

## **Consumer perception of quinoa food products in Morocco: case of Laayoune region**

Talal Sabraoui, Ayoub El Mouttaqi, Ihssane Mnaouer, Mohamed Belcaid and **Abdelaziz Hirich\***

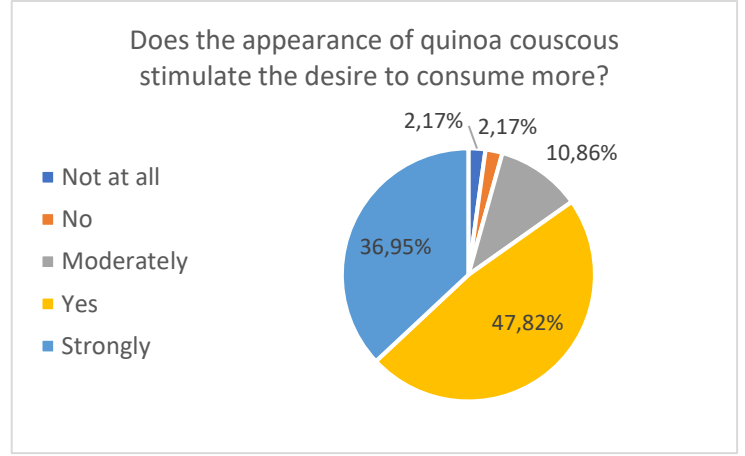
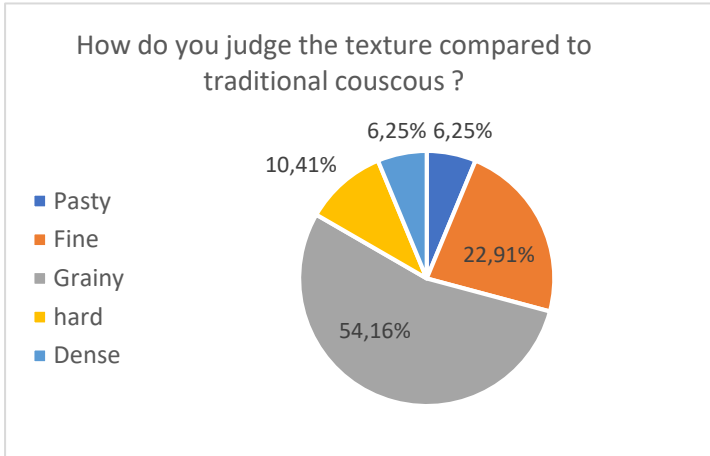
African Sustainable Agriculture Research Institute (ASARI), Mohammed VI Polytechnic University (UM6P), Laayoune, Morocco

Agricultural production, nowadays, is limited by many challenges including salinity. Saline water and soil resources become more abundant due to freshwater salinization, misuse of fertilizers and irrigation and seawater intrusion. Therefore, it is necessary to adopt biosaline agriculture system and alternative food crops to fill the gap in staple crop production which being affected recently by recurrent drought. However, before adopting new crops, we need to think how we can integrate them in the local diet to succeed their adoption by farmers by generating large consumer's demand. A tasting session was organized to assess the consumer's perception vis-à-vis three major consumed products where quinoa has been integrated, couscous, bread, and salad. Around 60 interviews were conducted targeting several consumer's categories with different ages, genders, and socio-economic background (farmer's, women cooperatives, staff, scientists, students, etc.). the questions were mainly about texture, appearance, color, flavor, smell, and taste. The obtained results showed that the appearance of quinoa couscous stimulate the desire of 85% of consumers to consume more and 55% found that quinoa couscous has similar odor as ordinary wheat/maize couscous. Regarding quinoa salad, about 44% of consumers perceived a bitter taste due to its saponin content. While the color of quinoa salad stimulates the desire of 93% of consumers to consume more. Bread is also a widely consumed product in Morocco. about 63% of consumers found that the quinoa bread has a tender texture. The appearance and color of bread stimulated the desire of 97% of consumers to consume more. This study clearly revealed the importance of integrating quinoa in the local diet and showed that the Moroccan consumer perception vis-à-vis quinoa products was very positive.

