

Food safety of hunted game meat

14.03.2024, Berlin

PD Dr. Robert Pieper

Department Safety in the Food Chain

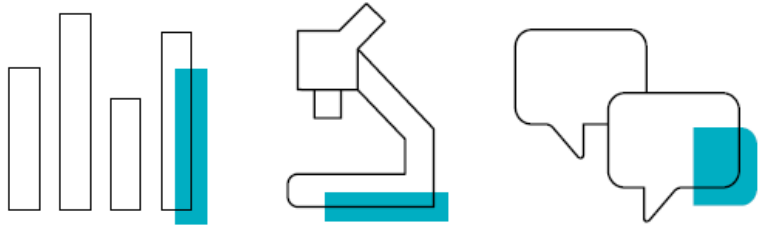
German Federal Institute for Risk Assessment (BfR)



- Independent research institution
- in the remit of the Federal Ministry of Food and Agriculture (BMEL)
- **Assessment** of health risks posed by food, feed, products or chemicals
- **Research** to expand the knowledge on which assessments are based
- **Communication** and consultation with various stakeholders

BfR | Identifying Risks –
Protecting Health

German Federal Institute for Risk Assessment (BfR)



Assess. Research. Communicate.

Budget

- 73.0 million € Personnel
- 17.2 million € Research
- 7.3 million € Building
- 45.1 million € Administration



261 | 863

Publications and presentations

1,112

Staff

3,931

Scientific opinions

9.6 million €

Acquired third-party-funds

21

Reference laboratories



2022

German Federal Institute for Risk Assessment (BfR)



Food and feed safety

Ingredients or additives, residues, contaminants or germs and parasites – the BfR assesses food and feed with regards to toxicological, microbiological and nutritional aspects and on the basis of internationally recognized criteria.



Product safety

The BfR investigates ingredients and their release from products like cosmetics, toys, clothing or food packaging and containers, and assesses whether the contained substances could be a hazard to human health.



Chemical safety

The BfR assesses health risks of chemicals, plant protection products, biocide products and hazardous materials to quickly identify undesirable effects.



Alternatives to animal experiments

The BfR performs the tasks of the “German Centre for the Protection of Laboratory Animals (Bf3R)” and coordinates all activities countrywide with the goal of restricting animal experiments to the absolutely essential minimum and ensuring the best possible care for laboratory animals.



Risk communication

The BfR examines the risk perception and risk behaviour of the population. The BfR involves various stakeholders in society to inform the public about health risks.

independent, impartial, transparent,
quality assured, international, purpose-driven,
application- and future-oriented

Food and eating is pleasure



The majority of Europeans associate food and eating with pleasure, such as selecting fresh and tasty foods (58 %) and with enjoyment of meals with friends and family (54 %).

Info: <https://www.efsa.europa.eu/en/corporate/pub/eurobarometer10>

Slightly more than half of the population rates food that can be bought in Germany as **safe or very safe**.

Info: <https://www.bfr.bund.de/cm/350/bfr-verbrauchermonitor-02-2023.pdf>

Game meat – a healthy and „well-known“ food?



