

A top-down view of a wooden cutting board on a dark surface. The board is covered with dark chocolate shavings and several small, square chocolate pieces. In the bottom left corner, there is a small, round, light-colored bowl filled with melted chocolate, with a wooden spoon resting on its rim. The background is a dark, textured surface, possibly a countertop, with some scattered chocolate shavings. A large, semi-transparent, light-colored geometric shape is overlaid on the right side of the image.

MAKING CHOCOLATES HEALTHIER THROUGH FRUITS, NUTS AND OTHER INGREDIENTS

RACHANA NEGI
Senior executive Nutritionist
Hershey India Pvt Ltd.

Introduction

- Chocolate is the largest confectionary market in the world. In addition to being the best tasting confection, chocolate is becoming popular because of its inherent nutritional properties
- Types of chocolates as per FSSR: milk chocolate, plain chocolate, blended chocolates, white chocolate, composite chocolate, filled chocolate, plain & milk covering chocolate
- Chocolate is a classic feel-good treat, but it also has high levels of antioxidants, which is another area of interest in nutraceuticals
- Post covid the consumers have become mindful of their choices with foods. Key trends in confectionery currently include the growing focus on rising concern over health in a category traditionally more associated with treats and indulgence.
- Ingredients like nuts, fruits, super foods etc. not only provide textures and flavor to the products but also contribute to the added health benefits
- There is also growing focus on functional confectionery, featuring ingredients such as protein, dietary fiber, vitamins and minerals that deliver health benefits in a tasty and appealing way
- Although one must be mindful about the portion of these indulgent yet healthier treats.

“EVEN NECTAR IS FATAL IF TAKEN IN EXCESS”

WHAT WILL WE COVER TODAY?

**MARKET AND CONSUMER
TRENDS IN HEALTHY
CHOCOLATES**

01

02

**INCLUSIONS IN CHOCOLATES
AND THEIR HEALTH BENEFITS**

**FUNCTIONAL INGREDIENTS
AND PLANT BASED
CHOCOLATES**

03

04

FUTURE ASPECTS



66

GLOBAL MARKET AND CONSUMER TRENDS



The global pursuit of health and happiness



Consumers continue to prioritize investment in health and wellbeing. 60% of consumers globally intend to increase their spending on health in the next 12 months.



Consumer action to improve mental wellbeing is gaining momentum and edging ahead of action on physical health. This is most pronounced among **Generation Z and Boomers**.



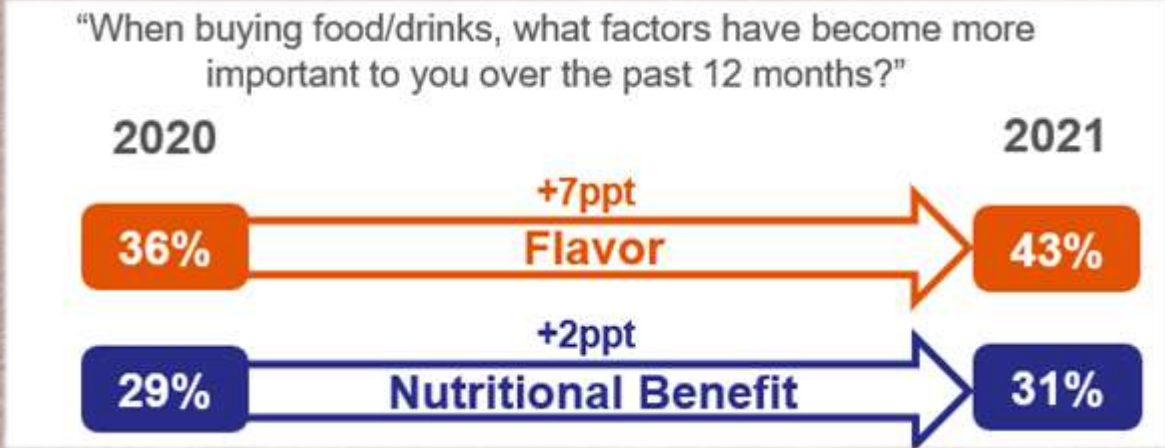
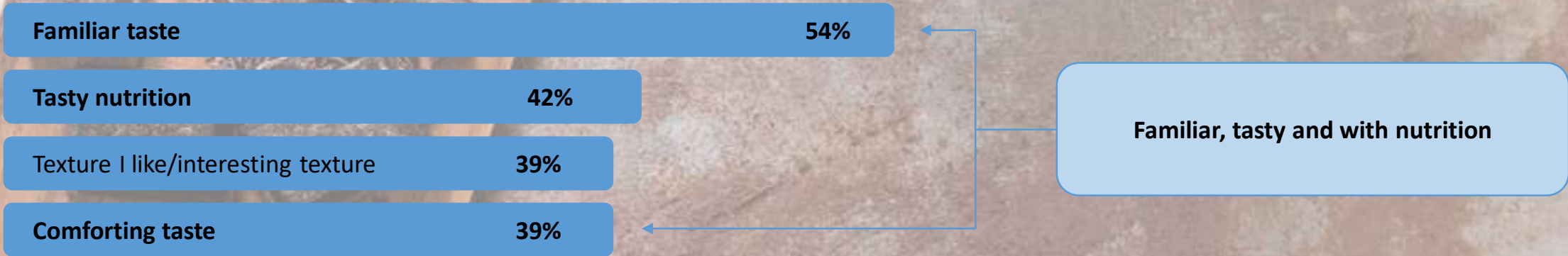
While consumers still enjoy the comfort of treats, a larger percentage are choosing a **healthier route to managing stress with good nutrition**.



