



### P030/S1-P30 THE LACK OF DIVERSITY OF PLANT SPECIES MOBILIZED BY HOUSEHOLD FOOD ACQUISITIONS IN BRAZIL

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**Introduction:** Agrobiodiversity is key for promoting healthy diets and moving towards more sustainable food systems. Conversely, monocultures and homogenous diets threaten the diversity of species available for human food. **Objectives:** This study aimed to investigate the diversity of plant species mobilized by household food acquisitions in Brazil. **Methods:** Data from the 2017-18 National Household Budget Survey were used to quantify the total amount of foods (kilograms) and beverages (litres) purchased per person per year by household aggregates (n=575). Food items were classified according to the Nova classification system. Those items classified as Nova groups 1 and 2 were directly identified at the species level by using taxonomical classification from four data sources. Ingredient lists from the UNC/IDEC/NUPENS national food label database were used to determine the composition of processed and ultra-processed foods. The percent composition of the ingredients was estimated and classified at the species level. The total amount of animal-sourced foods acquired by households were proportionally converted into the plant species utilized as feed inputs in their production. The Shannon index was used to assess the diversity of plant species. Linear regression models were used to test associations between sociodemographic characteristics and the Shannon index. **Results:** Six species accounted for more than 90% of the total amount of plant species mobilized by Brazilian households through their food purchases. This was reflected by a low average value of the Shannon index for the Brazilian population ( $H=0.87$ ; 95%CI 0.85; 0.88), indicating low diversity. Mean values of this index tended to increase with income and were significantly lower in the North and Midwest regions and in urban areas. **Conclusions:** Our findings demonstrate a low diversity of plant species mobilized by Brazilian households through their food purchases in 2017-18. This is in line with previous studies demonstrating increasing homogeneity of global food supplies.

**Keywords:** agrobiodiversity, household food acquisition, Shannon Index, Brazil

### P031/S1-P31 THE IMPACT OF THE EMULSIFIED STRUCTURE OF THE EGG YOLK (*Gallus Domesticus*, *Numida Meleagris*) ON THE QUALITY OF THE MAYONNAISE

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In Algeria, a technology for separating the constituents of eggs has been introduced. As a result, the pasteurized egg yolk powder has become a preferred product with less risk for the industrialist. Egg yolk has historically been used in cold emulsified sauces such as mayonnaise; it is an essential ingredient in the manufacture of cold and hot emulsion. The aim of this work is to study the impact of processing techniques on the nutritional and technological quality of eggs yolk and their influence on the mayonnaise quality. We have based on eggs from traditional farming methods of *Gallus domesticus*, *Numida meleagris*, because the health effects of lipids must now be explored and biosecurity also consumption-related quality of eggs and egg products are widely discussed in European regulations (CE 889, 2008; CE 834, 2007). The eggs obtained from free-range farming on an area of 500 m<sup>2</sup>, over a period of 120 days were characterized and compared to commercial eggs in terms of constituents' weight, shape index, Haugh unit and yolk content. A pilot scale formulation was carried out in order to define the sensory properties using the triangular test method in comparison with an industrial mayonnaise making with the pasteurized egg yolk powder. The results showed that these two kinds of eggs are the "A" category, and the excellent quality was proved with *Numida meleagris*' eggs with a good stabilization of emulsions, because their pH value, viscosity and dry extract, were strongly recommended for the formulation of mayonnaise. The internal and external quality of farm eggs is better than commercial eggs, hence the interest of free-range farming. Monitoring the quality of the yolk during storage at room temperature gave a shelf life of 7 days for *Gallus domesticus*' eggs and 21 days for *Numida meleagris*' eggs. The mayonnaise made from farm egg yolk complies with the company's internal standards giving fine and homogeneous emulsion with the diameter of the oil droplets dispersed correctly. With the results of the triangular test we confirmed that the production of mayonnaise based on free-range egg yolks on an industrial scale will be able to meet regulatory requirements and consumer needs. Basing on our results finding about specially the color and the shelf life of guinea fowl's eggs and their eggs products, the development of their an intensive farming is highly recommended to meet public health requirements.

**Keywords:** farm egg yolk, mayonnaise, egg quality, fat emulsified structure, sensory analyses.

