Food waste begins on the field

Food waste begins on the field

Food waste starts at the very beginning of the value chain with the producers in agriculture. Product-specific quality requirements and other market conditions are the causes of avoidable food losses in primary production. The event took a closer look at the interface between agricultural production and retail trade. How high is the extent of harvest losses really and what are the causes? To what extent are standards, such as aesthetic demands on agricultural products or contractual delivery quotas responsible for avoidable food losses? Do the "beauty standards" set by retailers really meet the needs of consumers? How do we manage to market edible food in spite of spontaneous shifts in demand? What are the political and social levers? Aesthetic standards for vegetables and fruit cause additional environmental damage in addition to waste. In order to meet certain visual requirements, for example, higher amounts of fertilisers and pesticides are used.

The associated environmental costs, such as harmful nutrient discharge into water and ecosystems, as well as greenhouse gas emissions, could be avoided by changing the expectations of retailers and consumers. What steps are needed to achieve this?

1. **Brief input: status quo – extent and causes of food losses in agriculture**
   Dr. Thomas Schmidt, Thünen Institute

Slides in German for the presentation can be found at the end of the minutes.

Questions on the content of the input:

Question: Is "contract farming" still an issue? Are farmers only allowed to market goods to the contract partner according to the contract?

Answer Thomas Schmidt: There are different contract concepts here, but one problem is rather that the quality requirements for products vary between different buyers. As farmers often produce according to the demands of certain buyers, the products can sometimes not be sold to buyers with different quality standards.

2. **Short input: Environmental and climate-relevant quality standards in food retailing**
   Frederike Balzer, Umweltbundesamt (UBA)

Slides in German for the presentation can be found at the end of the minutes.

The UBA study in German can be found here.

The project "Clean Air Farming" (LIFE17 GIE/DE/610) is funded by the EU Commission within the framework of the LIFE programme.

Questions on the content of the input:

Comment: Such an analysis would also be interesting for animal products.

Response Frederike Balzer: Agreed, but not yet planned. Will be gladly passed on.

Question: To what extent have the legal quality standards changed in the last decades?

Response Frederike Balzer: The special marketing requirements were abolished in 2009 for some products and replaced by general sales standards. In addition, these are revised on a regular basis. However, since the quality demands of food retailers on agricultural products often exceed the legal requirements, the amount of requirements have not changed in reality. Both consumers and supermarket chains are equally responsible for this, as consumers get used to higher standards because hardly any alternatives are offered and the retail sector argues that only immaculate products are in demand.

Answer Thomas Schmidt: Consumers' demands have risen sharply in recent years. Retail chains therefore try to gain a competitive advantage by marketing perfect vegetables and fruit. There has to be a rethinking on the part of the consumers or political regulations.

Comment (food retail representative): During marketing campaigns of misshapen products of food retailers, there were complaints because the products still looked too perfect.

Frederike Balzer's personal estimation: Products of the lowest permissible trade class (HK II) often still look very good. It can therefore be assumed that a large proportion of the rejected goods that do not meet the requirements of HK II would still have been edible.

3. Panel discussion: Political and social levers for reducing food losses at the interface between agricultural production and retail

Dr. Thomas Schmidt, Scientist at the Thünen Institute

What are the most important levers for reducing food losses in primary production?

- Responsibility lies above all with politics and not only with consumers
- Up to now: legal minimum standards ensure that food is safe to eat.
- What is needed: define maximum standards
    - Political framework conditions for retail that effectively reduce wastage
    - "Crooked vegetables" as a new standard
    - enforceable at national level, as these are not directly linked to international market conditions

- Political incentives: financing of new technology (keyword: intelligent packaging)
- Need for research: which measures are most efficient for different products to save losses? These must then be (financially) promoted

The project "Clean Air Farming" (LIFE17 GIE/DE/610) is funded by the EU Commission within the framework of the LIFE programme.

Food waste begins on the field

Ursula Schulte, Member of the Bundestag and food policy spokesperson of the SPD parliamentary group.

To what extent does the SPD (social democratic party) also address the issue of food waste in the field?

