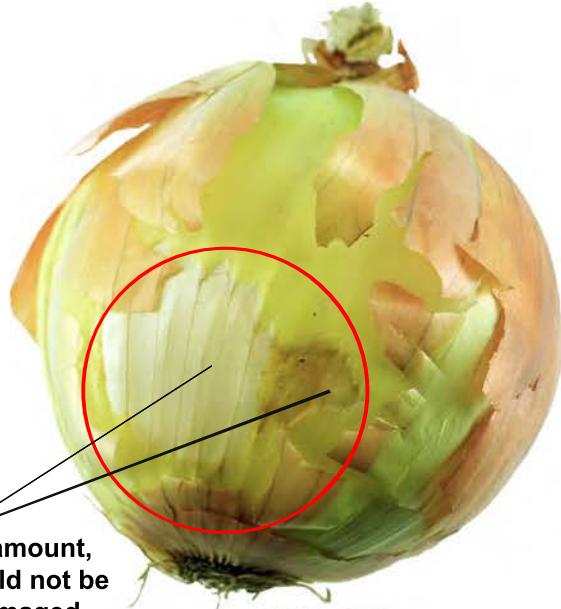
USDA Visual Aid ONS-CP-12 Jan 2017

## Examples of Serious Damage by Dry Sunken Areas on Northern (Other Than) Onions

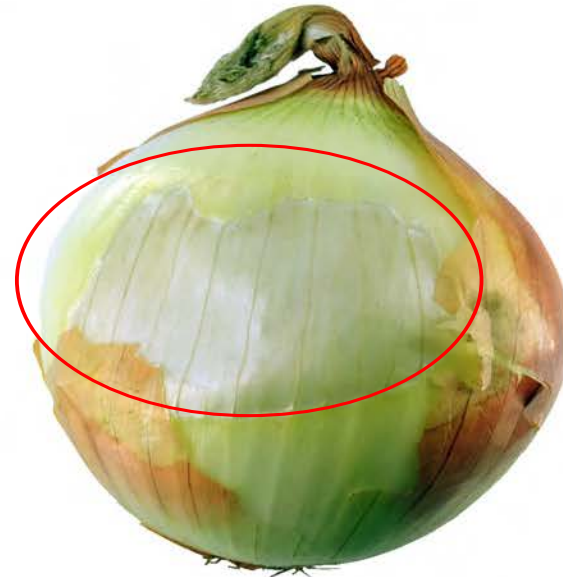
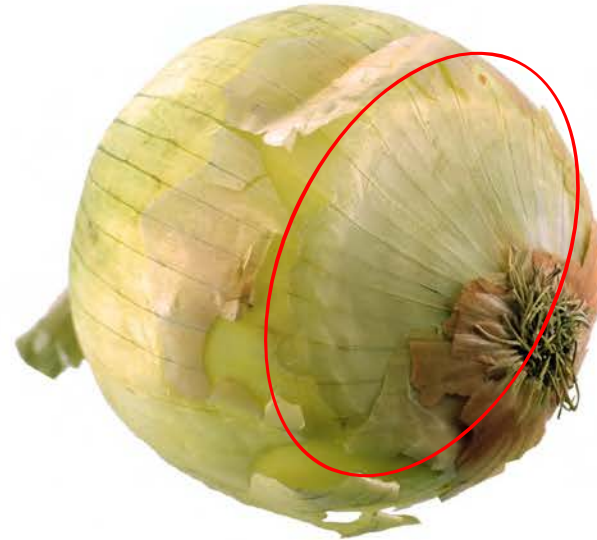
Condition: Until October 31 of the year of production; imports year round. Quality: November 1 until the end of the crop year.

Serious damage: When extending deeper than 1 fleshy scale, or a circle equal to 1 inch or larger in dia. (shown below).

Scoring guide based on an onion 2-3/4 inches in dia. (shown below).



