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On the Marc- Grape Fusion

Issue:

Beach House Wines processes 200 tonnes of grapes during the grape harvest in April/March each year. For every tonne of grapes calved, 30% by weight ends up as by-product or 'grape marc'. There is no current way of disposing this distributed waste.

Aim/Project Brief:

To develop a novel food product using grape skins, as either an ingredient or as a base of an ingredient.

Product development:

We started off brainstorming 10 concepts each. Then we narrowed them down to our top 3 (top one each) and produced these three products. Once we had produced these products we took them to our school staff and common room to get feedback on our test products. We received feedback from teachers and year 13 students on taste, texture, aroma, colour and all round, mouth feel.

Specifications:

- Be retorted to ensure it is commercially sterile and therefore shelf stable.
- Meet the required nutrition specifications of the customer.
- Easy to use for consumers who don't have extensive bakers experience
- Use majority of grape marc

Constraints:

Packaging: We had a dilemma when we had to decide which type of packaging to put our product in. After researching a variety of packaging types, it was decided that the grapefusion needed to be in a package specifically based on the stakeholders needs, in this case for home bakers(not commercial). This is how we decided that a piping bag was most efficient.

Time: Because we had a variety of team members, many members had other commitments. Half way through the project one team member left, so we needed to organise our work a lot more. This effected the allocated time we gave ourselves, as well as the Gantt chart. To manage this we distributed different tasks to each member, to meet each deadline.

Resources: This was a huge constraint during technological processing, as many concepts we had involved getting help from commercial producers. In addition, the school resources didn't have all the necessary gear to produce mocks, so we needed to borrow some equipment from students and teachers.

Method:

The team discovered a niche in the market which then led to consumer research of the clientele. Functional modelling such as concept screening and prototypes were undertaken to find the most preferable to the target age group.

Experiments:

The development of 'Grape Fusion' was first produced by a variety of concepts that were developed and trialled on a small scale. Before deciding on what our final product we'd produce we produced small mocks of the final 3 which included dehydrating, truffles, and a syrup.



1- Using a dehydrator we dehydrated a variety of fruits to understand what a final product would look like, if we were to use the same process on the grape marc. The final product wasn't desirable based on resources, texture and stakeholder specifications.



2- We began with creating a syrup from the grape marc and putting it in a dark chocolate casings. The flavours worked well together, though the complexity and resources available made it difficult to complete a favourable result



3- After a variety of technological processing, we gathered our grape marc and marinated it in different natural juices to increase its sugar content. We decided that orange juice gave the desired taste. The experiment was concluded with sensory testing and nutritional analysis to decide on the final product.

Conclusion: In consultation with Kirin (the main stakeholder and sponsor), our product specification were viable for full scale production, and we gathered a variety of stakeholder feedback. Sensory evaluation has shown positive results, as the target market enjoyed the grape syrup. Further consumer trialling and market costing would be required to ensure that On The Marc- Grape Fusion gets promoted in the market successfully.