Advance in research and technology to identify potential disease risk reduction benefits or to meet the personal nutritional needs of an individual

Consumers favor the familiar yet nutrition through confectionery they consume

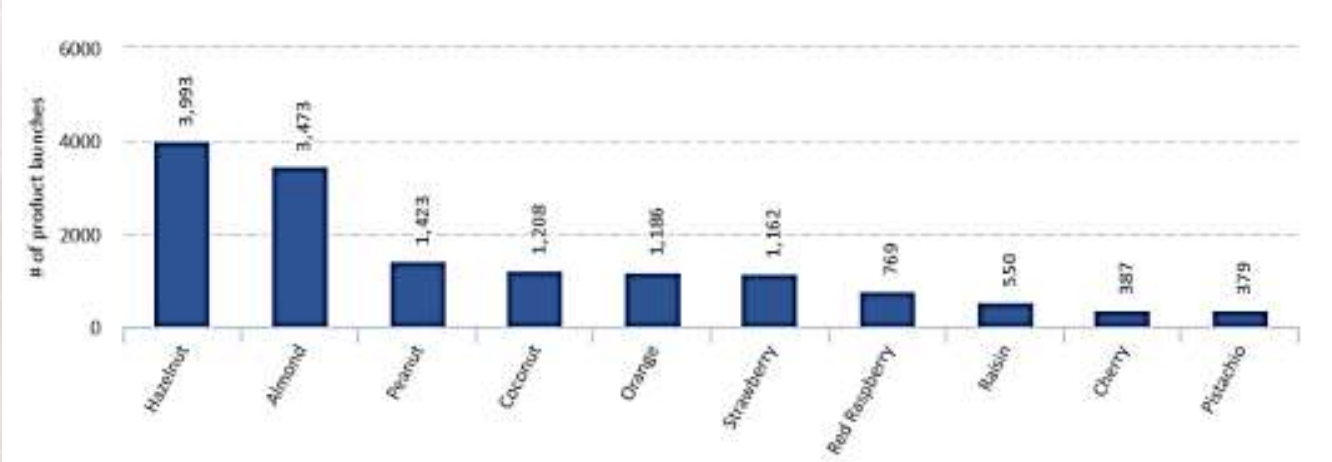
Which factors most influence your flavor choice in chocolate confectioneries? Select up to five (Average: 10 countries)



