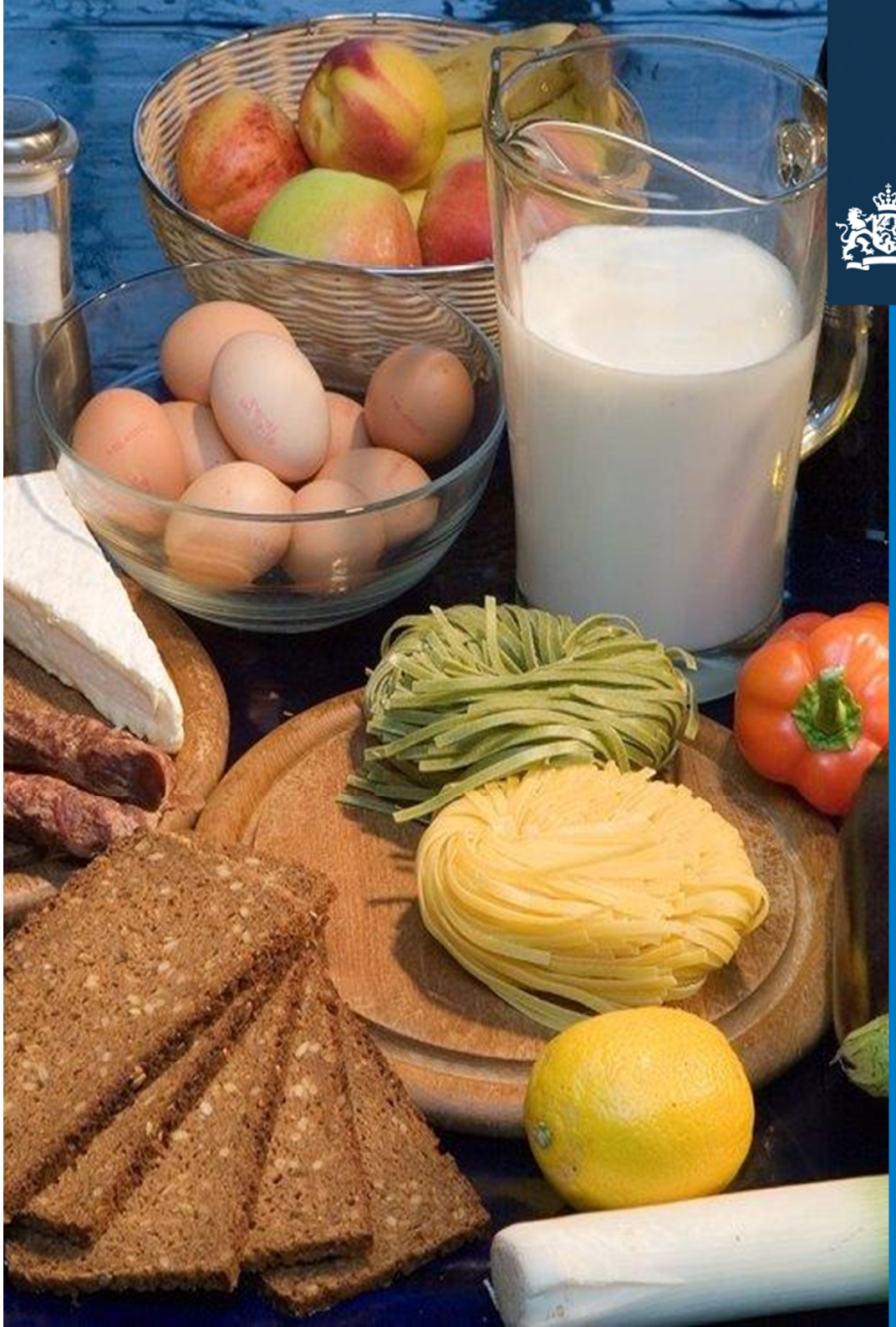

National Institute for Public Health
and the Environment
Ministry of Health, Welfare and Sport