If any lesser amount,  
this onion would not be  
seriously damaged



Circles show location of dry sunken areas.  
USDA Visual Aid ONS-CP-13 Jan 2017

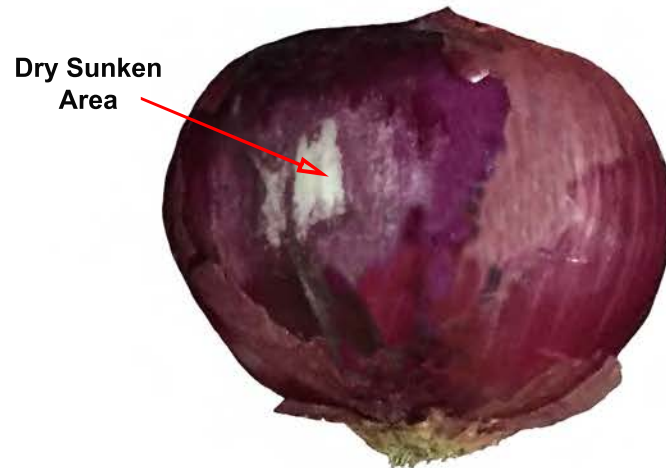
**Not Scorable by Dry Sunken Areas on Northern (Other Than) Onions**  
Based on 2-3/4 inch diameter onions (shown below).



**Dry Sunken Areas mixed with Staining (above photos). Not enough Dry Sunken Areas to score, but combination of defects materially detracts. Go with predominating defect (in this case Staining).**



**Slightly Stained (not a Dry Sunken Area)  
Not Scorable**



**Not enough Dry Sunken Areas  
Not scorable**

# Internal Sprouts on Onions



**Not scorable.  
Does not penetrate  
any fleshy scale  
(runs parallel).**

**Scorable (damage).  
Penetrates one fleshy scale.**

**Condition factor.**

**Damage: When penetrating one fleshy scale.**

**Serious Damage: When penetrating more than two fleshy scales.**

# ONIONS



**Purple Blotch**

**FOR IDENTIFICATION ONLY**

**ONS-IDENT-1  
MAY 1992**

# ONIONS



**Purple Blotch**

**Not Purple Blotch**

**FOR IDENTIFICATION ONLY**

**ONS-IDENT-2  
MAY 1992**



**ONIONS WITH EXCESSIVELY LONG ROOTS (SHOWN ABOVE) WHEN IN SUFFICIENT QUANTITY TO MATERIALLY AFFECT THE APPEARANCE OF THE LOT, ARE NOT PERMITTED IN U.S. NO. 1 GRADE.**