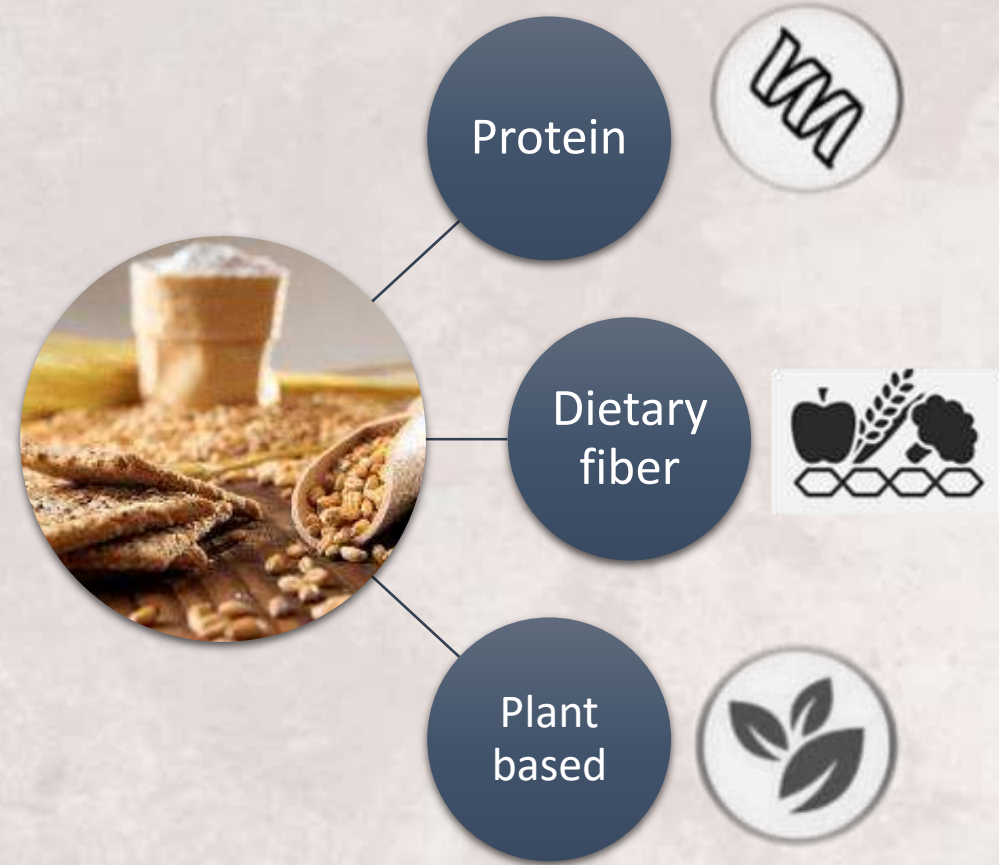
Source: Innova Flavor Survey 2021

Nuts and fruits are the top ingredients in chocolates, while there is a rise in functional claims with protein and fiber

Top 10 inclusions in chocolates (2020-2022)



Leading functional ingredients and high impact trend



Bars



Chocolate coated



Filled bars

Source: Innova market insight



“

HEALTH BENEFITS OF INCLUSIONS IN CHOCOLATES

Health benefits of some commonly paired nuts & seeds with chocolates



ALMONDS

- **Nutritional profile:** Almonds are dense in healthy MUFA, fiber protein, magnesium and Vit E
- Best source of Vitamin E (1 ounce provides 37% of RDA)
- High magnesium foods such as almonds may help prevent metabolic syndrome and type 2 diabetes
- Eating one or two handfuls of almonds per day can lead to mild reductions in “bad” LDL cholesterol. Almonds with dark chocolate promotes heart health (AHA)



HAZELNUT

- **Nutritional profile:** Rich in MUFA, PUFA, Omega 6 and Omega 9 fatty acids. Rich source of Vitamin E, manganese and zinc
- Hazelnuts are rich in flavonoids and Vit E that have been shown to increase antioxidant protection in the body.
- The Omega 3, 6 and 9 helps to maintain a healthy lipid profile and thus essential for heart health



SUPER SEEDS

- **Nutritional profile:** Commonly used seeds with chocolates are chia seeds, pumpkin seeds and flaxseeds. Rich in Omega 3, Omega 6 and dietary fiber
- Flaxseeds and chia seeds are excellent alternative for vegetarian Omega 3 in the form of ALA
- Pumpkin seeds are good sources of monounsaturated and omega-6 fats, and may help improve heart health