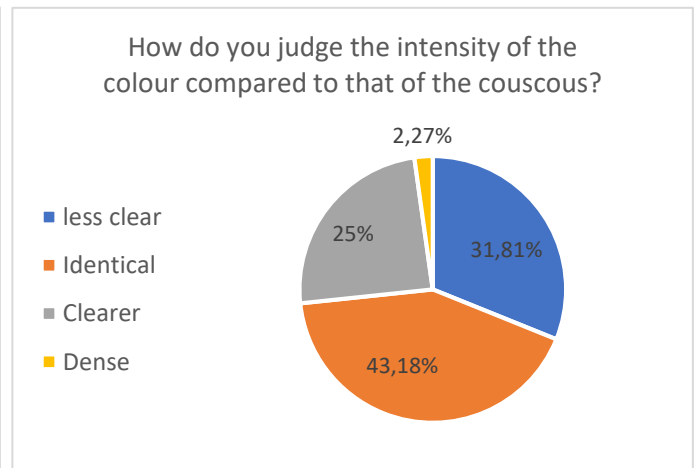
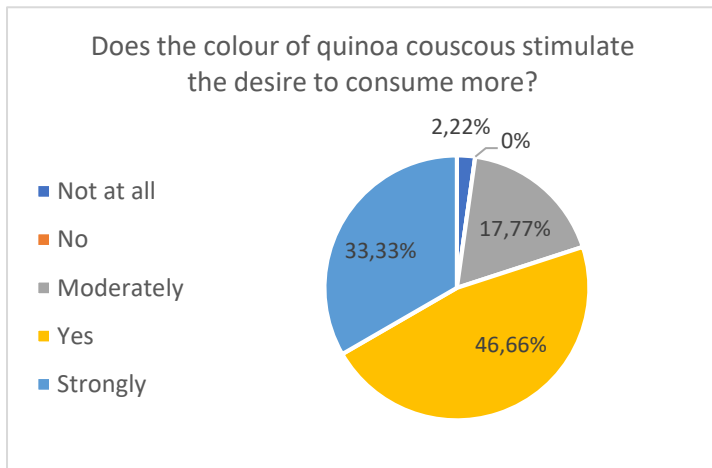
# Results