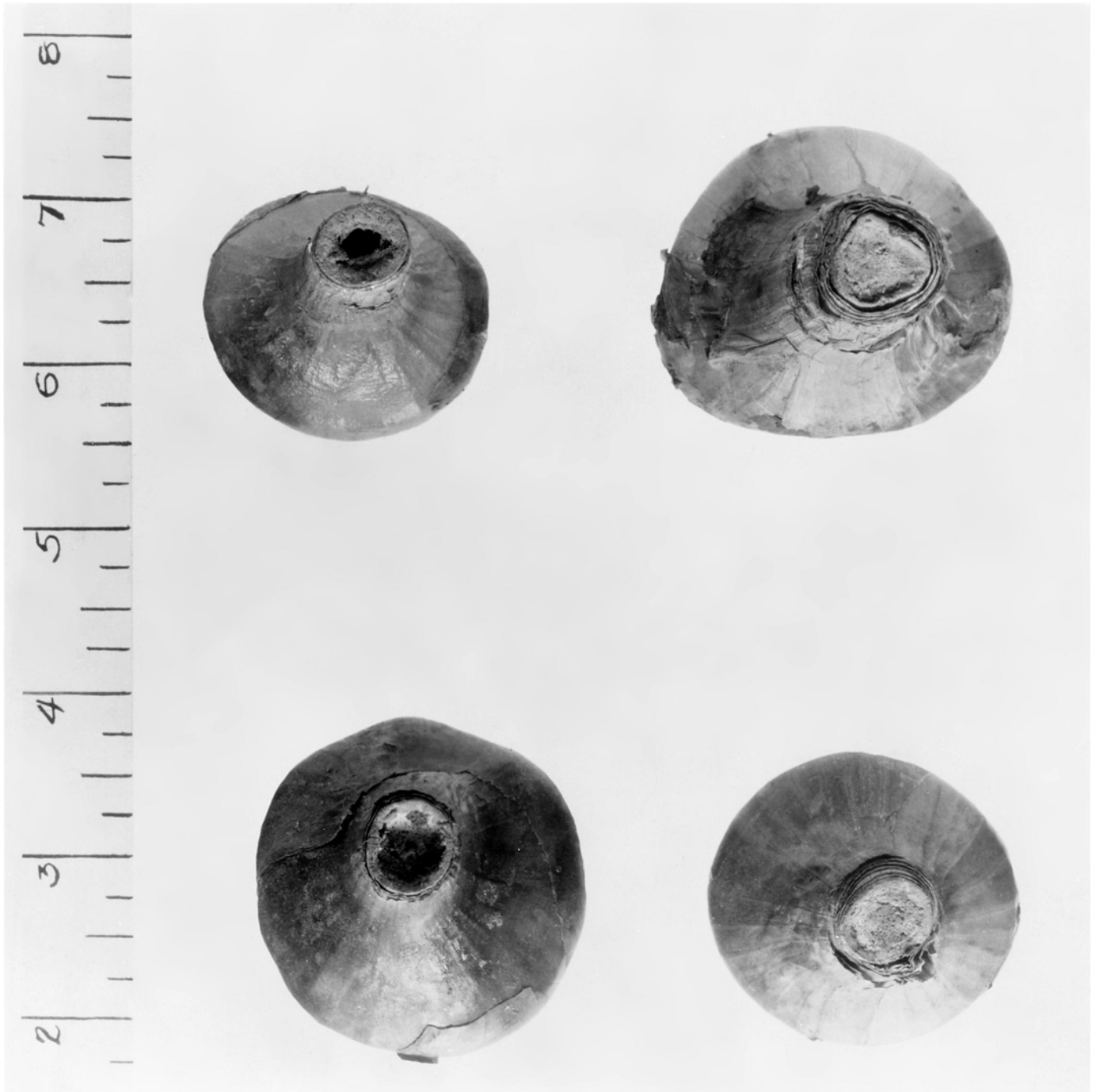
**Onions, Photo No. 1  
April 1990 (Previously No. 1, no date)**



