



Università di Scienze
Gastronomiche di Pollenzo
University of Gastronomic Sciences of Pollenzo

Activity Report

RefineAir @ Academic Tables UNISG

Introduction:

In June 2019 RefineAir joined the Friends of the University Association as a Supporting Member. There was an immediate desire to actively collaborate with the university and in particular with the Tavole Accademiche a project of the university born in 2013.

The Tavole Accademiche are the canteen of the University of Gastronomic Sciences in Pollenzo (UNISG). As well as being a place to eat, they are also an opportunity for training and experimentation. Every day the Tavole brigade uses quality raw materials from our teaching garden and selected companies to offer students tasty and sustainable dishes. To reduce food waste at source, students and staff choose their meals every day through an online booking system.

The relationship between Refine Air and UNISG has been developed to reduce food waste.

Activity:

It took place between November 2019 and February 2020 inside the cold rooms of the Academic Tables. The objective was to ascertain in a productive and operational environment, therefore not under laboratory conditions and scientifically valid, the visual differences on some fruits and vegetables after a certain period of storage in a cell sanitised with RefineAir devices and, at the same time, in a non-sanitised one.

In order to obtain visual feedback, photos were taken in a photographic set up inside the Cinema Laboratory* with the same shooting conditions. The photos were taken before placement in the cells and after certain period of time to verify the difference in deterioration.

* University laboratory analysing, designing and producing narrative with video and digital technologies

Cold rooms:



Two cells were used for the activity:

- The first is used for the storage of fresh fruit and vegetables, at a temperature of approximately 6.5 degrees, with two RefineAir sanitisation devices installed inside.
- The second is mainly for meat and cheese, at a temperature of approximately 4.5 degrees, without sanitisation devices.

The cells are used by the Academic Tables, to store the products necessary to guarantee the normal canteen service; two identical fruit and vegetable boxes have been used for the activity and specially marked to avoid unintentional tampering.

Didactic garden:

The didactical garden is a productive reality within the university and is located within the gardens of the Pollenzo Agency. It has a twofold purpose: didactic for the students, who are also directly involved in its maintenance, and productive for the supply of fresh fruit and vegetables to the Academic Tables. The vegetable garden and adjacent orchard are entirely organic. During the garden's production season, some of its vegetables were used for comparison. This gave us an overview from the plant to the end of its life, as well as clarifying the agricultural methods used during its growth.

Fruit and vegetables:

The test was developed on different types of fruit and vegetables:

- Vegetables from UNISG Didactical Garden: 5 - 11 November. Traditional vegetables from the university's Didactic Garden were used. The vegetables used were trumpet courgettes and fennel.
- Fruit from the local fruit and vegetable market: 20 November - 2/17 December Purchased in the morning at the Pollenzo market, the fruit was placed in the cells a few hours after purchase. The fruits chosen were bananas and grapes. The spoilage control photos were taken at two different times because of the different degree of spoilage found, on 2 December for the bananas and on 17 December for the grapes.
- Supermarket vegetables and fruit: 13/20 January - 4/26 February Purchased from the supermarket, the test was carried out on raspberries and cabbage from organic farming. Raspberries were tested from 13 to 20 January, and savoy cabbage from 4 to 26 February.

Shooting conditions:

For all photo reporting, the settings were the same both with respect to the camera and the set and with respect to the intensity and colour temperature of the artificial light. The settings were as follows: **Nikon D-500 camera > ISO 100, exposure 1/100, aperture f/11 Lupo led light > 5600°k dimmer 100%.**

Marcello Marengo, photographer and videomaker at the University's Cinema Laboratory took the photos.

Results

In the following, photographs are taken of the samples stored in cell A (with RefineAir sanitisation devices) and cell B (without RefineAir sanitisation devices) at different time intervals.

The photos show different rates of spoilage and a difference in the consistency of the vegetables, which is especially noticeable in the section shots.

Two broccoli were also tested and no substantial differences in appearance were found at the end of the storage period.