## Quinoa Couscous

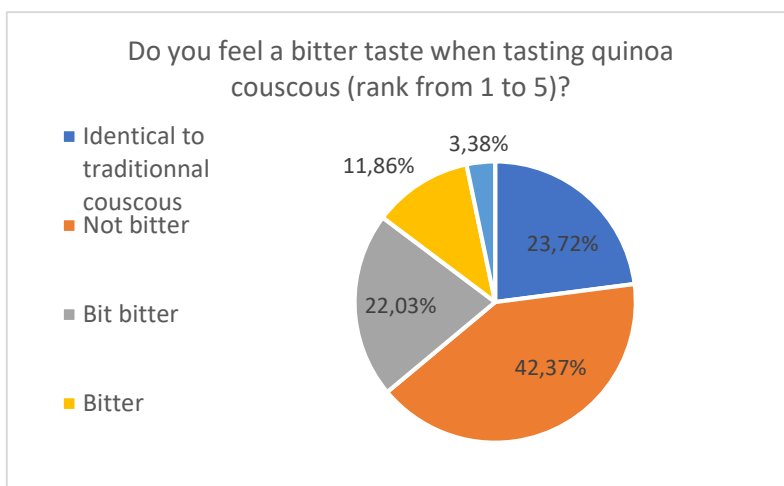
### Texture and Appearance



### Colour

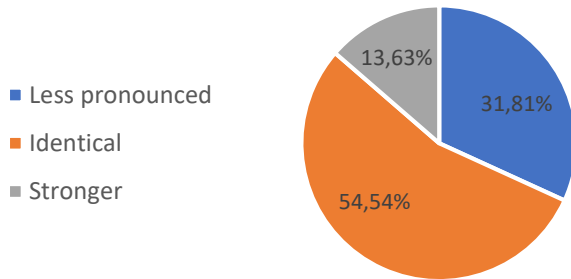


### Flavor/Taste

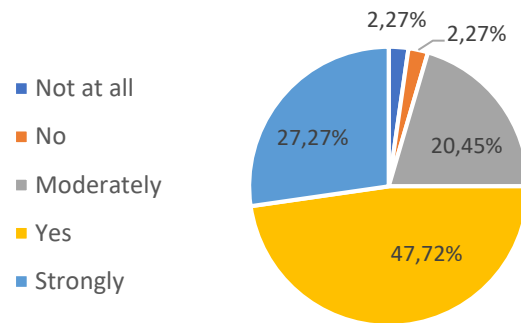


## Smell

Compared to traditional couscous, does quinoa couscous has an odor?



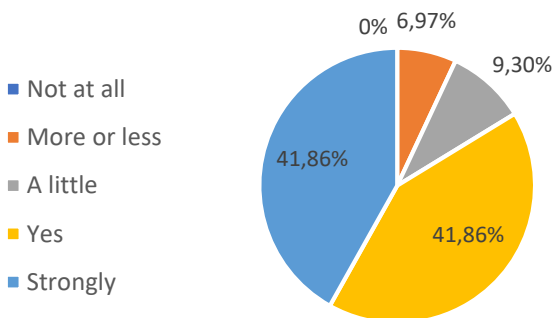
Does the smell of quinoa couscous make you want to eat more?



## Quinoa Salad

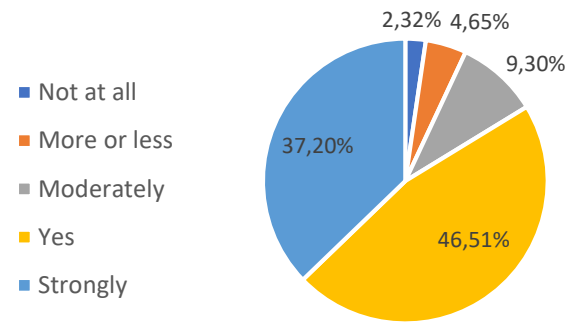
### Aspect

Does the appearance of quinoa salad stimulate the desire to consume more?



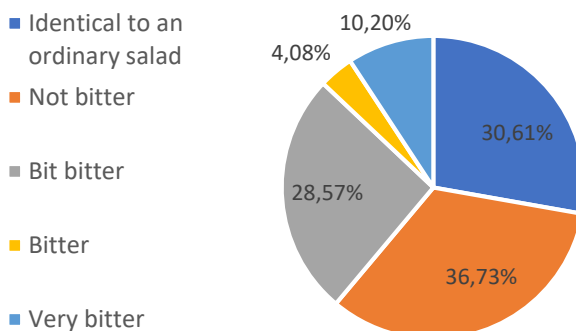
### Colour

Does the color of quinoa salad stimulate the desire to eat more?



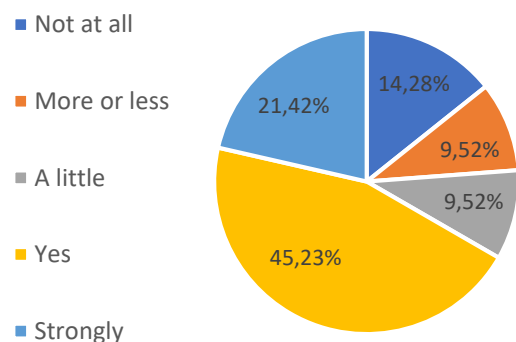
### Flavour/Taste

Do you feel a bitter taste while tasting the quinoa salad (rank from 1 to 5)?