**ONION SEEDSTEMS. THE OUTER SPECIMENS ARE LENGTHWISE SECTIONS SHOWING DAMAGE CAUSED BY SEEDSTEMS.**

**Onions, Photo No. 2  
April 1990 (Previously No. 2, no date)**





**ONION SEEDSTEMS SHOWING PITHY AND HOLLOW CENTERS. THE OUTER EDGE OF THE STEMS ARE TOUGH AND WOODY. NOT U.S. NO. 1.**

**Onions, Photo No. 3  
April 1990 (Previously No. 3, no date)**

## SHAPE ON ONIONS



A

B

C

D

**ONIONS A, B AND D ARE U.S. COMMERCIAL  
ONION C IS U.S. NO. 1**

**Onions, Photo No. 4  
April 1990 (Previously No. 4, no date)**



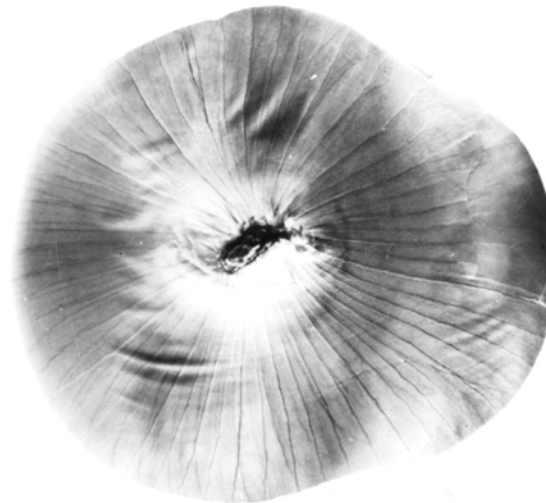
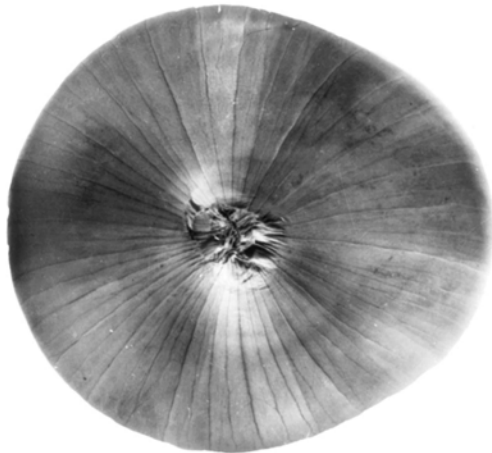
**ONIONS OF THESE SHAPES SHALL BE ALLOWED IN U.S. NO. 1 GRADE FOR NORTHERN GROWN ONIONS.**

**Onions, Photo No. 5  
April 1990 (Previously No. 5, no date)**

**A**



**B**

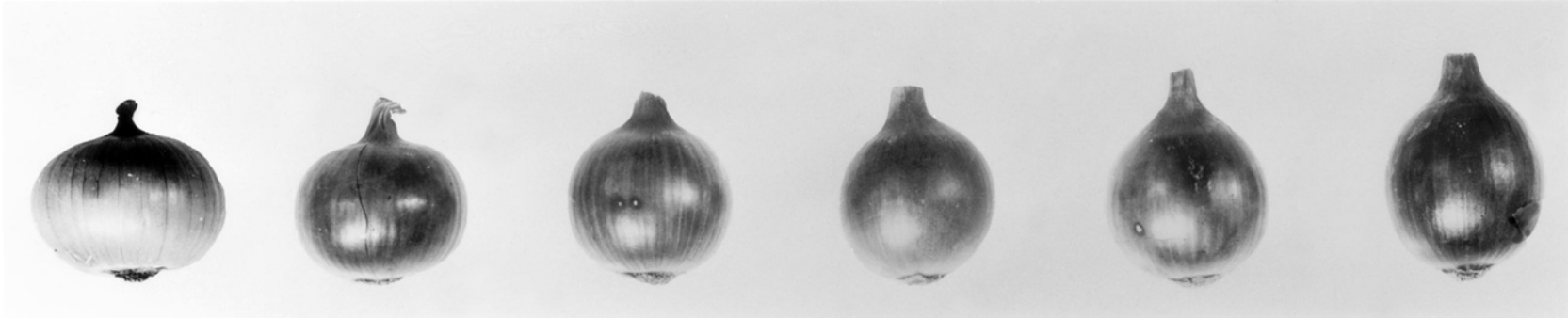


**A. U.S. NO. 1 FOR SHAPE**

**B. U.S. COMMERCIAL FOR SHAPE**

**Onions, Photo No. 8  
April 1990 (Previously No. 8, no date)**

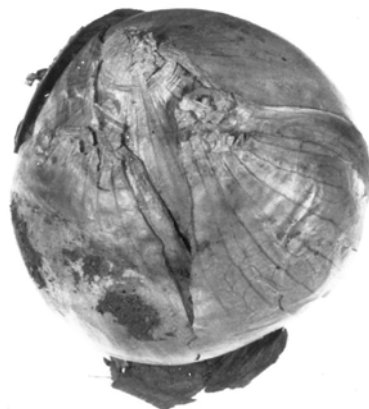
## SHAPE ON ONIONS



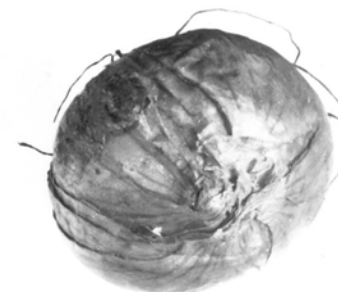
**ONION ON EXTREME LEFT IS CONSIDERED FLAT. ONIONS NOT FLATTER THAN OTHER FIVE ARE CONSIDERED GLOBE SHAPE.**