Health benefits of some commonly paired fruits with chocolates



RAISINS

- **Nutritional profile:** source of energy through natural sugars, source of antioxidants, iron, magnesium and potassium
- Raisins are an exceptional source of naturally occurring antioxidants. Phenolic acids and flavanols are most common.
- Best source of iron for individuals who follow vegan or plant-based diet
- Rich in soluble dietary fibre, essential for gut health and healthy bowel



CRANBERRY

- **Nutritional profile:** these are superfruits, highest in phenols and anthocyanins. Rich in calories and fiber
- Cranberries are primarily made up of carbs and fiber. They also contain several vitamins and minerals, including manganese, copper, and vitamins C, E, and K1
- Rich source of various bioactive plant compounds. Some of these, such as A-type proanthocyanins, may help prevent UTIs



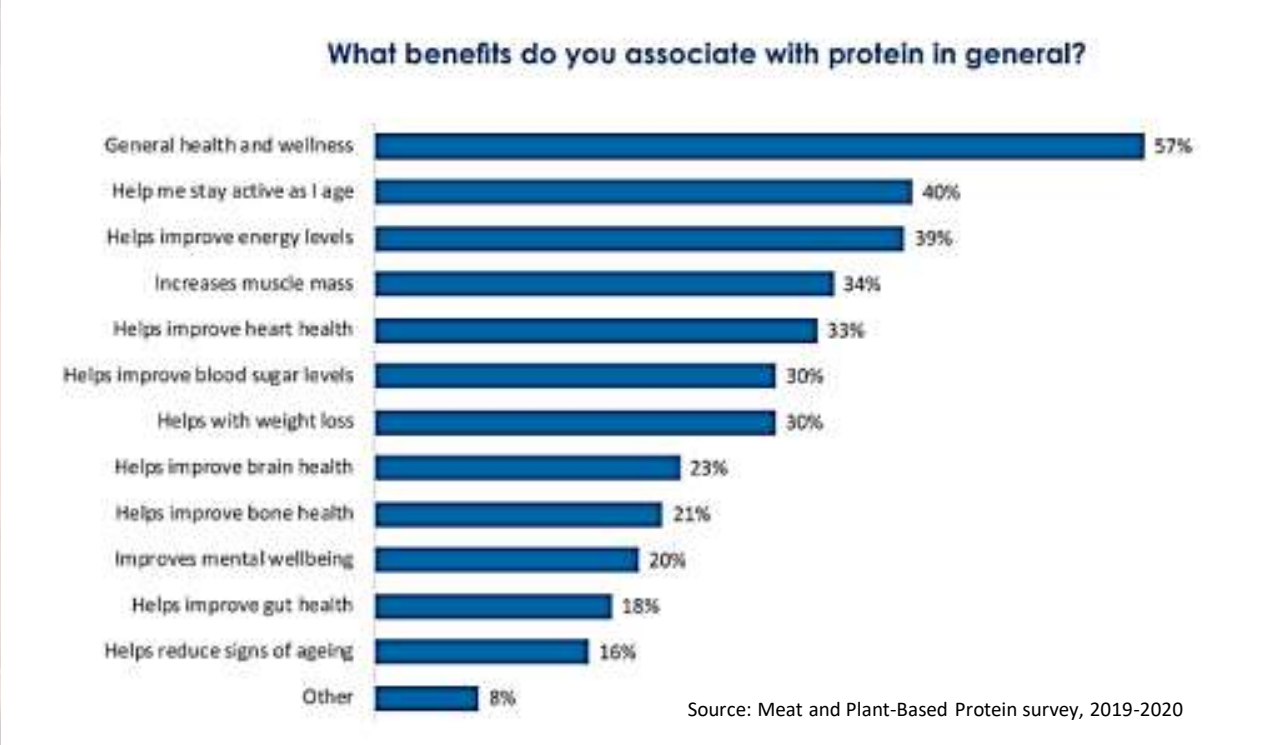
SUPER FRUITS

- **Nutritional profile:** packed with extremely high levels of antioxidants, fibers, vitamins and minerals. Some exotic super fruits include goji berry, acacia berry blueberry etc.
- Antioxidants in superfruits include flavonoids, anthocyanins, proanthocyanins and Vit C
- The bioactive components are extracted for its medical properties like for neurological disorders, cardiovascular health and diabetes
- They also have anti-aging and immunity boosting properties



66 FUNCTIONAL INGREDIENTS IN CHOCOLATES

Consumer choices driving growth in protein foods



- Consumers are more likely to turn to protein products not to address specific health issues or concerns, but instead to try and improve overall health
- Protein products are often deemed a more natural and safer way to obtain an energy boost

Key drivers:



Popularity of high protein diets for weight management as well as supporting more **active and healthy lifestyles.**

Continued interest in vegan, vegetarian and flexitarian eating for health, ethical and sustainability reasons driving demand for high quality plant-based protein sources.