Article

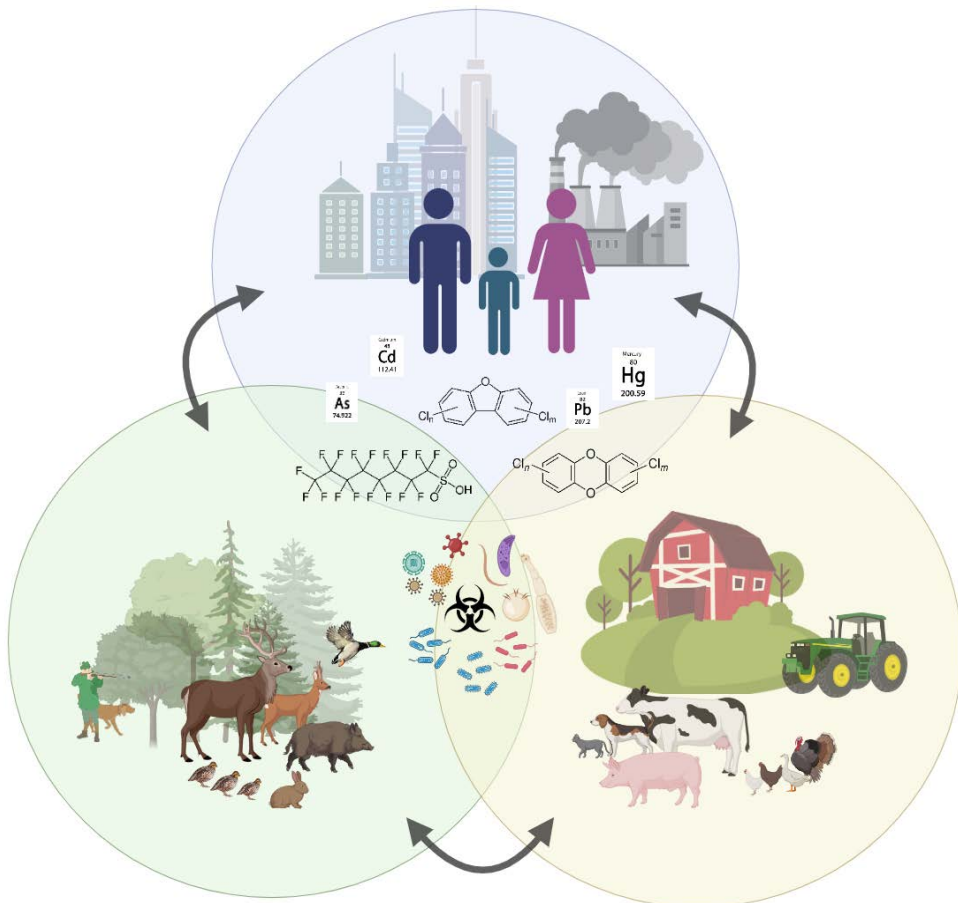
Game Meat Consumption—Conscious Choice or Just a Game?

Received: 24 August 2020; Accepted: 20 September 2020; Published: 24 September 2020

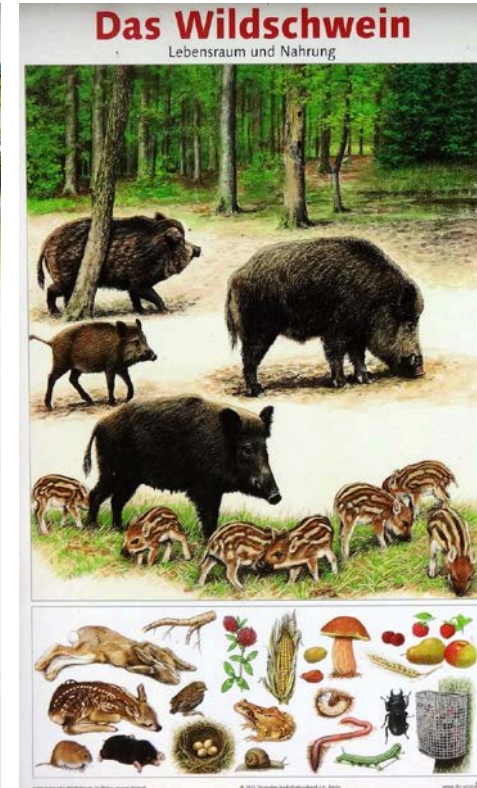
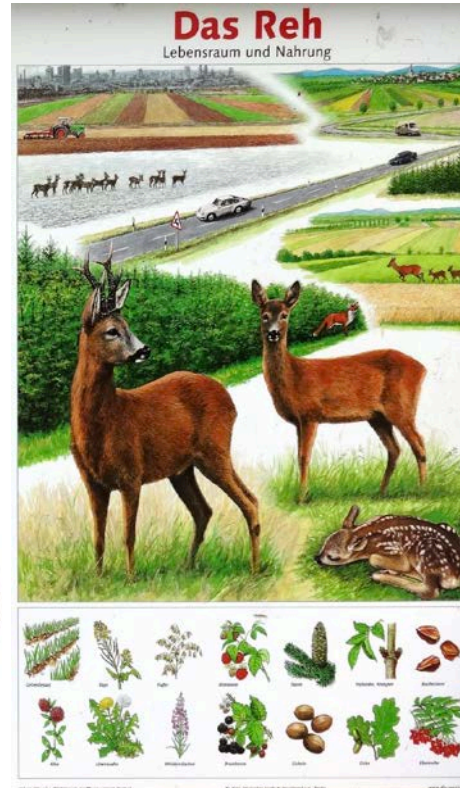
game for consumers. It was shown that rational motives influence the consumers' choice more than emotional factors, while the most important motives are connected with healthcare issues. Consumers, for whom the crucial attributes of quality are taste, nutritional value, and low fat content, constitute a group that might more often include game in their diet in the future. Among the emotional motives, the familiarity, described as a feeling of knowing the product, also has a statistically significant impact on the consumers' choice. The results obtained may be useful for academic theoreticians and market experts as well.