**Onions, Photo No. 10  
April 1990 (Previously No. 10, no date)**

## NORTHERN GROWN ONIONS – CRACKING OF SCALES



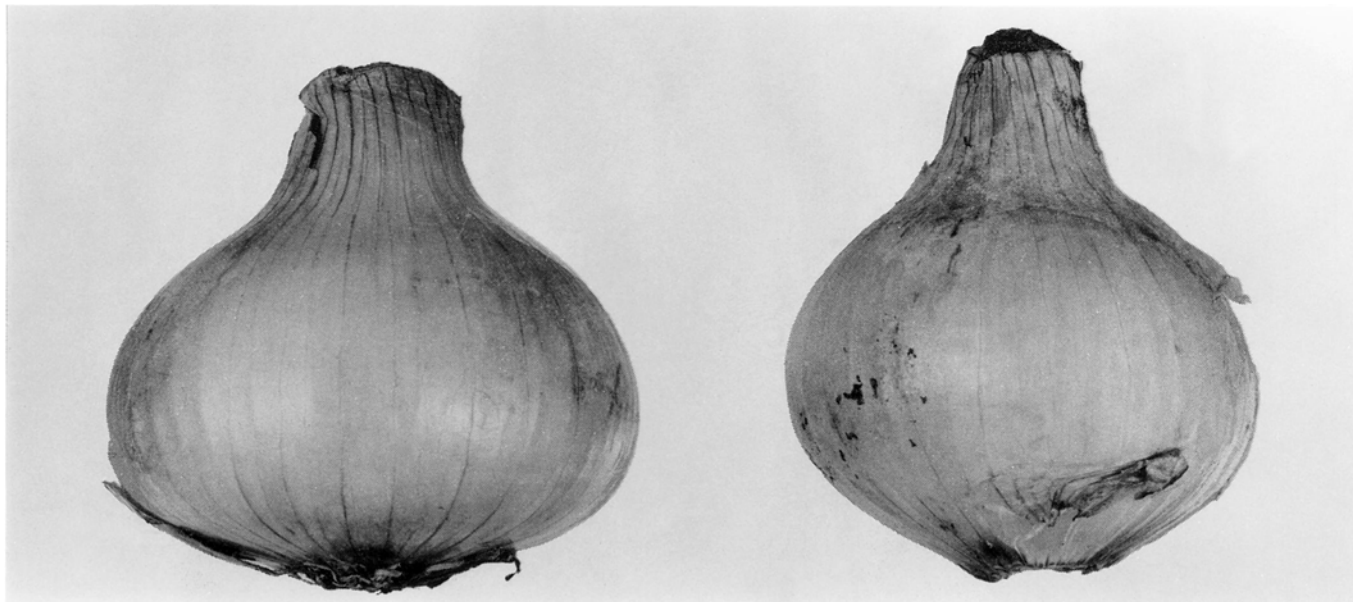
**Cracking of outer, thin, papery scales not considered damaged unless present to extent as to materially affect appearance of lot.**