What is on our plate? Safe, healthy and sustainable diets in the Netherlands

16 March 2017

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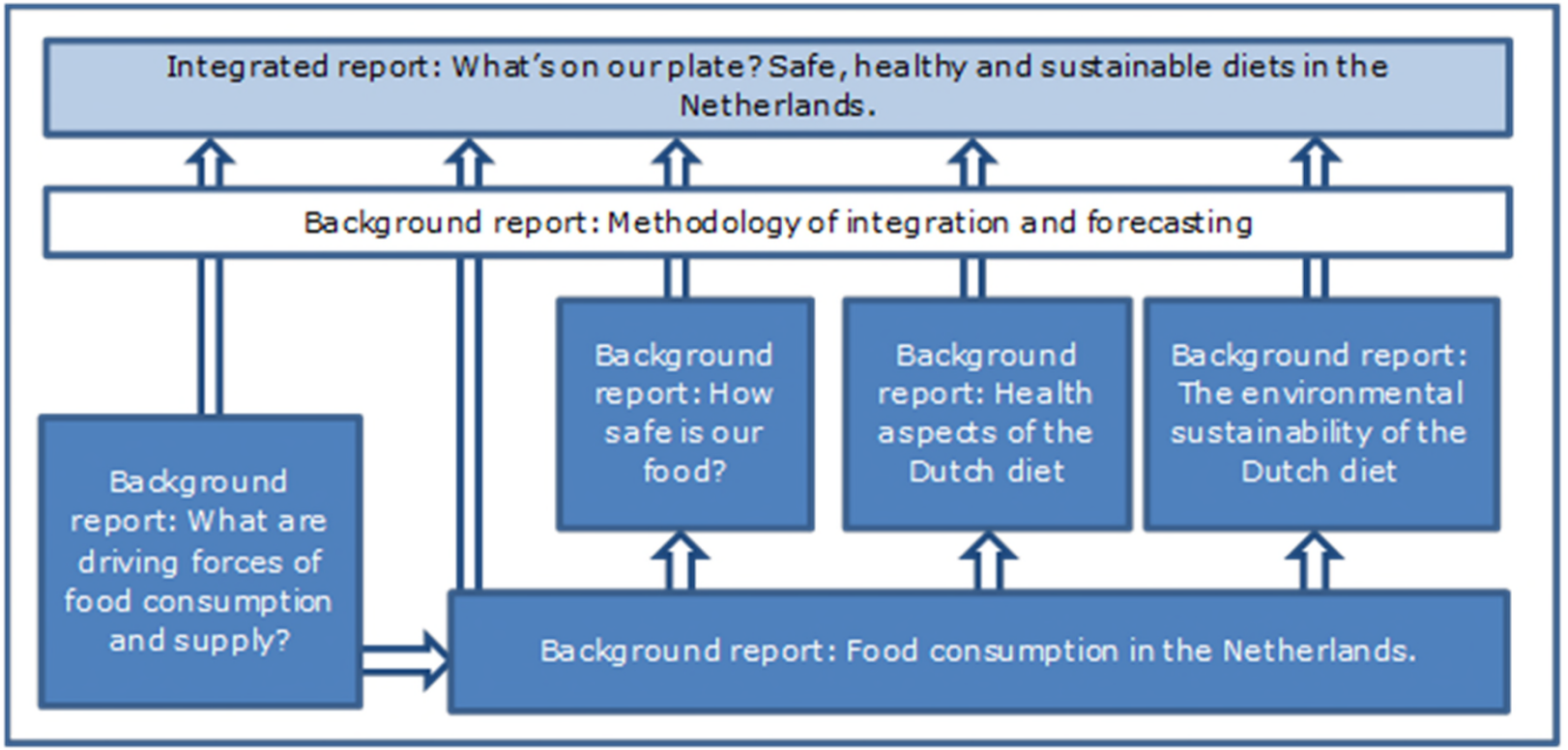
Aim

How safe, healthy and sustainable is the Dutch diet?

How can we increase the safety, healthiness and environmental sustainability of the our diet?

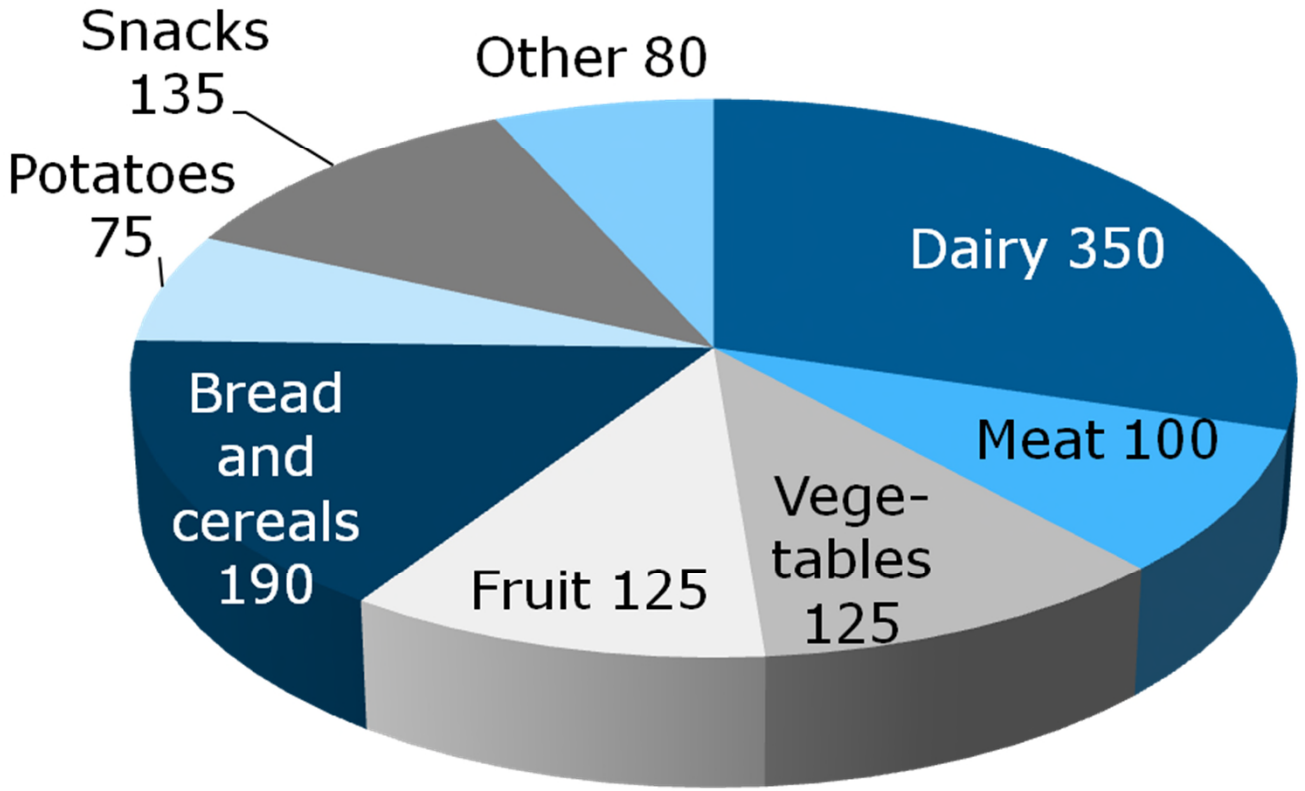
Introduction

The RIVM report "How safe is our food" is one of the background reports to the overarching report "What is on our plate? Safe, healthy and sustainable diets in the Netherlands".