...the feeling of knowing the product...

1. Game animal habitats and exposure to chemical and biological hazards



Created in BioRender.com 

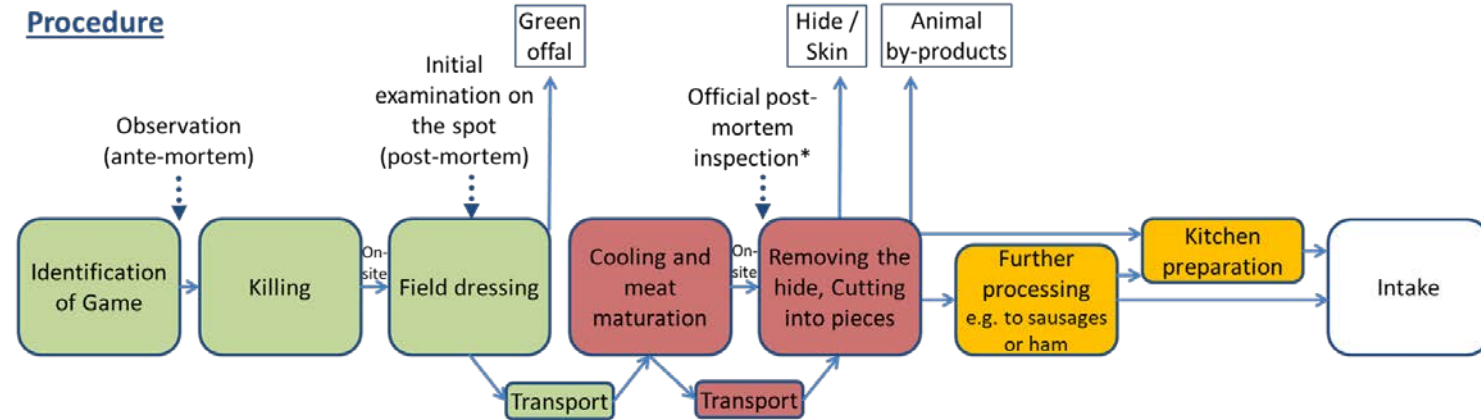


...the feeling of knowing the product...

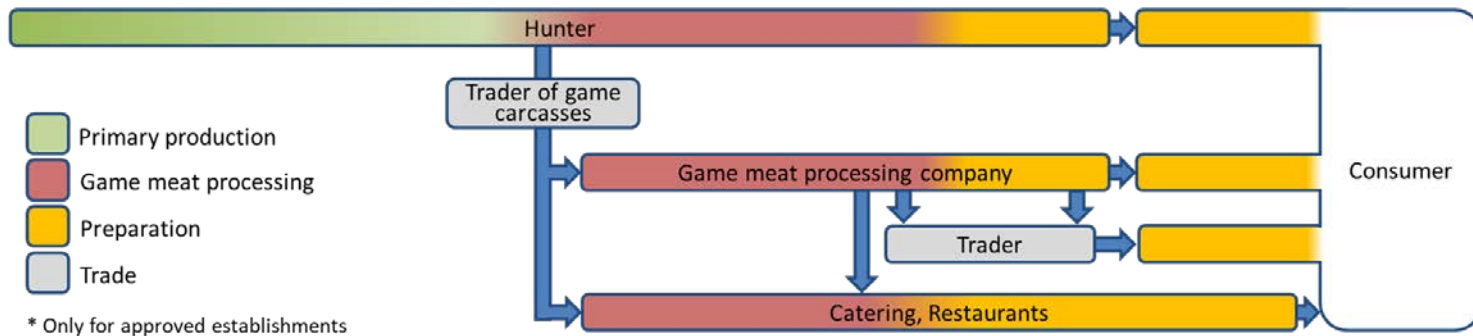
2. Hunting practice – ammunition, processing and the commodity chain



