

## LEARNING TO GROW FOOD 2025 - SENSORY TESTING

### Introduction

Two key objectives of this year's competition are to:

- develop the concept of **seed varieties** for a fruit or vegetable
- develop the skills of **fair comparison** - comparing one variety of potatoes with other varieties in a fair way.

### Evaluating the outcomes

When buying seed potatoes, their qualities are usually described to help you choose which to buy. For the varieties we provided, the seed catalogues described them as follows:

- **Red Duke of York:** rich flavour and yellow coloured flesh; skin scrapes off easily making them excellent new potatoes; good all-rounders for cooking
- **Casablanca:** white flesh and skin with few eyes; best chipped, baked, boiled, mashed or roasted
- **Swift:** an early crop producing excellent new potatoes, especially for boiling and for salads; texture becomes drier and firmer as the potato ages
- **Winston:** flesh can be watery and lacking in flavour

Comparing the various varieties of potato can be done simply by activities such as describing the appearance of the tubers, weighing the total yield of each variety, and comparing the weight before and after peeling to see how much is lost due to the thickness of their skins or when cutting off damaged parts of the tubers.

But we grow potatoes to eat, so it is also useful to explore how the potatoes respond to different methods of cooking - frying, baking, roasting, microwaving and boiling. Some varieties may break up while others stay firm; others may taste very different - boiled potatoes compared with jacket/baked potatoes for example.

Since the potato varieties each have their own qualities, it's also important to compare the sensory characteristics of each of them, such as colour, taste, smell and flavour in a way that involves fair comparison tests. This helps us to assess and articulate what we like or dislike about the varieties when they are on the plate, ready to eat.

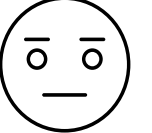
A wide range of vocabulary is used to describe these sensory characteristics, depending on the age and ability of the children and other consumers - but it's important for children to use their own views in sensory testing rather than being swayed by the comments of

others, especially adults whose sensory skills are quite different from young children and teenagers. It's okay for them not to like something even if we know it's good for them!

### Comparison tests

- **Hedonic ranking** is a way to test **preferences** to determine the extent to which the tester likes or dislikes a product. Testers are given several samples and asked to rank them based on how much they like/dislike them. Ideally, they should taste the foods without discussing their views with anyone else, having a drink of water between each tasting so they clean their palettes. Using the results from all the testers, an overall conclusion can be reached - maybe that there's no favourite or that all are acceptable!!

For children and younger people, a five-point scale is often used to record how they feel about each sample, but can be varied to suit their age and ability. For children, smiley faces can be used rather than words:

|                          |                                                                                     |
|--------------------------|-------------------------------------------------------------------------------------|
| dislike very much        |   |
| dislike                  |  |
| neither like nor dislike |  |
| like                     |  |
| like very much           |  |

- **Discrimination tests** are used to determine whether there are perceptible differences between two or more different foods. So, the aim is to determine whether there are any sensory differences between the potato varieties rather than to determine the degree of liking

**The triangle test** is the main type of discrimination test:

- The tester is given three samples
- Two of the samples are the same and one is different
- The tester is asked to identify the **odd one out**

### **Sensory vocabulary**

For both of these tests, the children and young people will be using a variety of descriptors to describe the sensory characteristics of the potato varieties, extending their vocabulary principally in the four areas of taste, smell, texture and appearance. Many words describe more than one attribute or characteristic:

- **Taste:** smell and taste together produce a flavour, so some words can be used to describe both of these characteristics
- **Texture:** when tasting food, the tongue and other sensitive skin reacts to the feel of the food so adjectives such as fluffy, dry, lumpy and smooth may be used; these same words can also be used to describe appearance of the food.

### **Footnote:**

The children and young people in our competition have a very wide range of ages and abilities and we rely on those adults working with them to determine the activities they undertake. The above is intended simply to offer ideas and support and, hopefully, to help address some of the requirements of national curricula and guidance. We know that you will have many ideas and learning experiences that you'll want to put into practice, but we hope this guidance sheet gives additional ones to support your activities.