What's on an average plate?

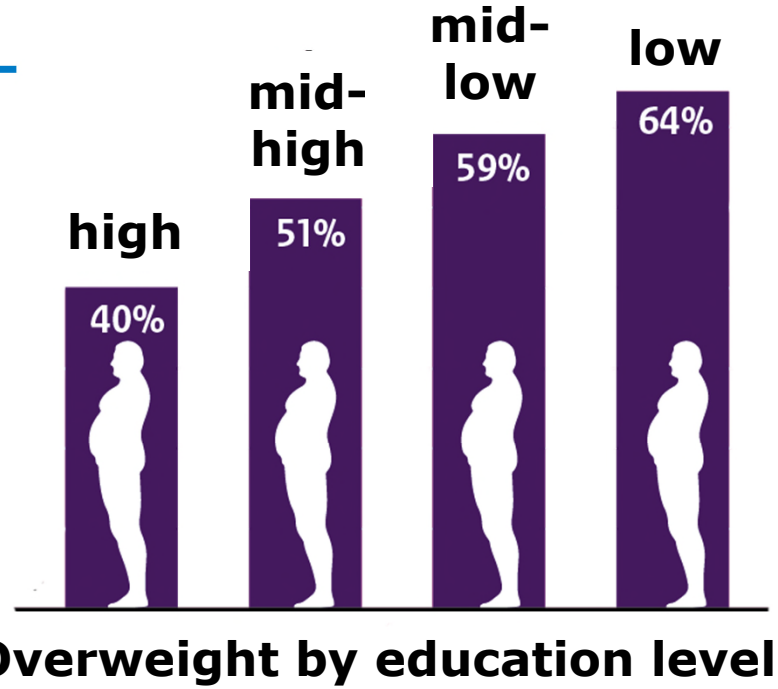
- 3 kg: 2 l beverages, 1 kg food:



Health gain is possible in NL

- Most Dutch people are healthy
- Life expectancy increases

but

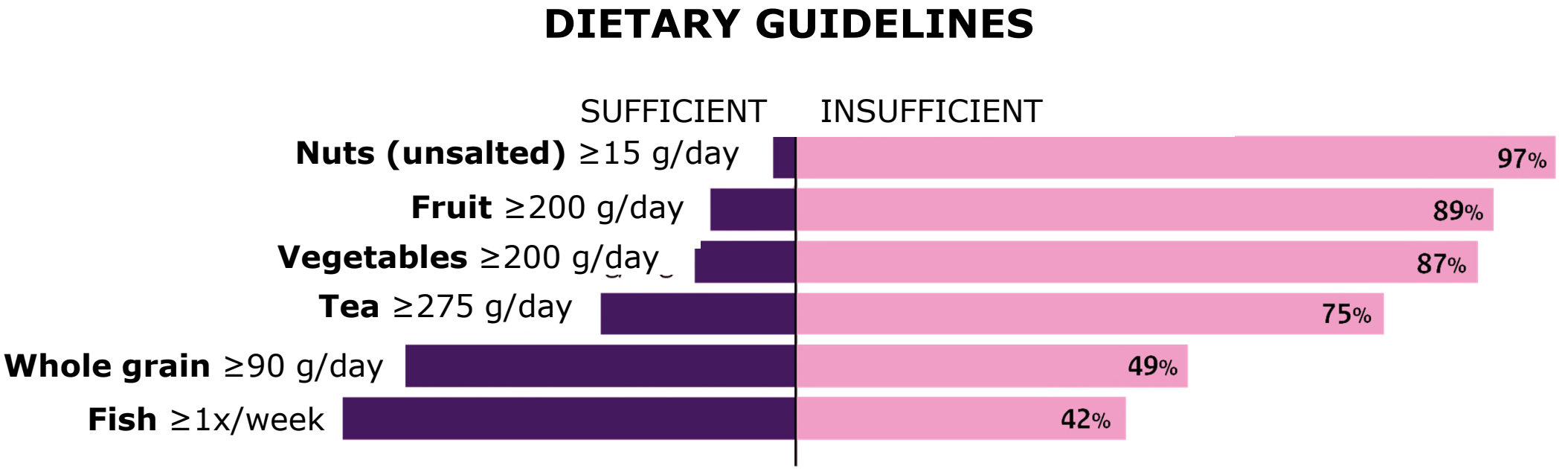


Overweight by education level

- About half of the population is overweight
- Prevalence of chronic diseases is high
- Health gains are possible through healthier diet and body weight
- Especially applicable for the lower socio-economic groups