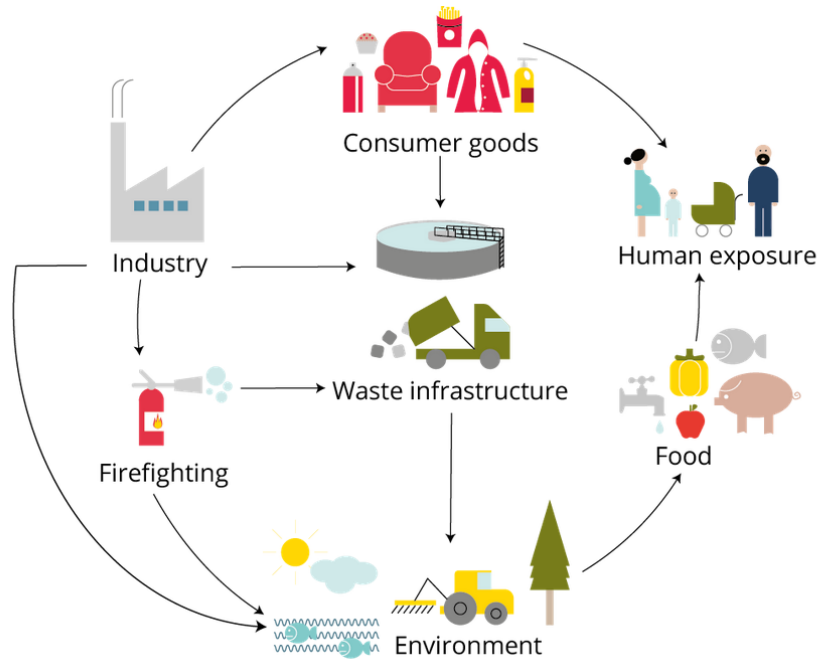
Procedure



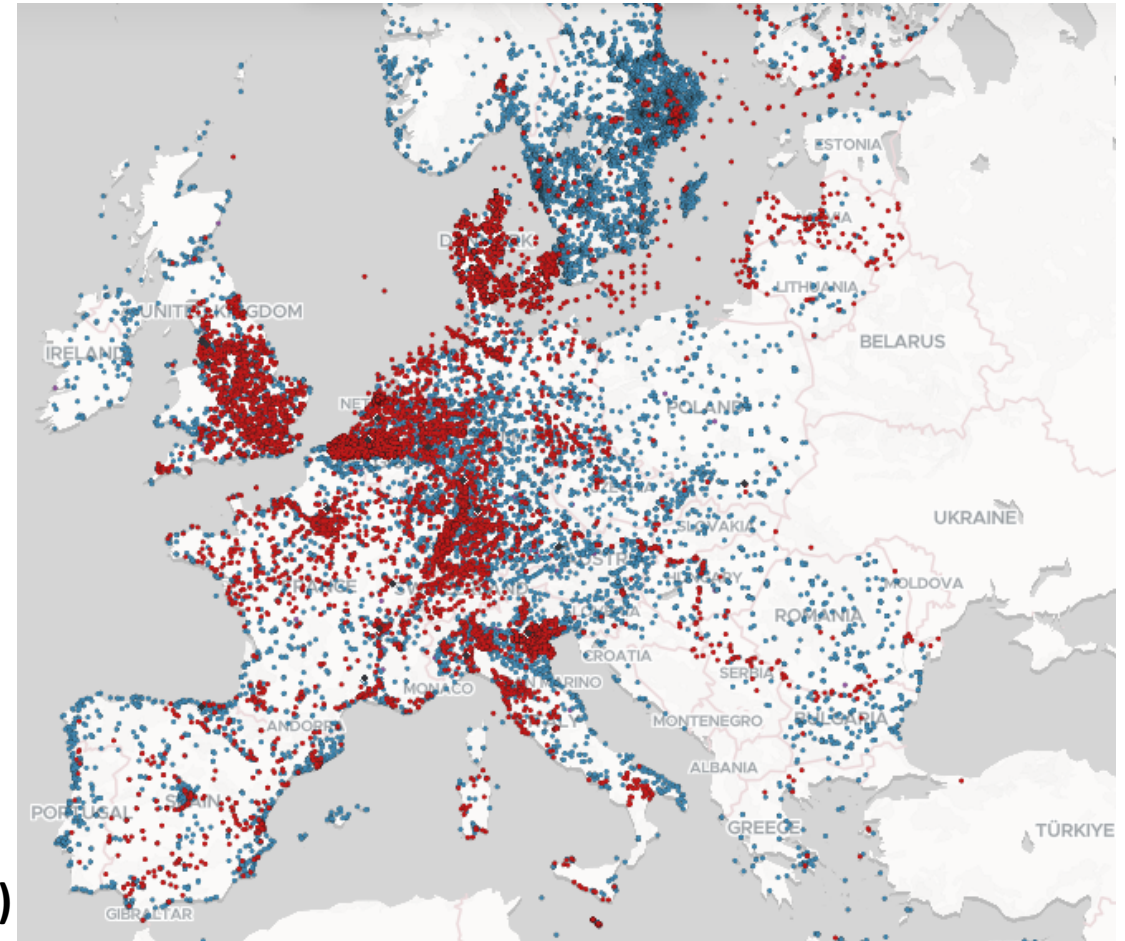
Involved parties



Example - Per- and PolyFluoroAlkyl Substances (The „Forever chemicals“)



