BEAN WRAPPED
- BEAN AND VEGETABLE WRAP -

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Teacher: Margie Ellis
Mentors: Sandra Chambers, Linge Teo

**BRIEF**

To develop a frozen, convenient hand-held snack product with a vegetable based filling that targets tertiary students. It should be a healthier snack alternative that is quick and easy to prepare. Our product will have a high Health Star rating and promote the use of fresh, seasonal vegetables. It will endorse the 'International year of the pulse'.

**OPPORTUNITY**

Our research identified a gap in the market for students living away from home with limited resources and cooking skills and poor eating habits. Nutritious snack products that could be purchased cheaply, in bulk, frozen and easily reheated were lacking on the shelves.

**METHOD/DEVELOPMENT PROCESS**

Market research on existing hand held 'on the go' snacks, availability of frozen snacks and vegetarian options

Carrying out survey on target market to establish consumer preferences (tertiary students)

Disassembly of existing products to compare their attributes

Identifying health and safety requirements and development of HACCPs plan

Research and testing into microbial activity

Development of initial concepts, followed by qualitative and quantitative screening

Further experimenting with ingredients, flavours, textures and serving sizes

Stakeholder feedback on final concepts

Scientific research and experimenting around freezing vegetables and viscosity of sauce (use of modified starch)

Research on branding and packaging options, followed by final packaging and labels

Mass production of final formulation and vacuum pack

Final sensory evaluation from stakeholders (clients and target market).

**ATTRIBUTES**

- Health Star rating of 3.5-4.5
- High quality but affordable
- Clean packaging: Creative, fresh and in line with GreenMount's philosophy
- High fibre, low fat
- Appealing taste for target market
- Suitable for vegetarians
- Consistent with market trends
- Cost effective

**CHALLENGES ENCOUNTERED**

- Finding a point of difference in a market that is yet to gain mass popularity
- Getting a quality result from freezing and reheating our selected wrap. Texture, leakage and folding are issues that would need addressing for future production
- Community health issue (campylobacter outbreak) impacted on our timeline and put at risk our ability to produce safe food

Strict hygiene practices were put in place.

**FINAL OUTCOME**

Frozen vegetarian wrap packed with fresh locally grown vegetables

Encourages tertiary students to eat healthily with little effort

Six individually packaged wraps in a value pack box

Product has potential to be produced in GreenMount's factory.

**NUTRITION INFORMATION**

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Ave Quantity per serving</th>
<th>Ave Quantity per 100g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>1616kJ</td>
<td>805kJ</td>
</tr>
<tr>
<td>Protein</td>
<td>17.4g</td>
<td>8.7g</td>
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<tr>
<td>Fat, Total</td>
<td>7.46g</td>
<td>3.78g</td>
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<tr>
<td>-saturated</td>
<td>2.4g</td>
<td>1.3g</td>
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<tr>
<td>Carbohydrate</td>
<td>74.6g</td>
<td>37.2g</td>
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<tr>
<td>-sugars</td>
<td>5.3g</td>
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<tr>
<td>Fibre</td>
<td>9.8g</td>
<td>4.9g</td>
</tr>
<tr>
<td>Sodium</td>
<td>505mg</td>
<td>267mg</td>
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<tr>
<td>Calcium</td>
<td>172.4mg</td>
<td>86.2mg</td>
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</tbody>
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Acknowledgements: CREST, GreenMount Foods (mentors), NZIFST, Dr Lee Huffman (sponsor), Mrs Ellis (teacher), Mrs Malanana (Science Technician), EIT