Protein becomes more important as **standard of living rises in Asia.**

Powering of chocolates with various sources of proteins for associated health benefits

Common sources of protein used in chocolate confectioneries

Building blocks
for muscle &
organs

Weight
management

Energy

Immune
health

Hybrid protein formulations is a good strategy to increase the nutritional quality of the protein and deliver a complete essential amino acid profile.

Plant protein

- Soy protein: SPI, SPC, soy granules, soy flakes
- Pea protein
- Wheat protein
- Rice protein
- Chickpea protein
- Hemp protein

PDCAAS (protein digestibility corrected amino acid score) of soy protein is comparable to that of whey protein

Milk protein

- Whey: WPC, WPI
- Casein
- Milk solids

Other

- Egg protein
- Collagen
- Insect protein (cricket flour)



High dietary fiber claims surge in chocolate category due to its innumeral advantage



1. Lowers LDL cholesterol levels



2. Weight management



3. Reduced bowel transit time

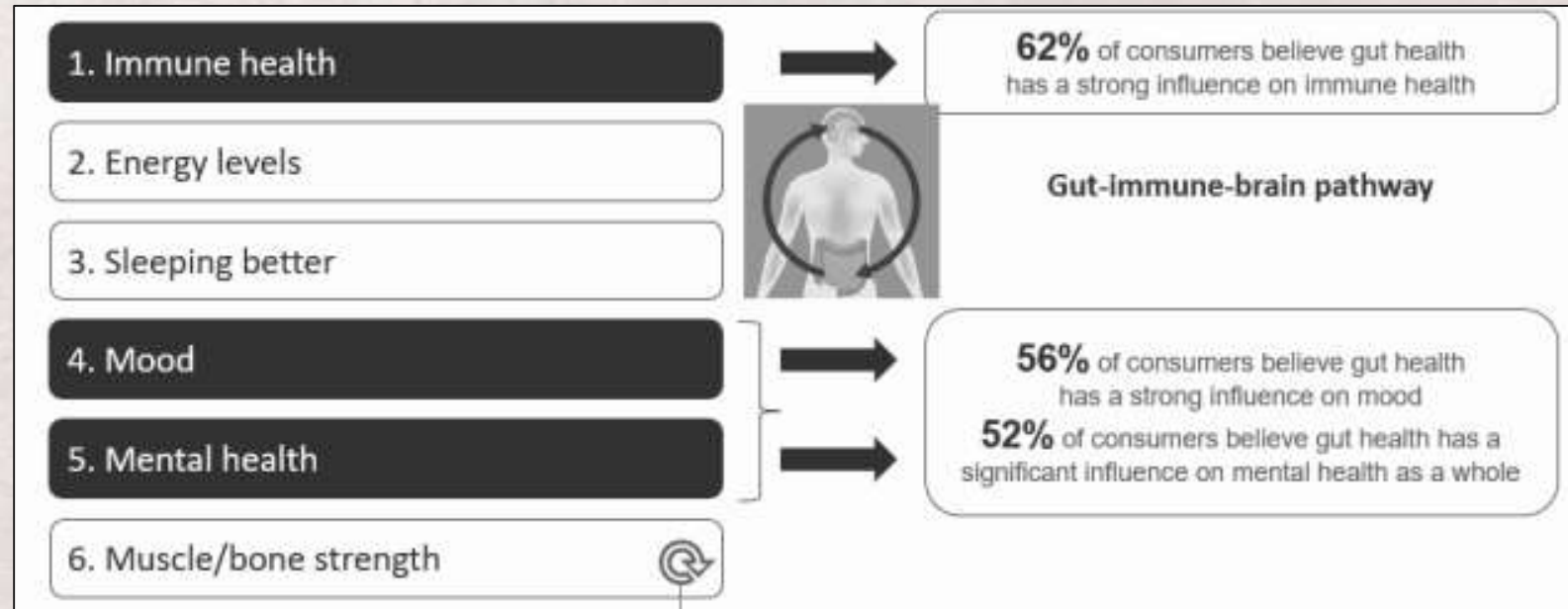


4. Prebiotic benefits



5. Helps control blood sugar levels

To what extent do you think the following physical health aspects are influenced by gut health?