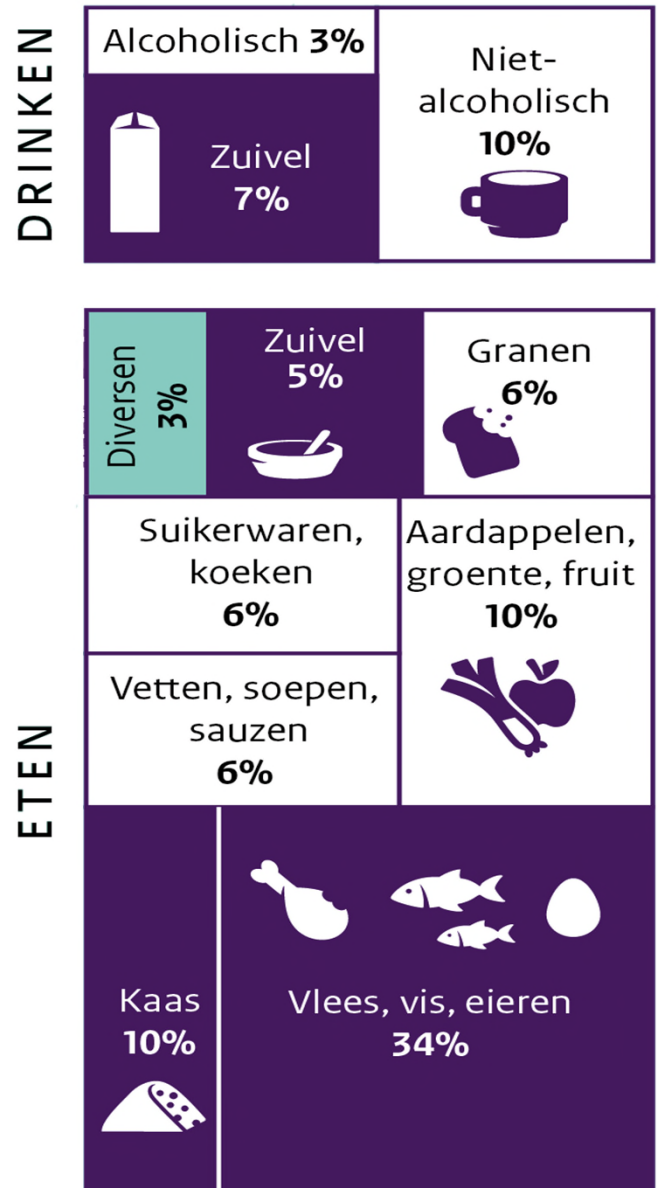
Health gain possible through healthier diet

A healthier diet lowers the chance of premature death, cardiovascular disease and diabetes by approximately 15-20%