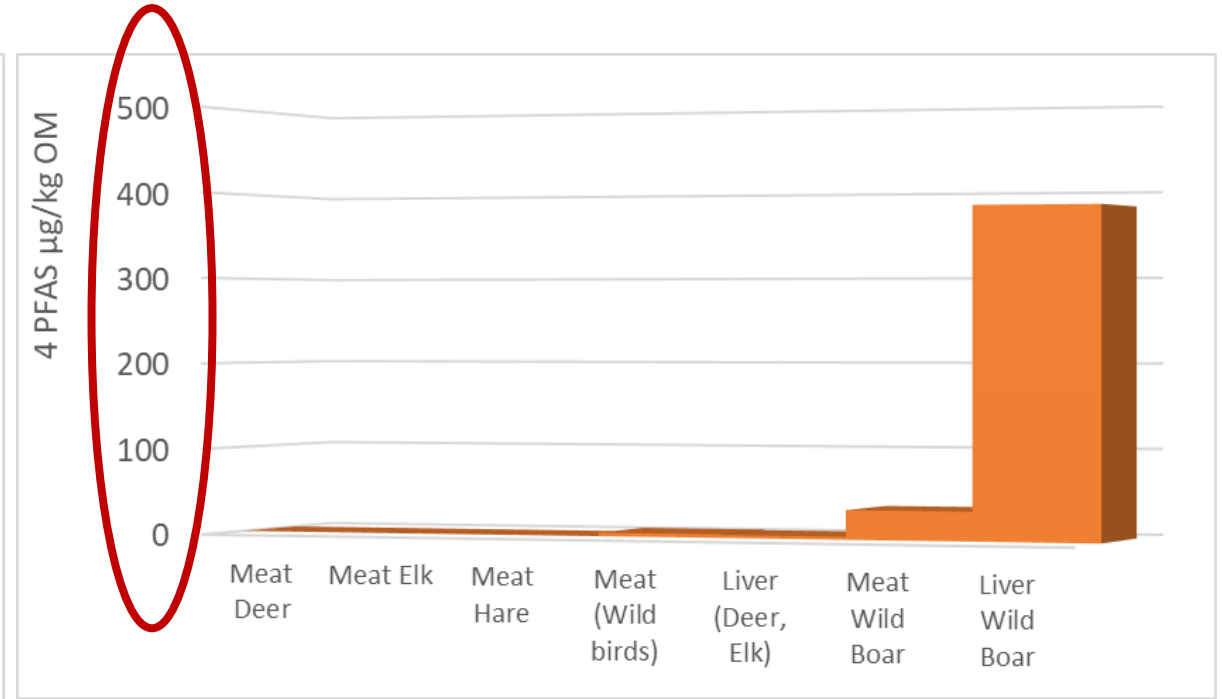
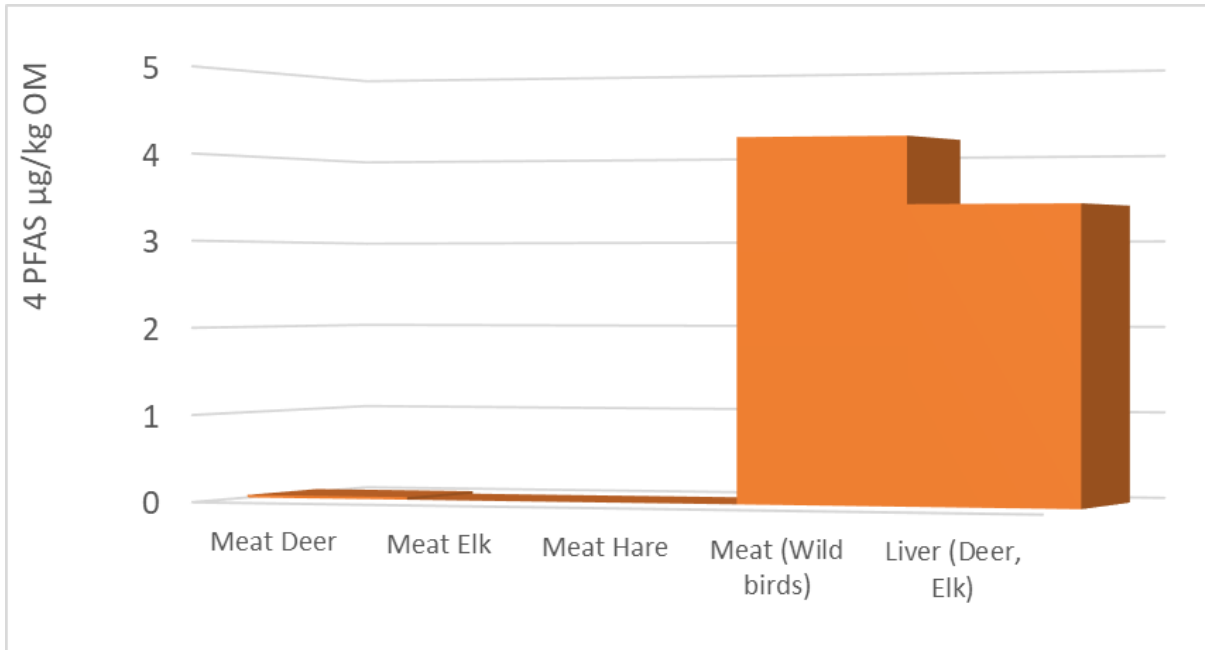
- Industrial/man made chemicals, extremely stable
- Bioaccumulative in aquatic and terrestrial food webs
- Adverse effects in animals and humans
- **Tolerable weekly intake 4.4 ng/kg BW** (sum of 4 substances)
- **Many known contamination areas across Europe**