- The focus is more on the consumer level, as the share of food waste there is over 50%.
- Consumer acceptance must be raised (for different product and quality standards)
- Products with aesthetic flaws can be processed into secondary products or donated (e.g. at the food bank), this must be promoted.
- According to the German Farmers' Association, there are hardly any food losses due to aesthetic standards.

Can the national implementation of the UTP Directive contribute to reducing food losses in the field or at the interface with retail?

- SPD calls for national implementation to become stricter and that more trade practices are banned (blacklisted)
- Blacklisted and greylisted practices should be equally banned as the farmers' market position often offer less scope of action
- Positive impact on reducing food losses: ban on returns of unsold goods, retailers are encouraged to make better sales forecasts; ban on short-term cancellations
- Education policy/ promotion of nutrition education: food value appreciation should already be addressed in school education; this can create a broad awareness in society for food waste

Frederic Goldkorn, Managing Director of Querfeld

How did the Querfeld business model come about and is it a model for the future?

- He became aware of the problem of food waste through various media reports, such as the film "Taste the waste" (2011)
- This was followed by contacting the marketing departments of the large food retailers and the realisation that companies do not sufficiently address the problem
- Querfeld was founded as a platform for marketing products with aesthetic flaws in order to counteract food waste in this area
- Marketing of goods to day-care centres, schools and company canteens
- Opening of "field embassies" by private individuals or in small shops where regionally grown vegetables with aesthetic "flaws" are distributed to people in the neighbourhood
- The demands of consumers are shaped by what is on offer in supermarkets
- The responsibility to create more acceptance for aesthetic flaws in produce lies with the supermarket chains and not only with consumers.
- Farmers are economically harmed if they produce Class I products but then have to sell them at a lower price because they have the appearance of Class II products
- Farmers estimate that 9-12% of the kiwifruit grown in Italy is wasted due to the current EU marketing standard

The project "Clean Air Farming" (LIFE17 GIE/DE/610) is funded by the EU Commission within the framework of the LIFE programme.

- The proportion of products offered with defects (e.g. "Krummer Dinger", "Bio-Helden" etc.) is estimated to be relatively low in food retailing in relation to products not accepted due to visual defects; however, exact figures are not yet available
- Sees the low number of marketing campaigns more as a marketing strategy of the food retailers
- Calls for more transparency in quality standards and trade practices

Anna Spiess, speaker at the Federal Association of the German Food Retail (BVLH)

Why does the food retail need quality standards?

- International standards are needed to classify goods and to enable cross-border trade
- Standards are valued by producers as they offer reliability and are relevant for achieving certain prices on the market
- Food retailers are already making efforts, marketing campaigns are increasing, products with different qualities are increasingly offered
- She therefore sees the responsibility more on consumers to demand these foods
- Quality standards reflect the needs of consumers
- Limit of responsibility of the retail: only 50% of vegetables and fruit end up in German households via the food retail trade
    - Alternative: look for other marketing channels, processing industries could better accept products with visual "defects"
    - Only 10 % of table potatoes reach households via food retailers
    - Challenge/ Limit of responsibility: food retailers often do not have a direct trading relationship with individual producers; producer groups, agricultural retailers & further processing are other actors, which must also be addressed here
    - Unsold fruit and vegetables are partly processed at the fresh food counter or sold to processing industries
- UTP directive: The food retail sector places great importance on cooperation with farmers, which is demonstrated by the Code of Conduct. In this way, the food retail sector anticipates the still pending legislation on the UTP Directive and fulfils the requirements of the Directive even before it enters into force
- Further retail activities to reduce food waste: working on improved forecasting systems to better determine demand
- Challenge: Retailers must offer food that is also in demand
- Different structures in food retailing offer different possibilities for cooperation between farmers and retailers; close cooperation between retailers and farmers offers greater potential for supporting suppliers in reducing food waste
- Call on policy-makers to facilitate the donation of food and to adapt the legal framework in order to reduce existing liability risks
- This year, the Primary Production Dialogue Forum will try to find constructive solutions to the issues

The project "Clean Air Farming" (LIFE17 GIE/DE/610) is funded by the EU Commission within the framework of the LIFE programme.