Source: Innova Trends Survey 2021

Commonly used dietary fibers in food systems and market products

Dietary fiber

Soluble fiber

Pectin: fruit, vegetable, legume

Inulin: roots and tubers

Fructo-oligosaccharides: fruits, grains, legumes

dextrin : chemically derived

Psyllium : husk of ripe seeds

Beta-glucan: oat and barley

Promotes satiety, lowers glucose level after meal, lowers blood cholesterol levels, growth of health promoting bacteria, production of SFA's

Insoluble fiber

Bran : wholegrains

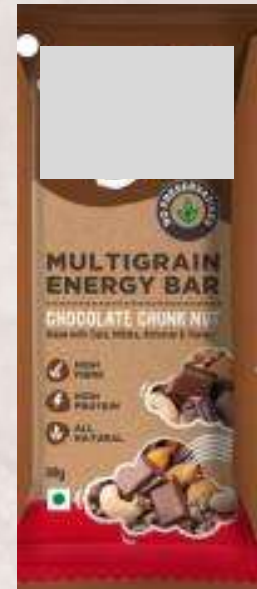
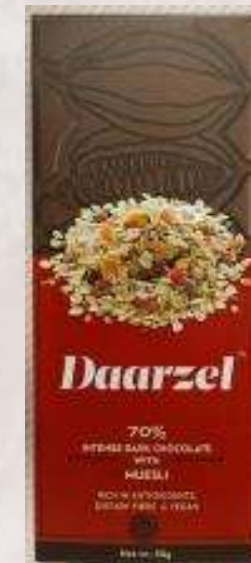
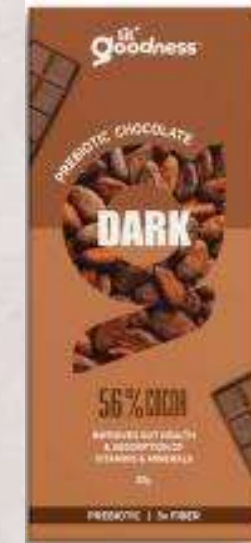
Cellulose: vegetables

Hemicellulose: vegetables

Lignin: seeds

Resistant starch: wholegrains, chemically modified starch etc.

Eases bowel movement, enhances nutrient uptake, controls blood glucose levels





66
PLANT BASED CHOCOLATES

Plant-based chocolate is both a modern invention and a centuries-old recipe

A plant based or “vegan” chocolates are 100% free of any animal or products derived from animals like milk, milk solids, milk fat, honey etc. They may contain milk of/ powdered oats, almonds, rice, cashew, coconut or milk fat replacers to mimic the properties of milk derivatives