● Known contamination ● Known PFAS User ● Presumptive contamination ◆ PFAS manufacturing facility

Sources: European Environment Agency (EEA), March 2022, Le Monde, 2023, EFSA, 2020

PFAS in game meat – A matter of scaling

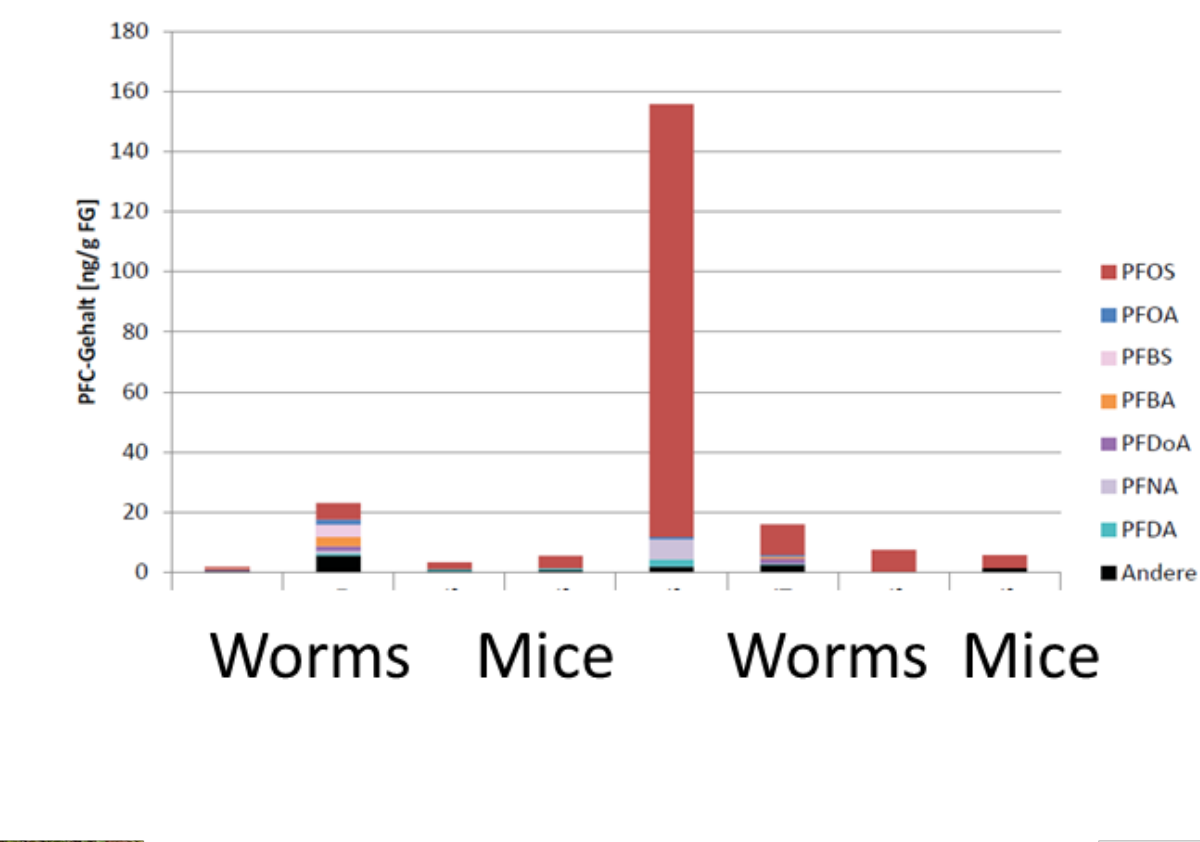
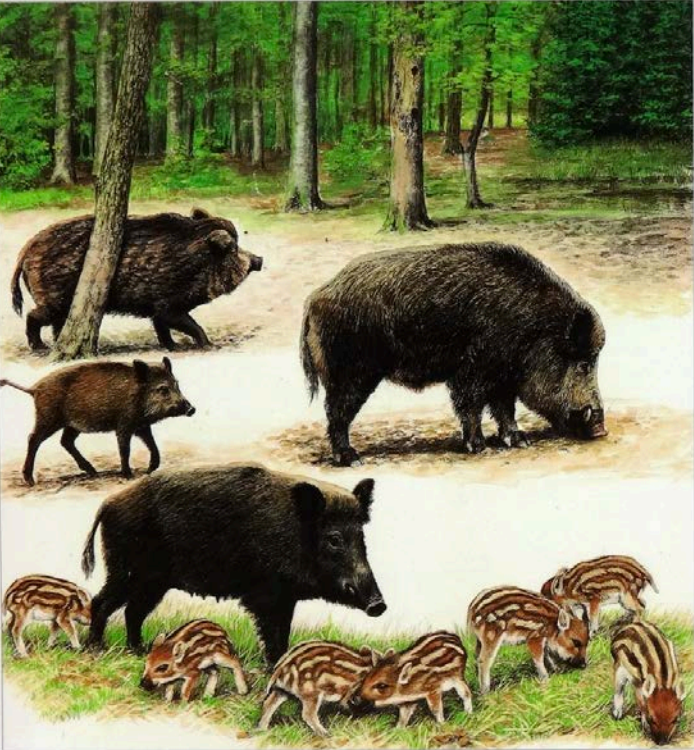


Source: BfR, 2021

A wild boars diet

Das Wildschwein

Lebensraum und Nahrung



Source: DJV; Landesanstalt für Umwelt Baden-Württemberg, 2021; R. Pieper

Summary and outlook (From the forest to the table)

- **Game meat is considered a high quality and nutritional food**
- **Is game meat safe? How and where can we influence game meat safety?**
- **Can we generate standard recommendations regarding hunting practice?**

- **PFAS as an example for mainly influence of environment, homerange, animal factors**
- **Other examples to be presented and discussed today and tomorrow...**

Food safety of hunted game meat

14.03.2024, Berlin

PD Dr. Robert Pieper

Department Safety in the Food Chain