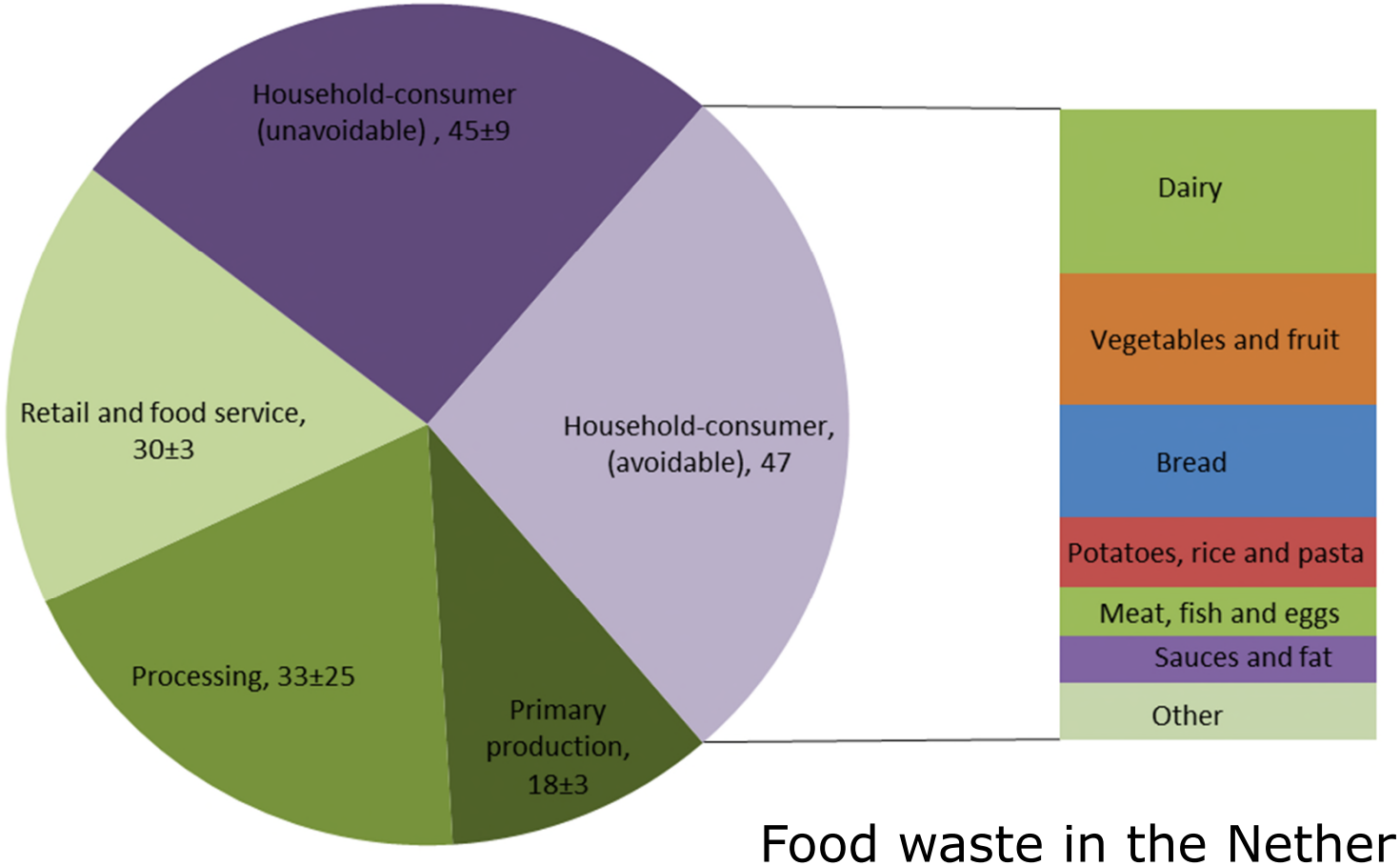


Dutch diet has significant impact on the environment

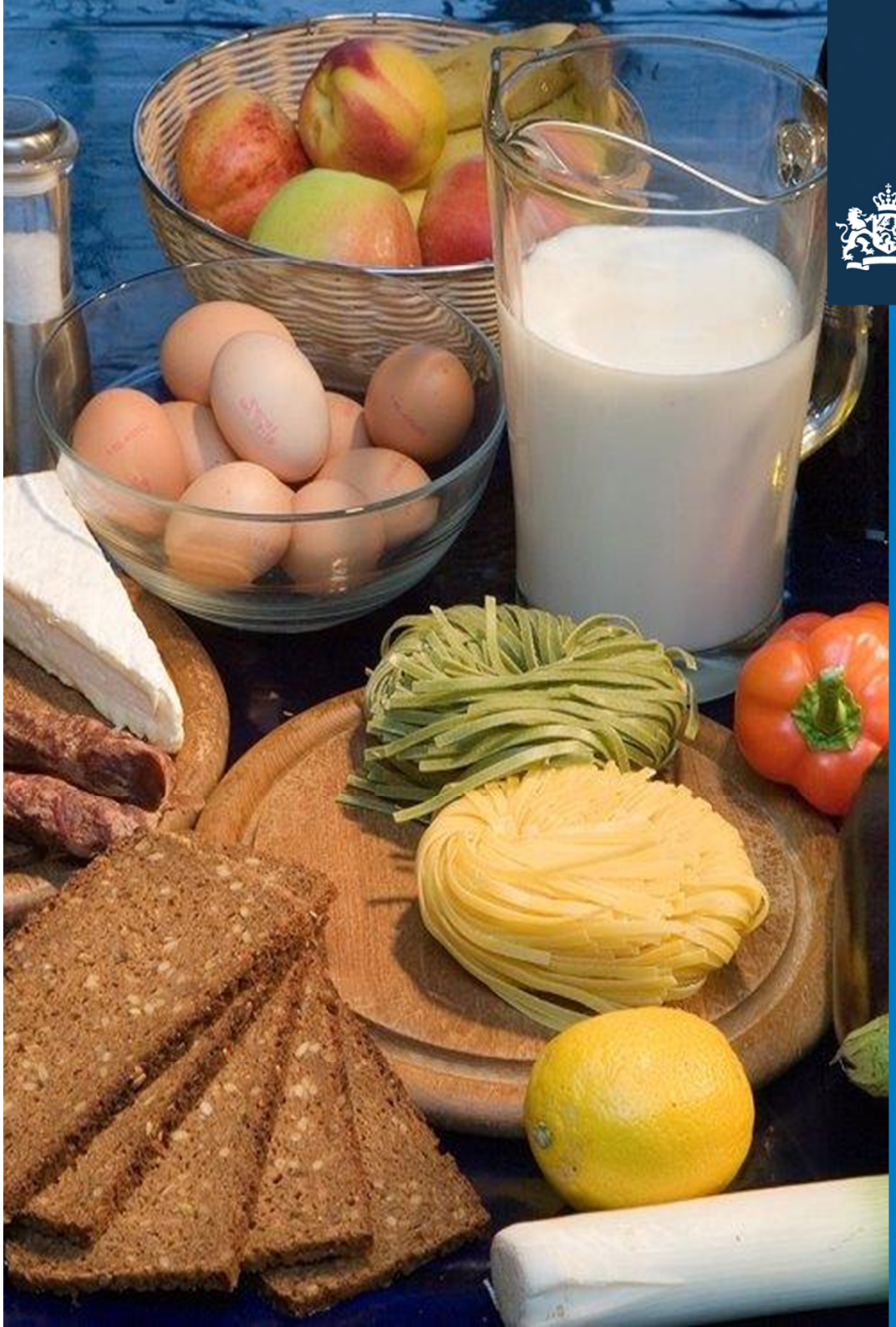
- Food consumption of Dutch adults: 4-5 kg CO_2-eq. per day
- Primary production of meat, dairy and drinks have the largest impact



Food waste, kg



Food waste in the Netherlands per household per year



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How safe is our food

Background report to "What is on our plate?"

Mengelers, de Wit, Boon, Franz, Bouwknegt, de Jonge, Bulder and Havelaar

Aim of the report

To describe the latest state-of-the-art on Dutch food safety

Many experts involved

Topics:

- hazards (microbiological and chemical) that can threaten food safety;
- current status of food safety in the Netherlands;
- efforts made to maintain and improve food safety;
- most important changes in the drivers of emerging risks in relation to food safety

Content of the report

1. Introduction
2. Food related hazards
3. Safety of the Dutch food
4. Efforts to ensure food safety
5. Emerging issues in food safety

Not addressed are the following topics:

- allergic reactions to (substances within) foods
- product authenticity and fraud
- dietary supplements and interactions between food components and drugs
- physical hazards (such as pieces of glass or metal in food products)
- hazards related to animal feed

Indicators of food safety

The following indicators were used to describe the status of the food safety in the Netherlands:

Microbiological

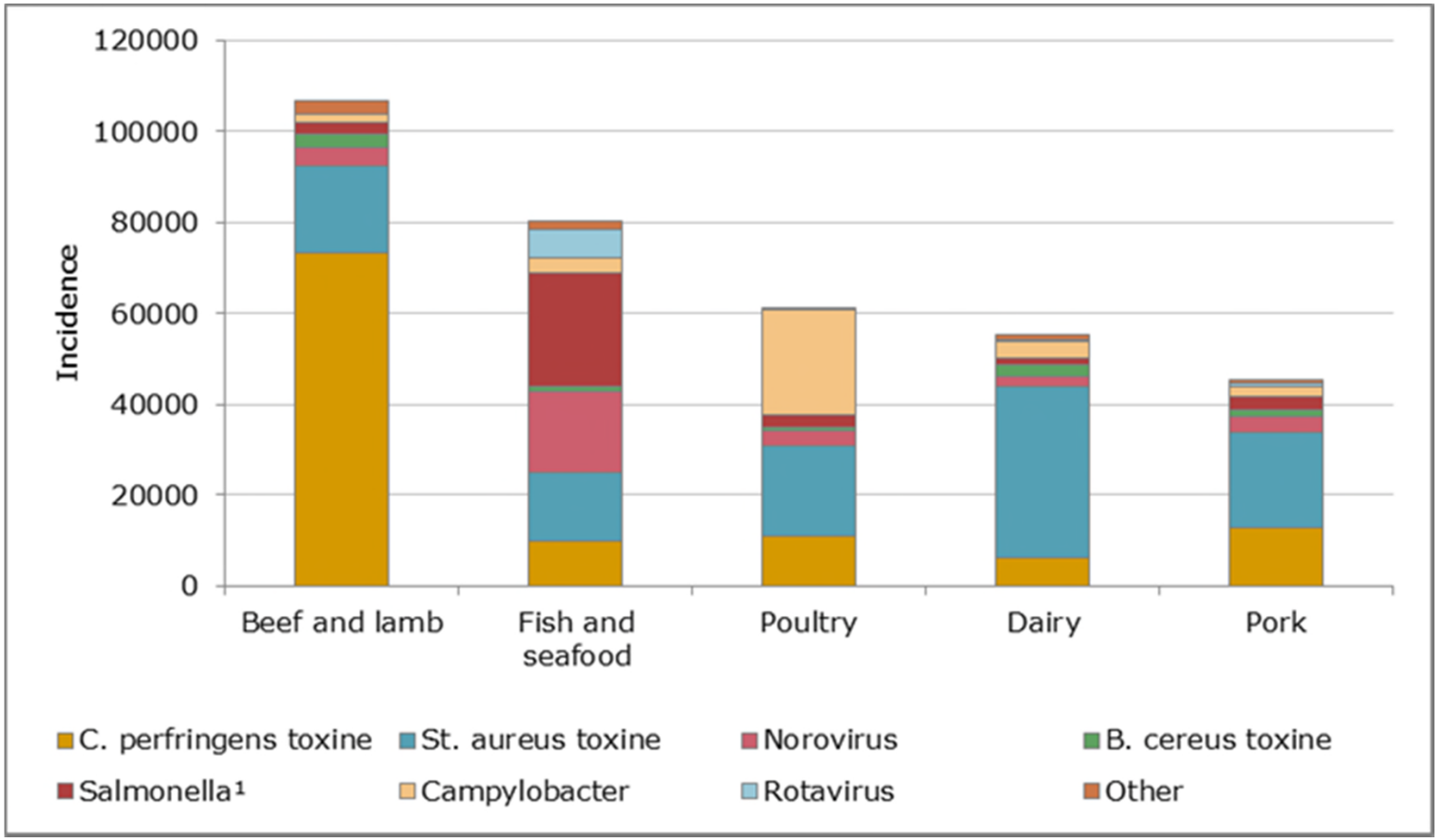
- annual number of cases of foodborne diseases
- disability adjusted life years (DALYs)

Chemical

- risk quotient: ratio of the human dietary exposure and the health based guidance value

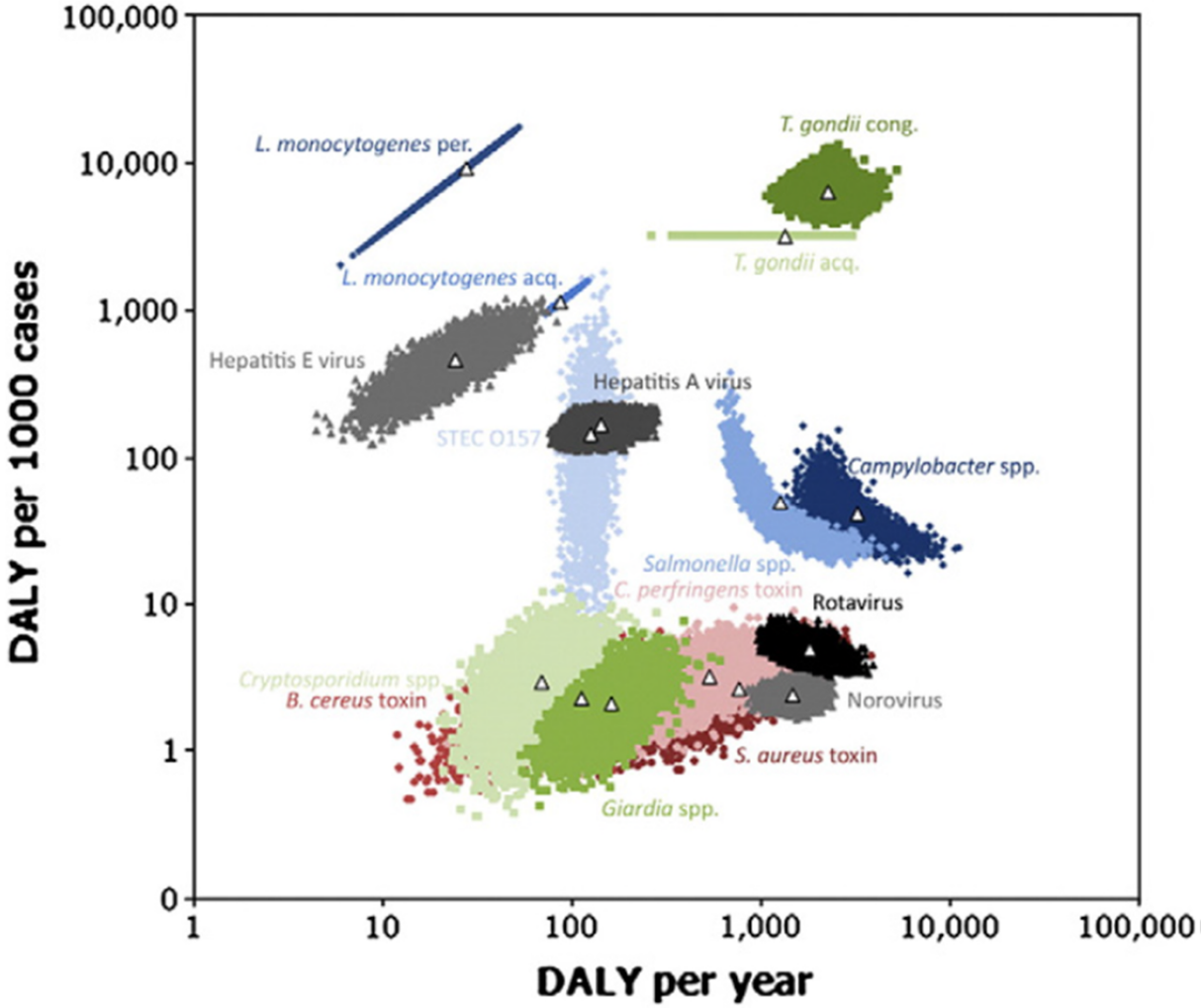
No common denominator used for microbiological and chemical food safety