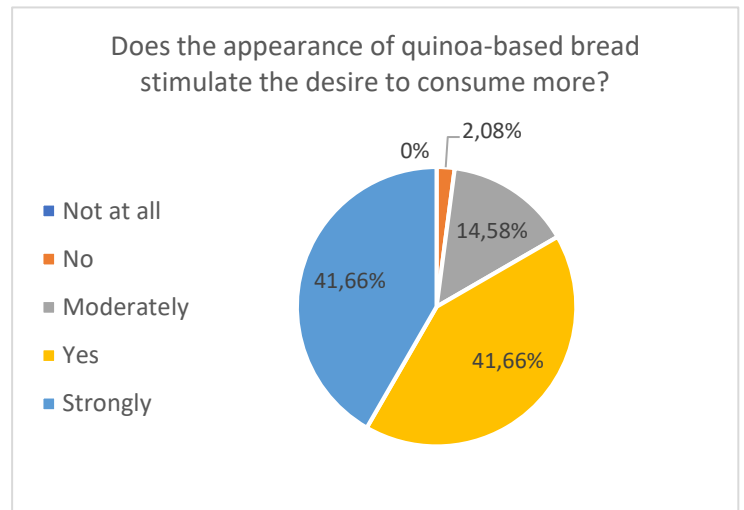
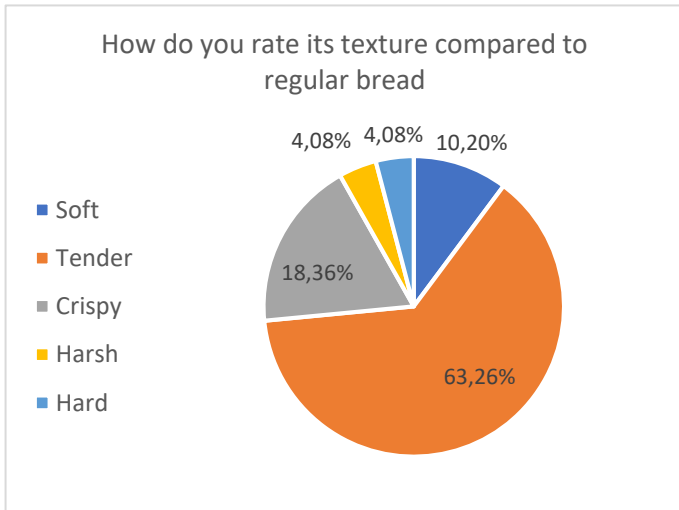
### Smell

Does the smell of quinoa salad stimulate to consume more?