**One or more cracked, fleshy scales considered damaged.**

**Onions, Photo No. 14  
April 1990 (Previously No. 14, no date)**

**NORTHERN GROWN ONIONS**  
Illustrating “Bottlenecks” or “Thick-necked” Onions



**Not “Bottlenecks” – U.S. No. 1**



**“Bottlenecks” – Not U.S. No. 1 but meet requirements of U.S. No. 2**

**Onions, Photo No. 15**  
**April 1990 (Previously No. 15, no date)**

**ONIONS SLIDE 1 – LOOSE SKIN**





**ONIONS SLIDE 2 – EXCESSIVE TOPS**



**ONIONS SLIDE 3 – DRY ROOTS**



**ONIONS SLIDE 4 – VISIBLE SPROUTS**



**ONIONS SLIDE 5 – CONCEALED SPROUTS**



**ONIONS SLIDE 6 – CONCEALED SPROUTS CUT**



**ONIONS SLIDE 7 – INSECT INJURY**



**ONIONS SLIDE 8 – INSECT INJURY**



**ONIONS SLIDE 9 – DISSIMILAR VARIETAL**





**ONIONS SLIDE 10 -- BOTTLENECK**



**ONIONS SLIDE 11 – NEW ROOT GROWTH**



**ONIONS SLIDE 12 -- PEELER**



**ONIONS SLIDE 13 – CLOSELY TRIMMED**



**ONIONS SLIDE 14 -- DOUBLE**



**ONIONS SLIDE 15 -- SPLIT**



**ONIONS SLIDE 16 -- SPLIT**



**ONIONS SLIDE 17 – MISSHAPEN OR SPLIT**





**ONIONS SLIDE 18 – CRACKED PAPERY SCALES**



**ONIONS SLIDE 19 -- SUNBURN**



**ONIONS SLIDE 20 -- SUNSCALD**



**ONIONS SLIDE 21 – BLACK SURFACE MOLD**



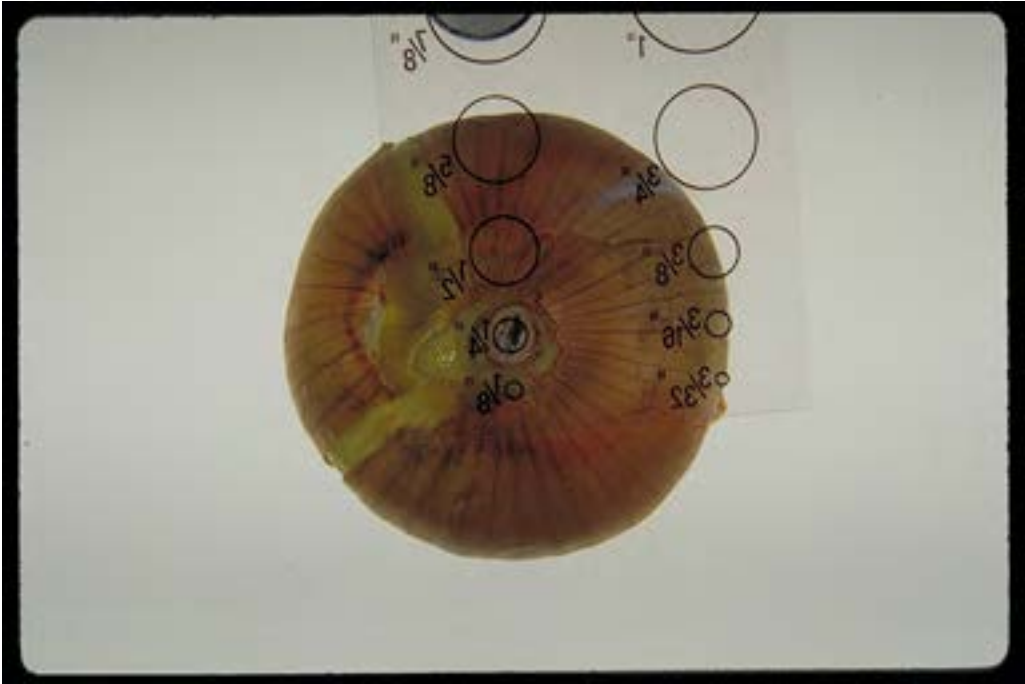
**ONIONS SLIDE 22 – BLACK MOLD BETWEEN SCALES**