Results (1) Microbiological risks



Incidences of symptomatic infections per pathogen and food group

Results (2) Microbiological risks



Estimated DALYs at population level (X-axis, expressed per year) and individual level (Y-axis, expressed per 1000 cases)

Conclusions (1)

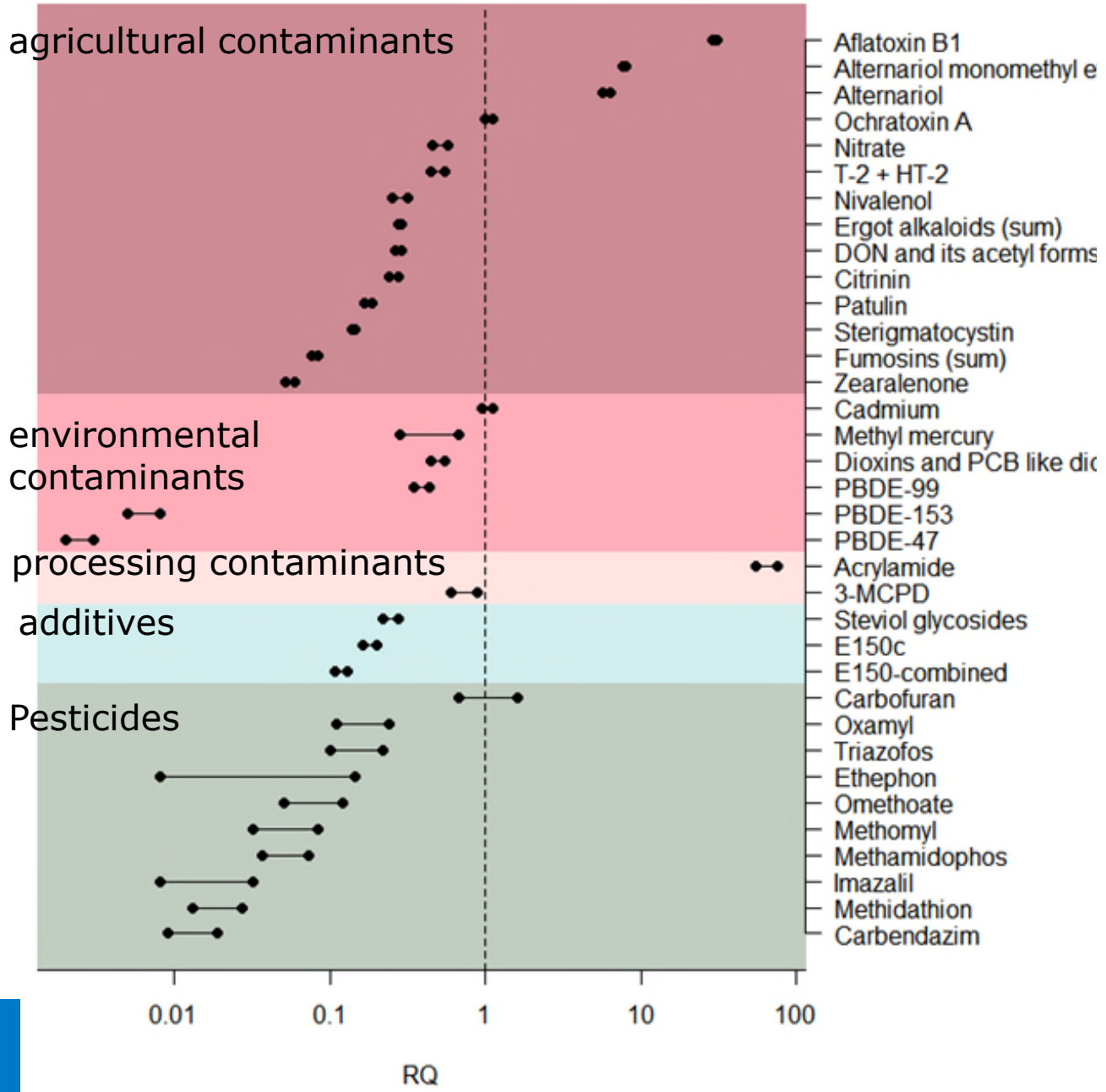
Microbiological risks

- Over the period 2009–2014, the annual number of cases of foodborne diseases caused by pathogens in the Netherlands did not change substantially.
- Annually, on average, around 700,000 cases of foodborne disease are estimated to occur in the Netherlands (i.e. on average 1 for every 24 inhabitants), leading to a disease burden (BoD) of approximately 6000 disability adjusted life years (DALY) and an associated cost of illness (COI) of around 170 million euros.
- The majority of the disease burden was caused by Campylobacter, Salmonella and Toxoplasma.
- Animal products are the most important source of infection.
- Less than 0.5% of the loss of health is due to food-borne infections