ZUCCHINI TROMBETTA - 7 giorni

T1: november 5th



SAMPLE A



SAMPLE B

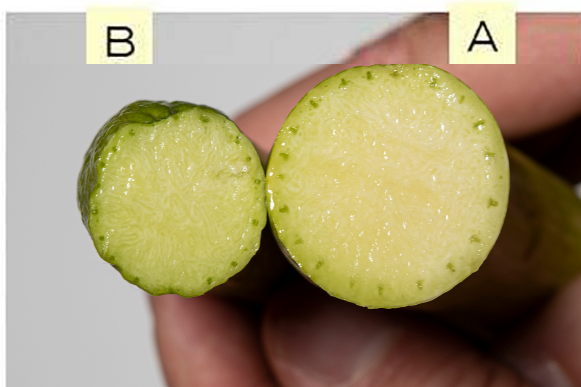
T2: november 11th



SAMPLE A



SAMPLE B



FENNEL - 7 days

T1: november 5th



SAMPLE A



SAMPLE B

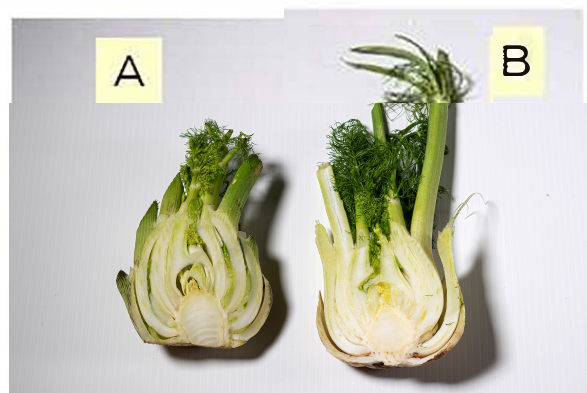
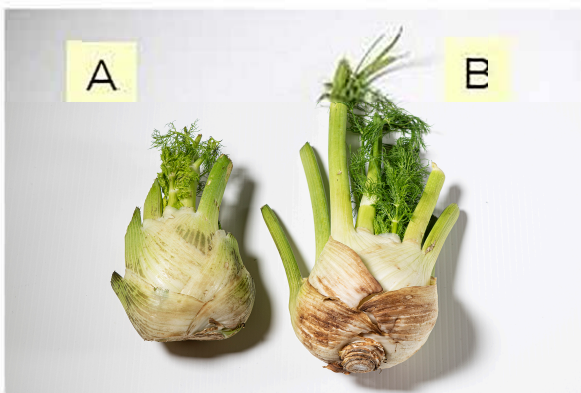
T2: november 11th



SAMPLE A

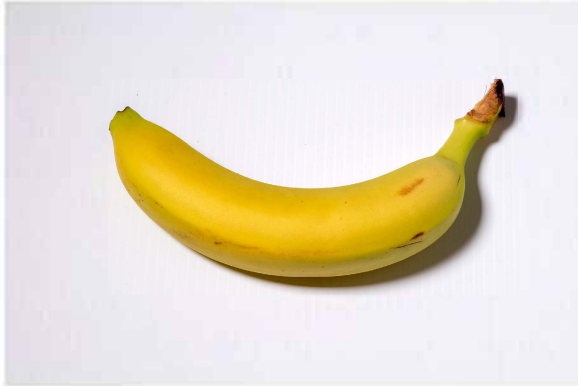


SAMPLE B

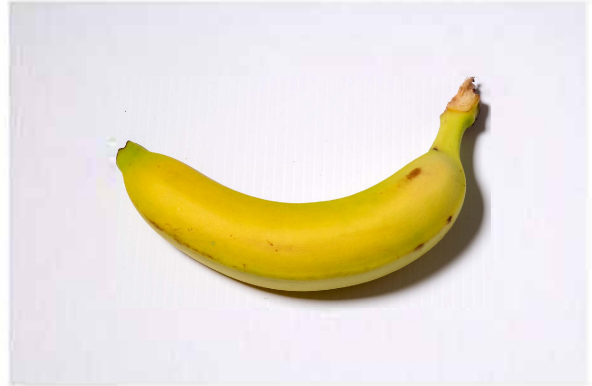


BANANAS - 13 days

T1: november 20th



SAMPLE A



SAMPLEB

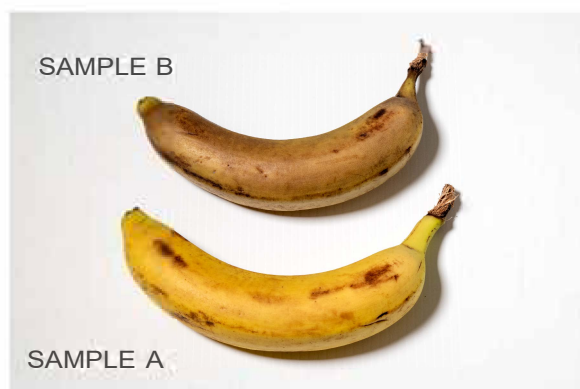
T2: december 2nd



SAMPLE A



SAMPLE B



SAMPLE A



SAMPLE A

GRAPE - 28 days

T1: november 20th



SAMPLE A



SAMPLE B

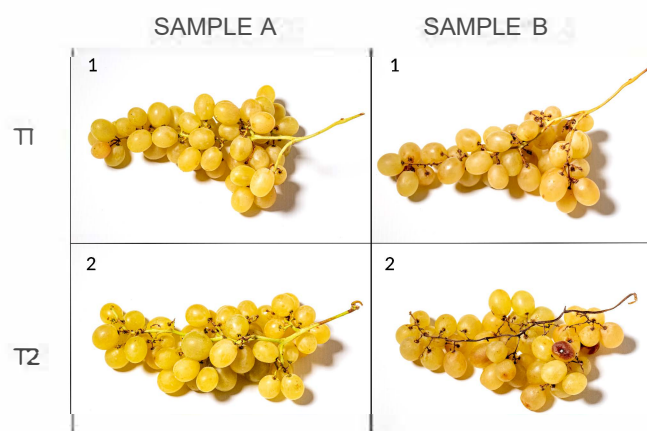
T2: december 17th



SAMPLE A



SAMPLE B



CABBAGE 23 days

T1: february 4th



SAMPLE A



SAMPLE B

T2: february 7th- 4 days



SAMPLE A



SAMPLE B

T3: february 11th - 8 days



SAMPLE A



SAMPLE B

CABBAGE - 23 days

T4: february 17th-14 days



SAMPLE A



SAMPLE B

T5: february 20th -17 days



SAMPLE A



SAMPLE B

T6: february 26th - 23 days



SAMPLE A



SAMPLE B

RASPBERRIES - 8 days

T1: January 13th



SAMPLE A



SAMPLE B

T2: January 20th



SAMPLE A



SAMPLE B