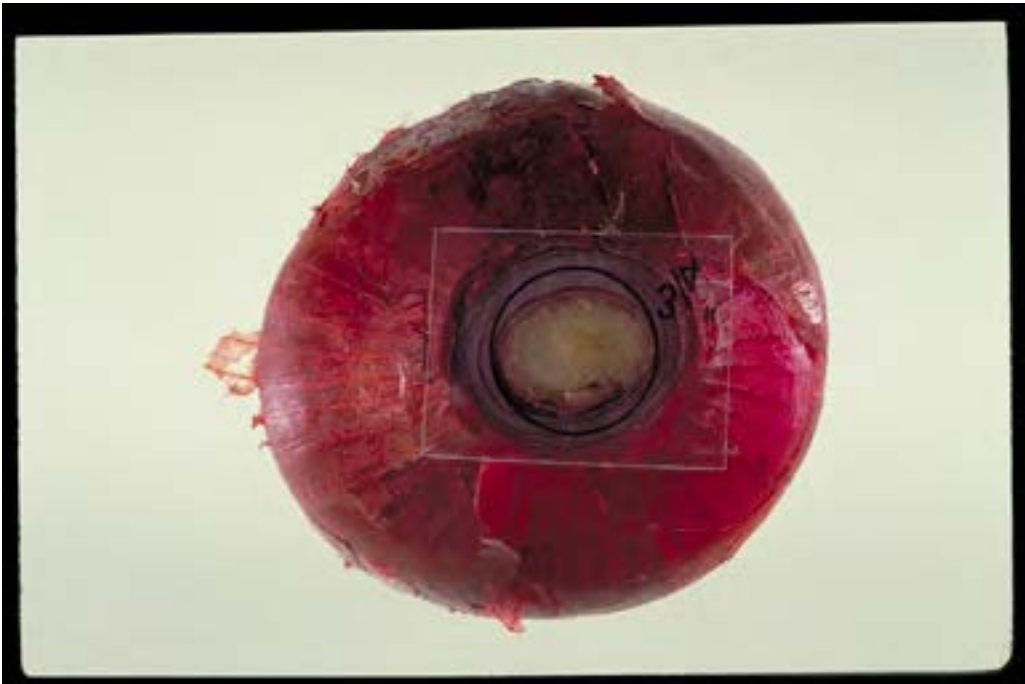
**ONIONS SLIDE 23 -- DIRT**



**ONIONS SLIDE 24 -- SEEDSTEM**



**ONIONS SLIDE 25 -- SEEDSTEM**





**ONIONS SLIDE 26 -- CUT**



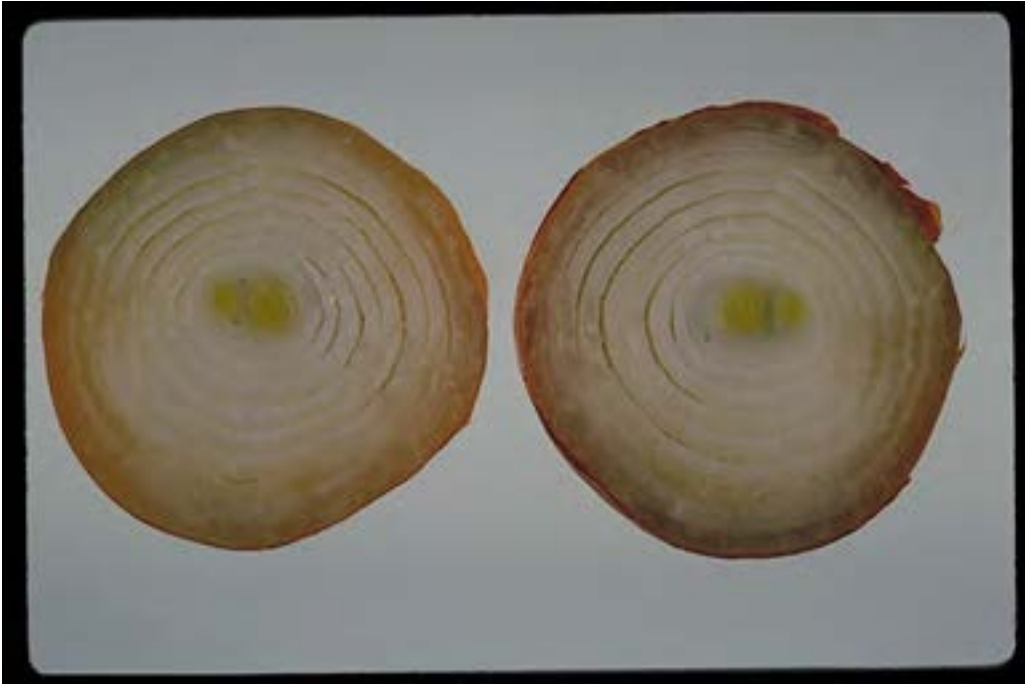
**ONIONS SLIDE 27 -- CUT**



**ONIONS SLIDE 28 -- CUT**



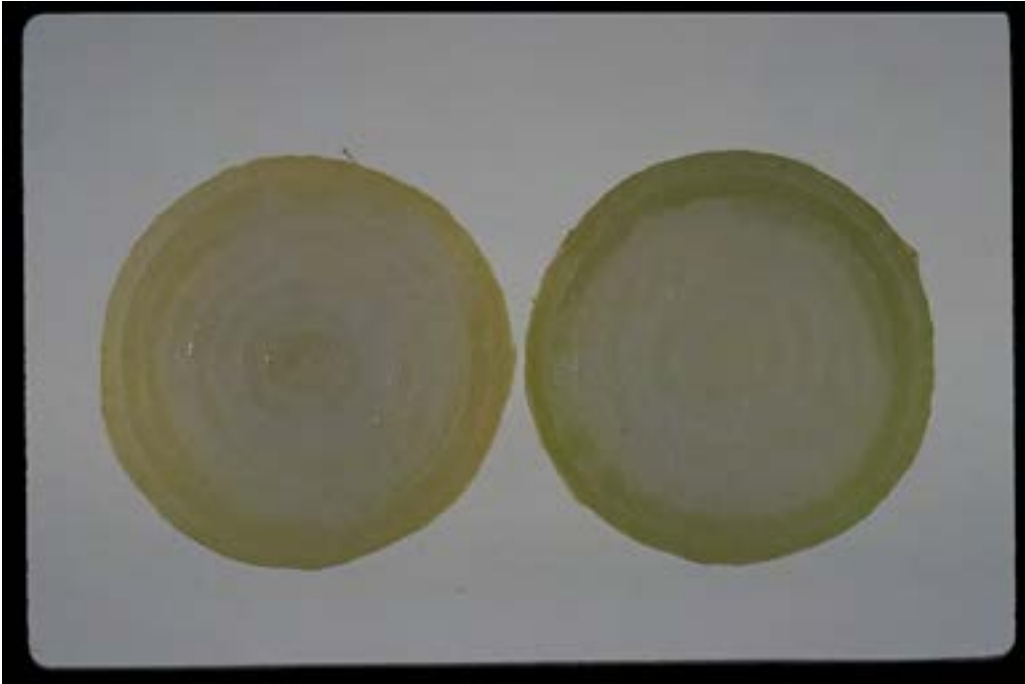
**ONIONS SLIDE 29 – WATERY OR TRANSLUCENT SCALES**



**ONIONS SLIDE 30 – WATERY SCALES**



**ONIONS SLIDE 31 – TRANSLUCENT AND WATERY SCALES**



**ONIONS SLIDE 32 -- CUT**



**ONIONS SLIDE 33 – SLIGHTLY STAINED**





**ONIONS SLIDE 34 – APPRECIABLY STAINED**



**ONIONS SLIDE 35 – BADLY STAINED**



**ONIONS SLIDE 36 – DECAY IN NECK**



**ONIONS SLIDE 37 – FUSARIUM BULB ROT**



**ONIONS SLIDE 38 – FUSARIUM BULB ROT CUT**



**ONIONS SLIDE 39 – BLUE MOLD ROT**



**ONIONS SLIDE 133**

