## Internal Quality Checks on Fruit in the UK

Richard J Dyer June 2006



#### **Contents:**

- Destructive sampling procedure
- Fruit that HMI destructively sample to check for internal defects
- Objective testing by HMI



# Destructive sampling procedure

 No national legislation for destructive sampling

We rely on what is stated in 1148/01

Pa rural payments agency

## Regulation 1148/01

- Check for internal defects on the basis of reduced samples
- Especially where control destroys the trade value of the produce
- the size of the reduced sample shall not exceed 10% of the size of the bulk sample initially taken for the inspection

rural payments agency

# Destructive sampling procedure

- The need to cut and destroy a sample falls into two categories:-
- Where there is an **outward sign** of an internal defect.
- Where there is no outward sign of an internal defect

Pa rural payments agency

## **Outward Sign of Defect**

Example: 30 kiwifruit in a tray showing water soaking.

Cut up to 10% to confirm suspicion.

 Count all kiwifruit exhibiting external symptoms and cut 3 per tray (being 10% of the sample) to confirm your suspicions

Pa rural payments agency

## **NO Outward Sign of Defect**

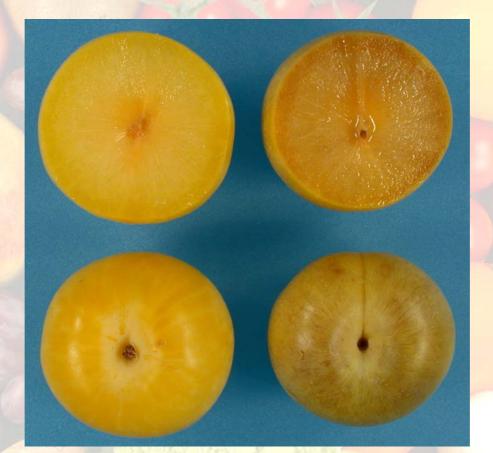
- Example: Apples, count 150, with suspect water core.
- Take a random sample of 10% from each container and cut the entire reduced sample.
- Remove 15 apples from the box at random and cut them.



# DEFECTS REQUIRING DESTRUCTIVE SAMPLING



## Internal browning - plum





## Gum pocket - plum





#### **Fractured stone - plum**



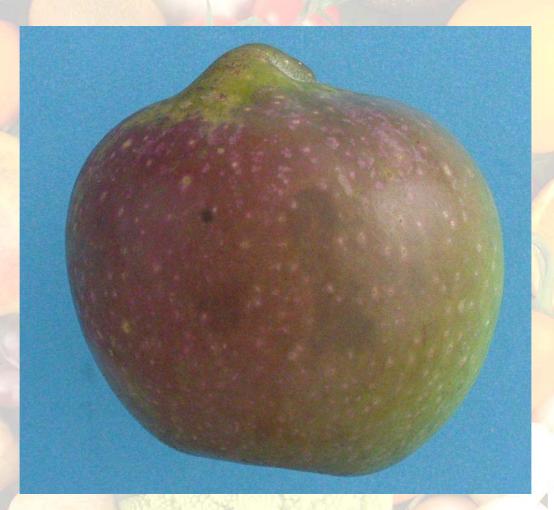


#### **Split stone - nectarine**





#### Suspected water-core - apple



rural payments agency

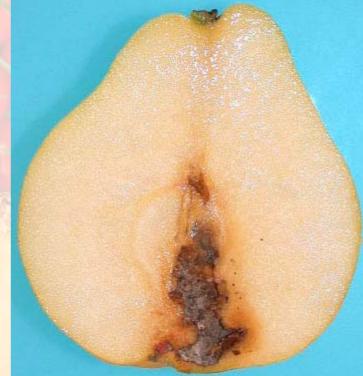
### Water-core – out of grade





#### **Pest Damage - pears**







#### Kiwifruit - watersoaking





#### Avocado – rubbing/ bruise and chilling injury





# OBJECTIVE TESTS CARRIED OUT BY HMI



#### Marketing Standards incorporating Objective Tests

APPLES **AVOCADOS** CITRUS GRAPES HAZELNUTS **KIWIFRUIT MELONS** PEACHES AND NECTARINES WALNUTS WATER MELONS

Pa rural payments agency

#### **Objective Tests**

Sugar levels – <sup>o</sup>Brix Dry Matter Moisture Content Flesh Pressure Juice Content





#### Objective testing equipment











# Dover

Tpa rural payments agency

#### We always encourage our inspectors to cut one or two items of fruit during inspection...