Concluding statements: What is the most important influencing factor for you?

Thomas Schmidt: Education creates more awareness in society for food waste and has an effect on cooking, shopping and dealing with the best-before date.

Frederic Goldkorn: With the current climate crisis, we are running out of time and have to act. At the same time, there is great potential for action in nutrition. It needs to be made visible which foods are sustainable so that consumers can choose climate-friendly products.

Anna Spiess: Enter into a fact-based dialogue with each other to identify and solve problems. The retail is aware of its responsibility and wants to fulfil its interface function (between consumers and suppliers).

Ursula Schulte: Do more educational work from the kindergarten onwards and include imperfect vegetables and fruit in cooking campaigns and process them in canteens to promote food appreciation.

Contributions of the participants

Ronja Herzberg, Thünen Institute: On the link between unfair trade practices (Directive (EU) on unfair trading practices) and food waste (results of current research)

- The abolition of so-called "take-back-agreements" can reduce wastage in the EU (but play only a minor role for fruit and vegetables produced in Germany)
- short-term cancellations are only relevant to a small extend, as orders are also placed at short notice (mostly between 12 and 24 hours in advance)
- Longer-term orders from food retailers would enable producers to plan better in terms of quantity and timing and thus effectively reduce food waste
- More firm agreements between food retailers and producers regarding produced quantities and seasonal products and targeted use of promotions can help to sell seasonal goods and reduce food waste
- In addition: more spontaneous purchase of foodstuffs in the case of oversupply of products should be implemented

Jutta Kienzle, Association for the Promotion of Organic Fruit Cultivation (FÖKO):

- The impact of lack of acceptance of minor imperfections on the cultivation system is quite big
- All organic products are classified in a "beautiful trade class II", which includes fruit without imperfections as well as products with small aesthetic defects, but the tolerances of bruises etc. are not used
- If requirements are set as in class I, this would cause a "conventionalisation" of organic cultivation. In this case, it would be a good idea to dissolve the conventional classification according

The project "Clean Air Farming" (LIFE17 GIE/DE/610) is funded by the EU Commission within the framework of the LIFE programme.

to appearance into Class I and Class II and to offer dessert fruit only under Class II with a sorting that includes all fruits that are flawless in terms of taste and shelf life. FÖKO has drawn up guidelines for this purpose

Contributions of the participants in the chat:

- The role of the consumer is discussed quite controversially. In the presentation, the share was very high; with "plates instead of bins", the responsibility of industry and retail is much higher.
- The adaptation of sorting and sorting devices is an issue here, especially for carrots, as far as I know.
- It's very similar for us as a company that deals with it. Customers are regularly surprised by what the retail refuses.
- Should we think about abolishing the trade classes altogether? The production costs are, after all, the same.
- In most cases, however, the farmer does not have a network to sell the goods elsewhere.
- Would it be helpful to standardise the purchasing requirements of food retailers by law and lower the standard so that sorting out is minimised?
- How can retailers be forced (by law or in another way?) to sell previously rejected goods? e.g. sales quotas: Trade class II xx% etc.
- If the retail only sells pretty varieties of fruit and vegetables, then the consumer is not used to anything else either. Some cabbages are far too big for me and I am glad that there are "individual" sizes at the weekly market. Regional.
- Are there any thoughts about pricing food waste proportionately at the different marketing levels in the sense of "true cost"?
- For a long time, our slogan was: “Geschmack ist keine Frage des Aussehens!” (Taste is not a question of appearance! Querfeld)
- Instead of "educate" – "inform", because there are still many parts of the production and supply chain that are not transparent. (In terms of raising awareness among consumers)
- Agreement Querfeld: Overall, it is probably the same here as everywhere with food: conventional produce is often too cheap and quality products cannot compete with that. Organic quality should be the norm, not the exception (also in terms of price, leading to "true cost" again).
- I see the biggest challenge in consumer education and nutrition education. As I said before, customers have been very spoiled in recent years about what products can look like. Those here are also more likely to question the farm and how much it cannot market or the impact on the environment (increased fertilisation, pesticide use) and are happy to do without. Unfortunately, the general public does not think this way. They say, "In supermarket XY the apples do not look as nice as before and the price has remained the same, I now only buy my apples in supermarket Z"; in general, it's all a huge price war. If the consumer sees different sizes of cabbage on the shelf and they are marketed by the unit price, then the consumer will tend to take the larger cabbage because he/she then gets more for the same money.
- A great opportunity are the so-called subscription boxes (with regional vegetables and fruit) because the consumers then have no choice/no comparison. Then they have to be satisfied with what they get.