Results (3)

Chemical risks

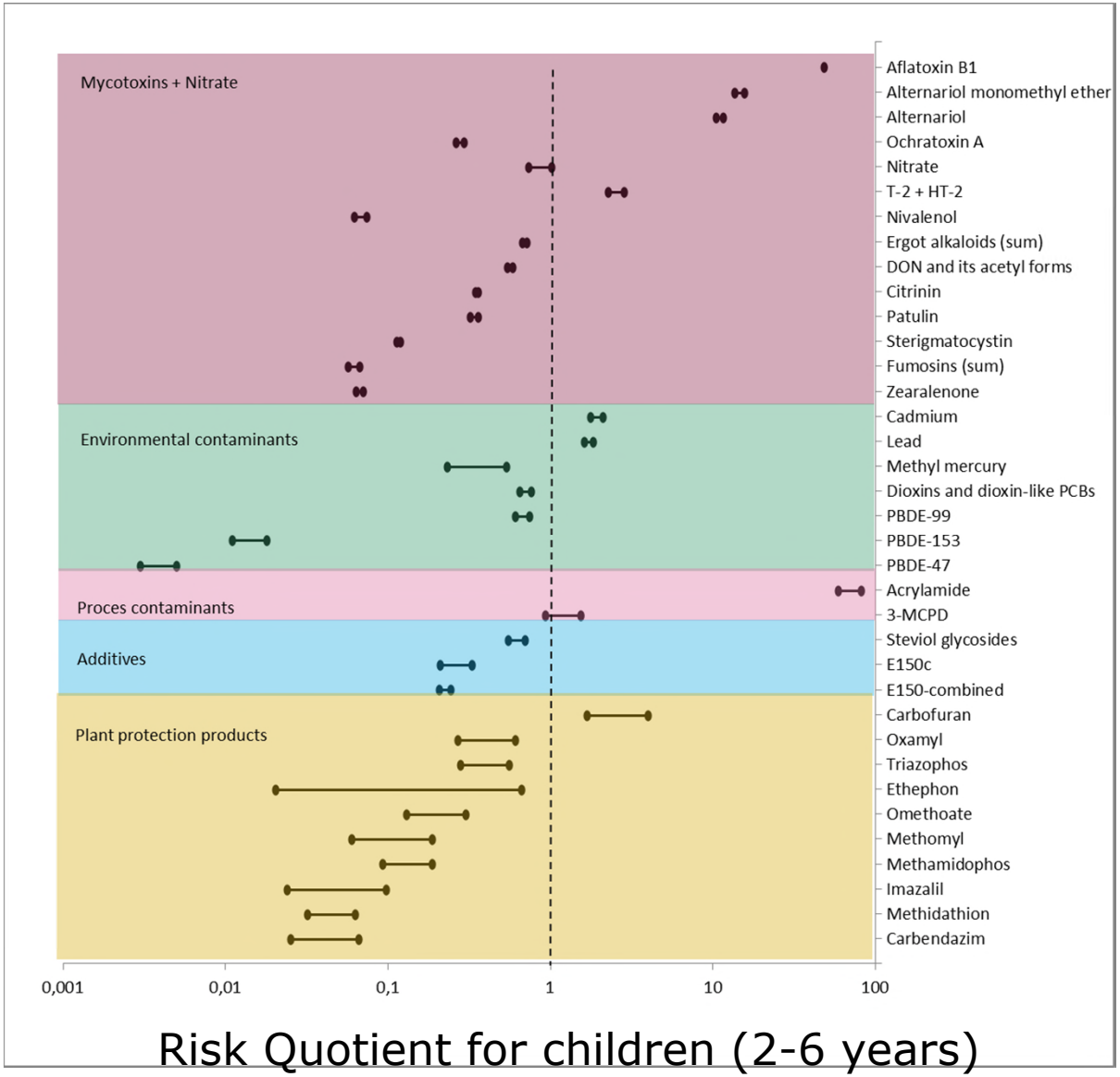
- Intake of substances permitted for use in food remain below the recommended safe level
- Intake of some chemical substances is higher then the recommended safe level



RQs for adults (7-69 y) (P95/health limit)

Results (4)

Chemical risks



Risk Quotient for children (2-6 years)

Conclusions (2)

Chemical risks

- The exposures to chemicals in food seldom exceeded HBGVs (RQ<1).
- For contaminants present in food, HBGVs are not always available due to lack of adequate data. For some contaminants for which HBGVs are available, exposure sometimes exceeded the HBGV (RQ>1). This was the case for two heavy metals, cadmium and lead, some mycotoxins and acrylamide.
- Conclusion: the quality of the data available for risk assessment determines the quality of the risk assessment. Within some legal frameworks, data are limited and not as good as desired (e.g. contaminants and food contact materials).

See website RIVM, via Google (How safe is our food) or http://www.rivm.nl/en/Documents_and_publications/Scientific/Reports/2017/March/How_safe_is_our_food_Background_report_to_What_s_on_our_plate_Safe_healthy_and_sustainable_diets_in_the_Netherlands