



From the Known to the Unknown:

Attractive meat alternatives building the
bridge to a plant-based future

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hydrosol
THE STABILISER PEOPLE

„Der Mensch ist ein Gewohnheitstier“ or: „Old habits die hard!“



Food has a lot to do with

- Tradition
- Experiences
- Habits

Food is pure emotion. The tastes of our childhood make us happy!

The consumer interest is there



Five of the top trends of Innova Market Insights show that consumers are open to new experiences and willing to explore plant-based food



The VEGGIE Reality – on the market



Do carnivores have an evolutionary advantage due to higher protein supply??

Evolution:

- The encephalon (brain) has grown
- With a higher percentage of meat in the diet (>20%), the encephalon grew faster compared to plant eaters
- Lactation phase is shorter
- Meat consumption leads to a better supply of proteins and therefore essential amino acids
- Historically, intake was at times higher than 50% when no plants were available (winter, drought, etc.)

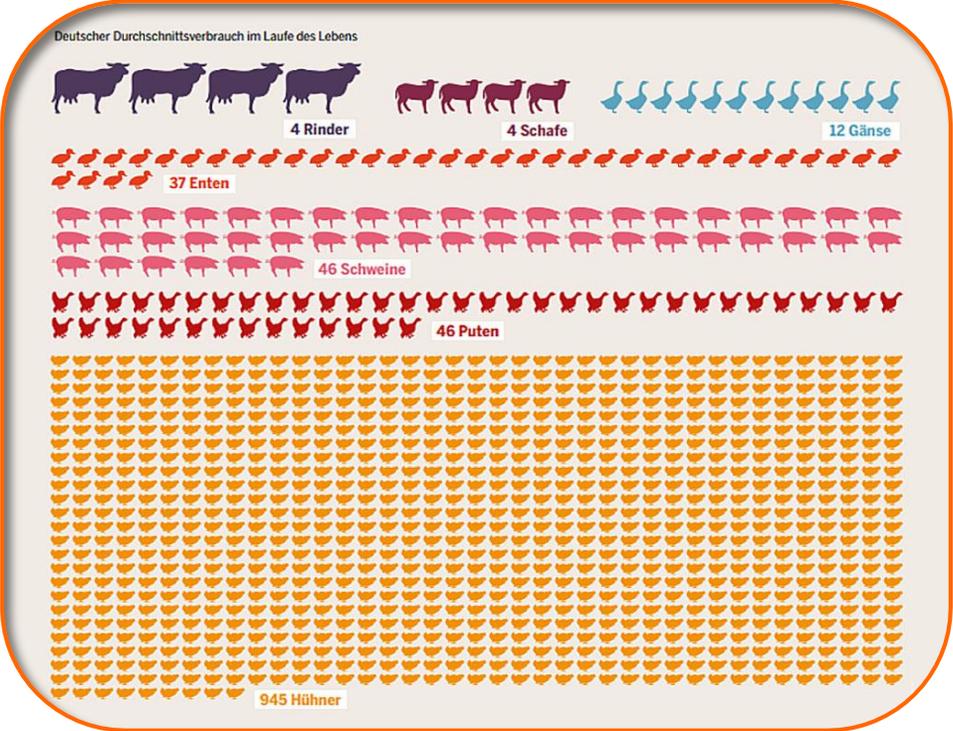


Protein demand according to German Nutrition Society (DGE)