The project "Clean Air Farming" (LIFE17 GIE/DE/610) is funded by the EU Commission within the framework of the LIFE programme.

Food waste begins on the field

- The international standards of the UNECE have been systematically reviewed for some time now for content that could have an impact on unnecessary losses, in order to create more room for manoeuvre here. However, these are voluntarily applied standards. The UNECE will soon publish a "Code of Good Practice" for fruit and vegetables with tips on how to reduce losses along the value chain.
- The retail itself also sets its own marketing standards/demands from suppliers. So probably not much would change if the existing official standards were abolished?
- To this: this would at least create the legal basis for those who want to do things differently.
- To this: how can the entire retail be pushed to use the entire scope? This would then also apply to every supermarket and then there would be no supermarket hopping.
- One solution to the problem Frederic has just described - that farmers have to bear many risks (weather, etc.) - would be, among other things, solidarity-based agriculture https://www.solidarische-landwirtschaft.org
- As long as the EU's common agricultural policy (GAP) continues to distribute the largest share of subsidies according to area, overproduction and the subsequent destruction of food is part of the system. If you want to reduce food waste in a sustainable way, you have to question the prevailing European agricultural policy.
- Question to Ms Schulte: Why doesn't Germany follow France's example and prohibit retailers from throwing away food that is still edible? In this way, the retail would perhaps plan more responsibly and reduce items, that do not look quite so nice, which could lead to more acceptance among consumers.
- Answer from Ms Schulte: Politically not possible in the current coalition. The SPD would in favour of it in principle.
- Nutrition education ... for this, kitchens have to be set up again in day-care centres and schools.
- If fruit and vegetables are thrown away because they are not sold in the shops, then they currently cost around 0 €. Why can't they be offered cheaply in the shops? Sure, transport etc., but it should be much cheaper than HK I and II?
- To this: it is not thrown away on the farm but it is not harvested at all and remains on the field. The expensive part is the labour costs for harvesting.
- What's wrong with selling kohlrabi or cauliflower by weight? This could be implemented.
- To this: This could also lead to less being thrown away in private households, as individual households can buy the quantity they really need.
- Retailers have been selling strawberries from South Africa and other countries for weeks. When the local farmers harvest, they are too expensive. Why does the retail have to sell out of season?
- To the representatives of the retail - what are the obstacles to change to prices per kg for vegetables?
- One of the trade's mottoes is to make full consumers hungry. After the war it was different. Now sated consumers have to be seduced - and how can the retail do that better than with "perfect" food?
- What you can get used to when you're forced to is something we've seen quite well over the last year. We work in education. But it's no use telling children something for two hours, but then they go home, to the supermarket or anywhere else, and things are completely different... That

The project "Clean Air Farming" (LIFE17 GIE/DE/610) is funded by the EU Commission within the framework of the LIFE programme.

doesn't work on a large scale. And if we now wait for the children to make the world better for us in 20 years' time, that is very sad as an evaluation of our own potential.

- We are the consumers and we decide whether it goes on like this. If we change our buying behaviour, then the food retail sector must act.
- Nutrition education is a task for society as a whole. It also worked with smoking. It takes time, but it works if politics provides a framework.

The project "Clean Air Farming" (LIFE17 GIE/DE/610) is funded by the EU Commission within the framework of the LIFE programme.