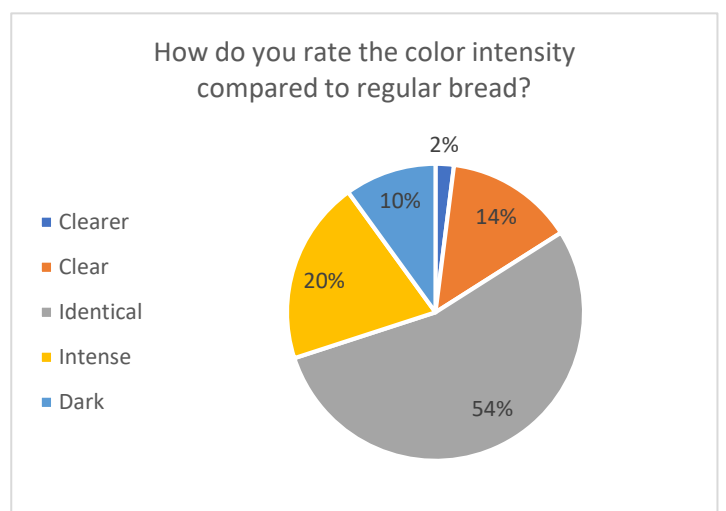
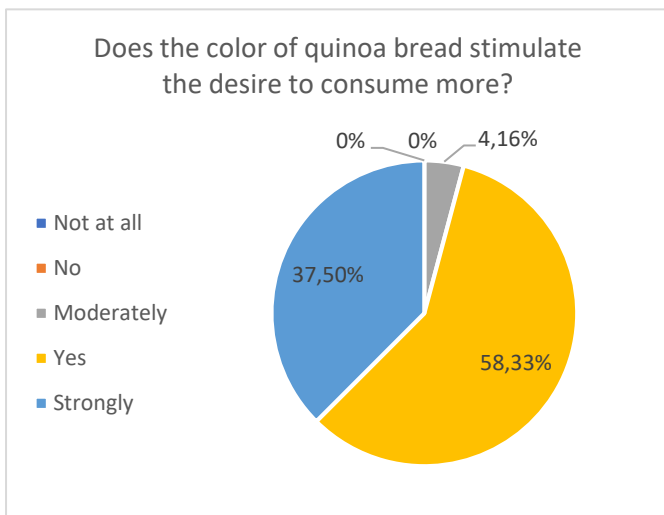


# Quinoa bread

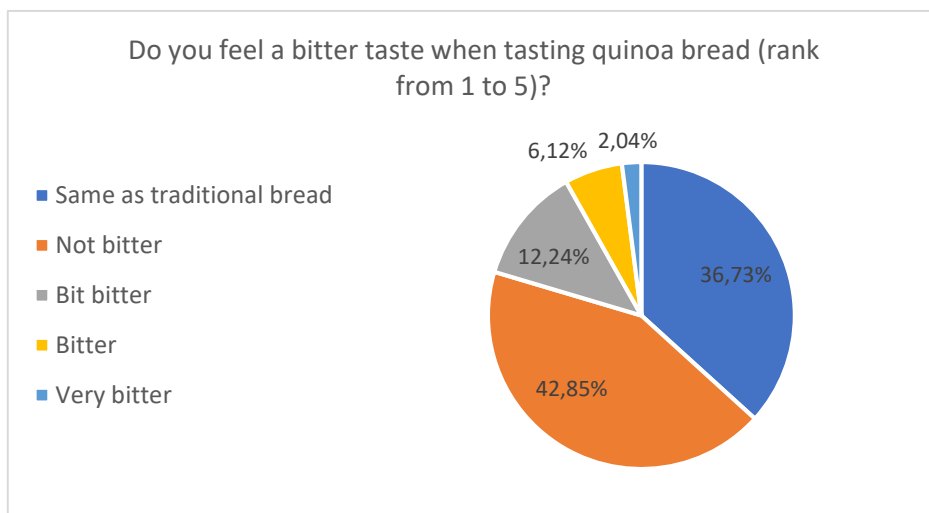
## Texture and Appearance



## Colour

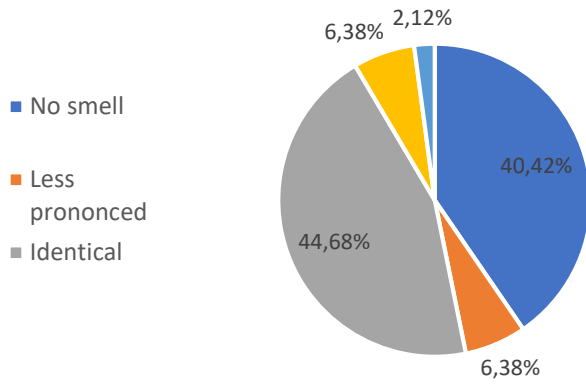


## Flavour/taste



## Smell

Do you find quinoa bread has a special smell compared to regular bread?



Does the smell of quinoa bread stimulate the desire to consume more?