High Protein demand: about 1g/kg body weight per day

- 9-11% of food has to be protein
- Even more during pregnancy or lactation

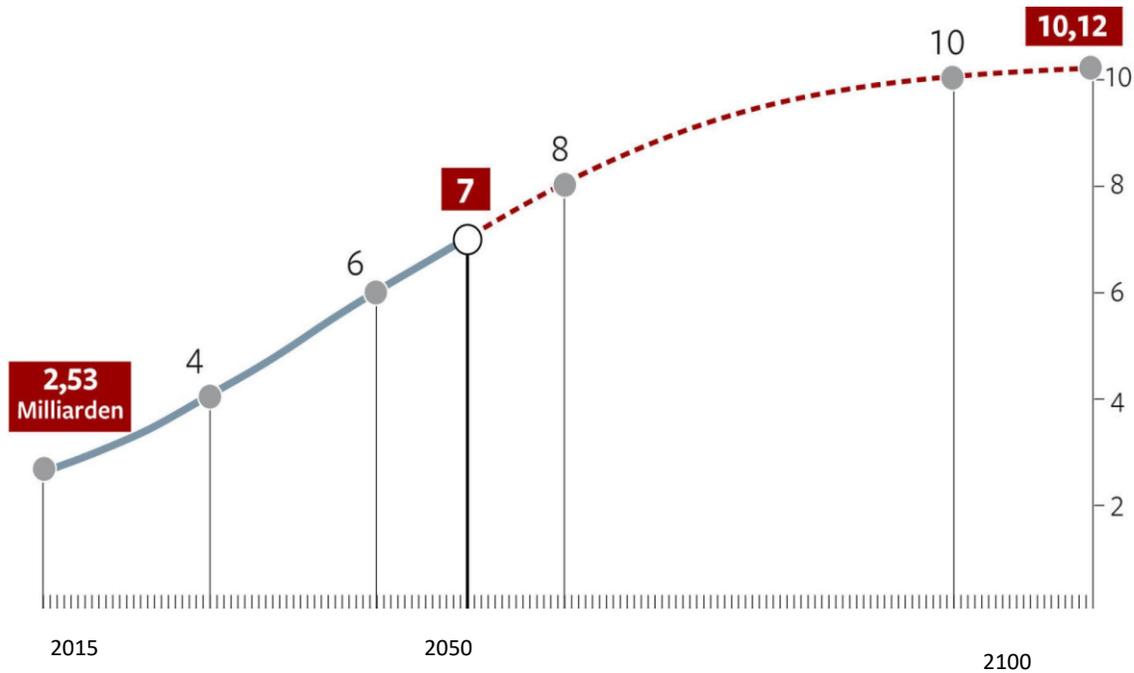
Meat consumption of a German in whole lifespan
(source: Fleischatlas 2013)



Growth in population =



Growth in meat consumption



Source: Fleischatlas 2013

Meeting needs with meat as the main protein source is a challenge today, and in future will **simply not be possible!**

Proteins and satiety



- Satiety is the driver of body weight management
- Consumers want to have Veggie-Alternatives, but for real satiety a significant protein content is crucial.
- The share of protein in plant alternatives has to be high

From the Known to the Unknown:

How can the shift towards a plant based diet be achieved?

So far:

We need plant-based food products:

- that match the consumer expectations regarding good food
- that are appealing to the consumer
- that are healthy
- that provide protein and essential amino acids in sufficient amounts

A closer look to alternative protein sources...

Legumes or: Beans, beans, beans!

Part 1

Legumes contain 5-35% Protein



- Taste and texture diversity are massively restricted
- Indigestible carbohydrates cause bloating and flatulence

A closer look to alternative protein sources...

I'm going nuts...

Part 2

Nuts and kernels: 15-35% Protein



- High fat content
 - The fat in nuts is healthy, but
 - High calorie content
 - Allergenic potential
- Processability is limited
- Expensive
- Nuts cannot be the base of a diet, only a partial substitution

A closer look to alternative protein sources...