Plant based is small, but emerging trend

Lactose free

Cholesterol free

Clean label

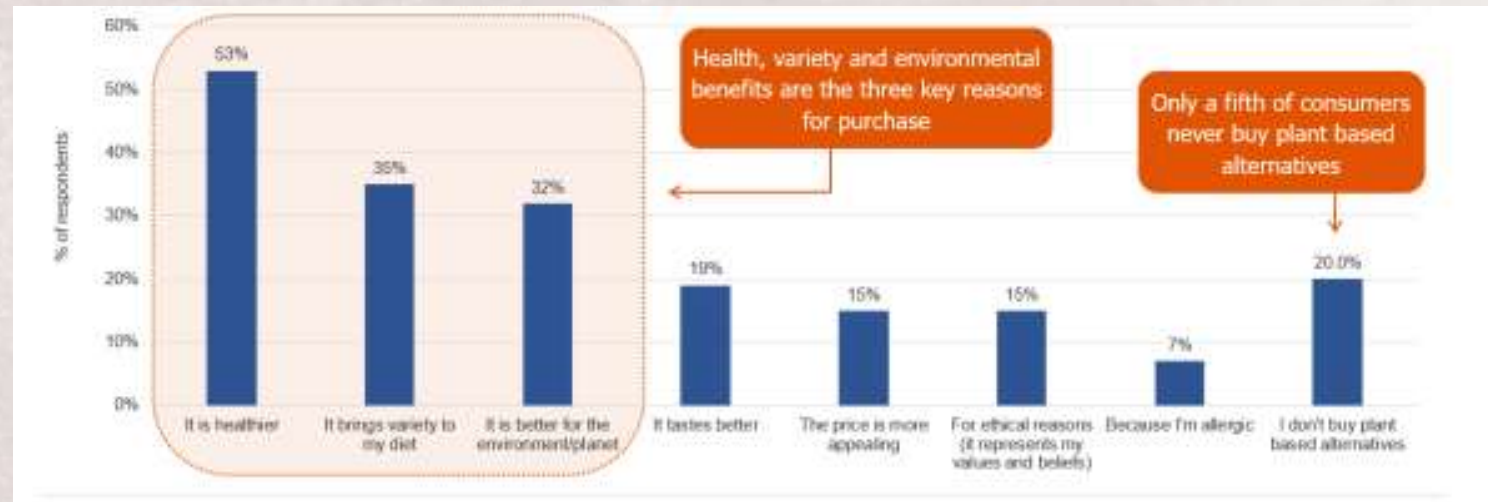
Holistic health:
Sustainability

Premium quality

Vegan



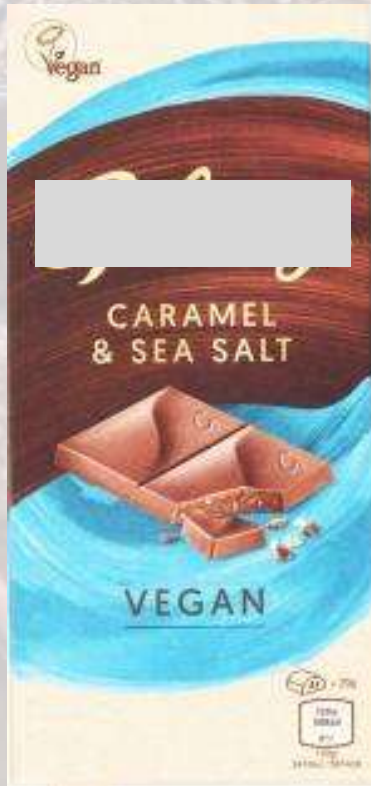
For what reasons would you consider buying/eating plant-based alternatives?



Source: Innova Consumer Trends Survey 2021

While the total calories might remain the same compared to the milk derivatives available in the market

Some plant-based chocolates in the market



Key product trends to watchout in plant-based chocolates



Multiple health claims

Many plant-based chocolate products still take a broader approach to health, using vegan recipes as part of multiple health platforms, e.g., Sugar free, gluten free, protein, gut health etc.

Tied to naturalness and simplicity

Claims regarding “raw” formulation, organic or short ingredients lists are common

Sugar free expansion

An increasing number of new vegan or plant-based sweets are also positioned on reduced sugar platforms

Plant extracts & botanicals

Flavors from nature, including fruit/vegetable concentrates plant and floral extracts. E.g: Ashwagandha for alert and relaxation



66
FUTURE ASPECTS



Future aspects:

- The market for healthy yet indulgent chocolate confectioneries will grow in coming years with the increased awareness among consumers about healthier alternatives and Gen Z, who are willing to spend more on offerings with holistic health
- Growth and penetration of inclusions which are emerging today to like super fruits, seeds, grains, botanicals , floral extracts and other differentiated ingredients
- Protein claims, particularly on plant-based chocolates will continue to drive health-focused consumers as well as consumers who wants to follow a balanced lifestyle due to their contribution towards overall health and wellness
- Advances in technologies, further research in the functional ingredients and their doses will mould the future of functional foods and thus chocolates with potential to live healthier life
- There is further scope in making the healthier chocolates affordable and palatable in comparison with the existing available chocolates in the market



THANK YOU!!