Ewww...worms

Part 3

Black soldier fly: 55% protein



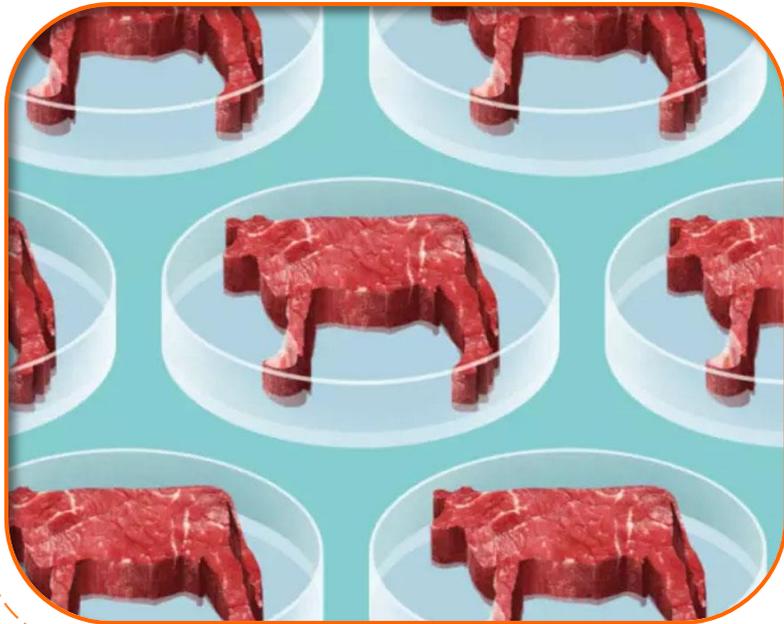
- No sustainable production concept so far (food waste can't be used)
- Common feeling of disgust
- Not „plant based“/vegan

A closer glimpse to alternative protein sources...

Science fiction: Cell cultured meat

Part 4

Cell based meat: Protein content like meat (20%)



- Expensive
- Sustainability?
- Biggest question: When will it become reality?

A closer glimpse to alternative protein sources...

Part 5

Science fiction: Synthetic food concepts:

Complete solutions: 20% protein of daily intake



- Forget about indulgence?
- Is this really what we propose for everyday eating?

THE HYDROSOL ANSWER:

Familiar product concepts based on plant proteins that look familiar and appealing, and thus invite the consumer to enjoy them





The Hydrosol answer is supported by Proveg:

„Bad vegan products are the enemy of a plant based nutrition“

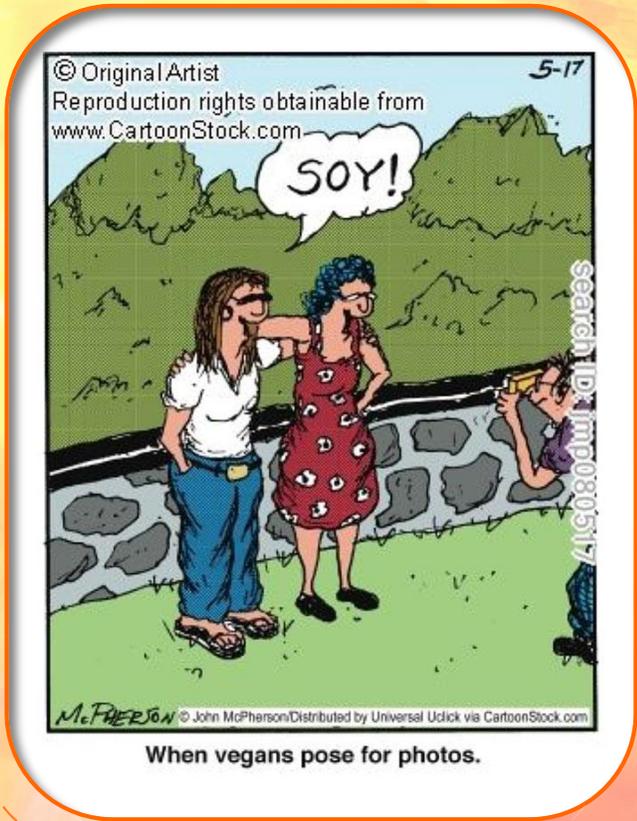
Alexandra Kirsch, ProVeg International

Properties and advantages of Hydrosol meat analogues:

- Diverse Plant Protein sources (pea, potato, soy, sunflower)
- High Protein content
- Fat reduced (TFA and SFA reduced)
- With or without food additives
- Allergen-free (except soy)
- Vitamine deficits can be balanced
- Fit existing food supply chain
- Known and familiar

CONCLUSION

- Global hunger for protein will increase
- Rising demands can only be covered with protein derived from plants
- Plant based food has to provide proteins in an attractive way
- Alternatives to meat and dairy products are able to build a bridge to possibly completely new product categories in the future



When vegans pose for photos.

New ideas, new markets.

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