Status Quo – Ausmaß und Ursachen von Lebensmittelverlusten in der Landwirtschaft

Thomas Schmidt, Ronja Herzberg, Felicitas Schneider
Thünen-Institut für Marktanalyse

Deutsche Umwelthilfe

Online-Fachgespräch: **Lebensmittelverschwendung beginnt schon auf dem Acker**

Diskussion von Ursachen und Lösungen

06. April 2021

Inhalt

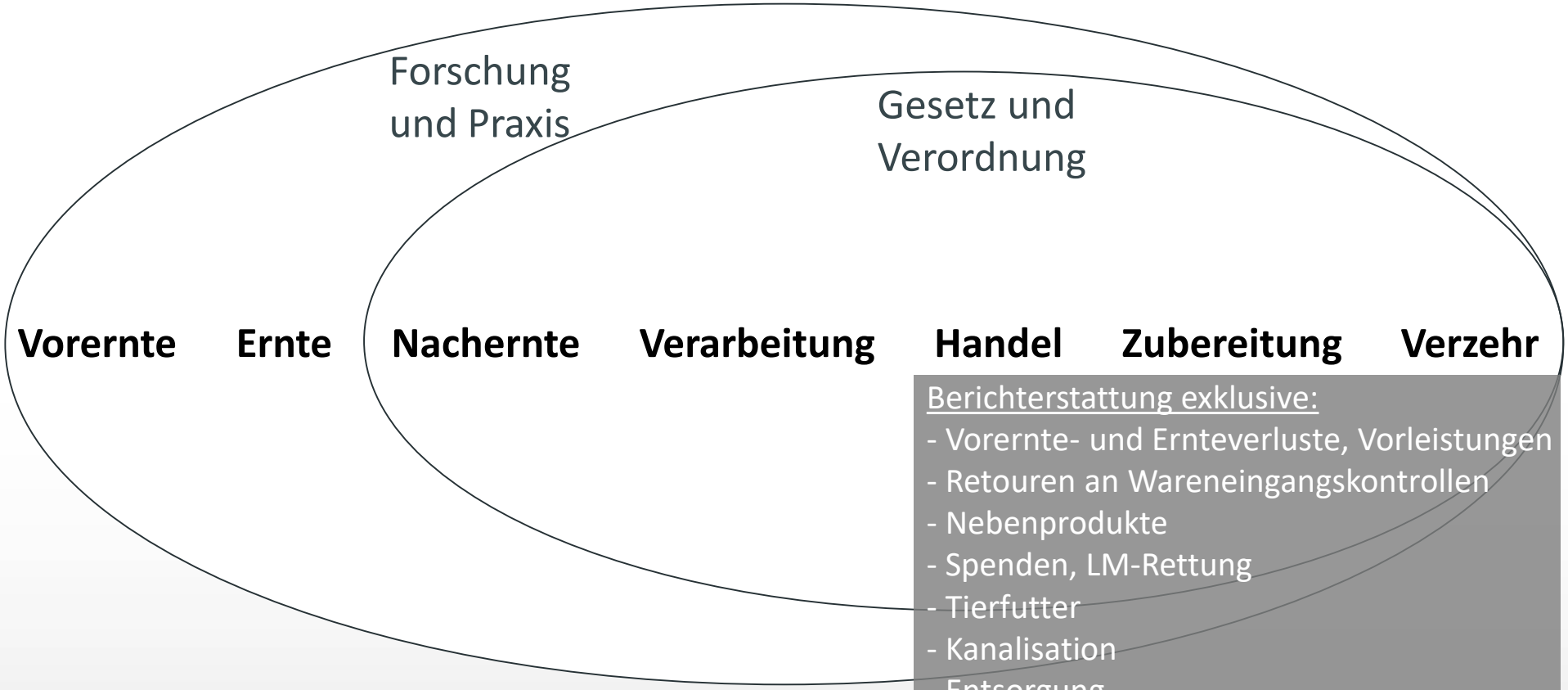
1 Verluste in der landwirtschaftlichen Produktion

2 Ursachen für diese Verluste

3 Stand der Wissenschaft

4 Laufende Aktivitäten

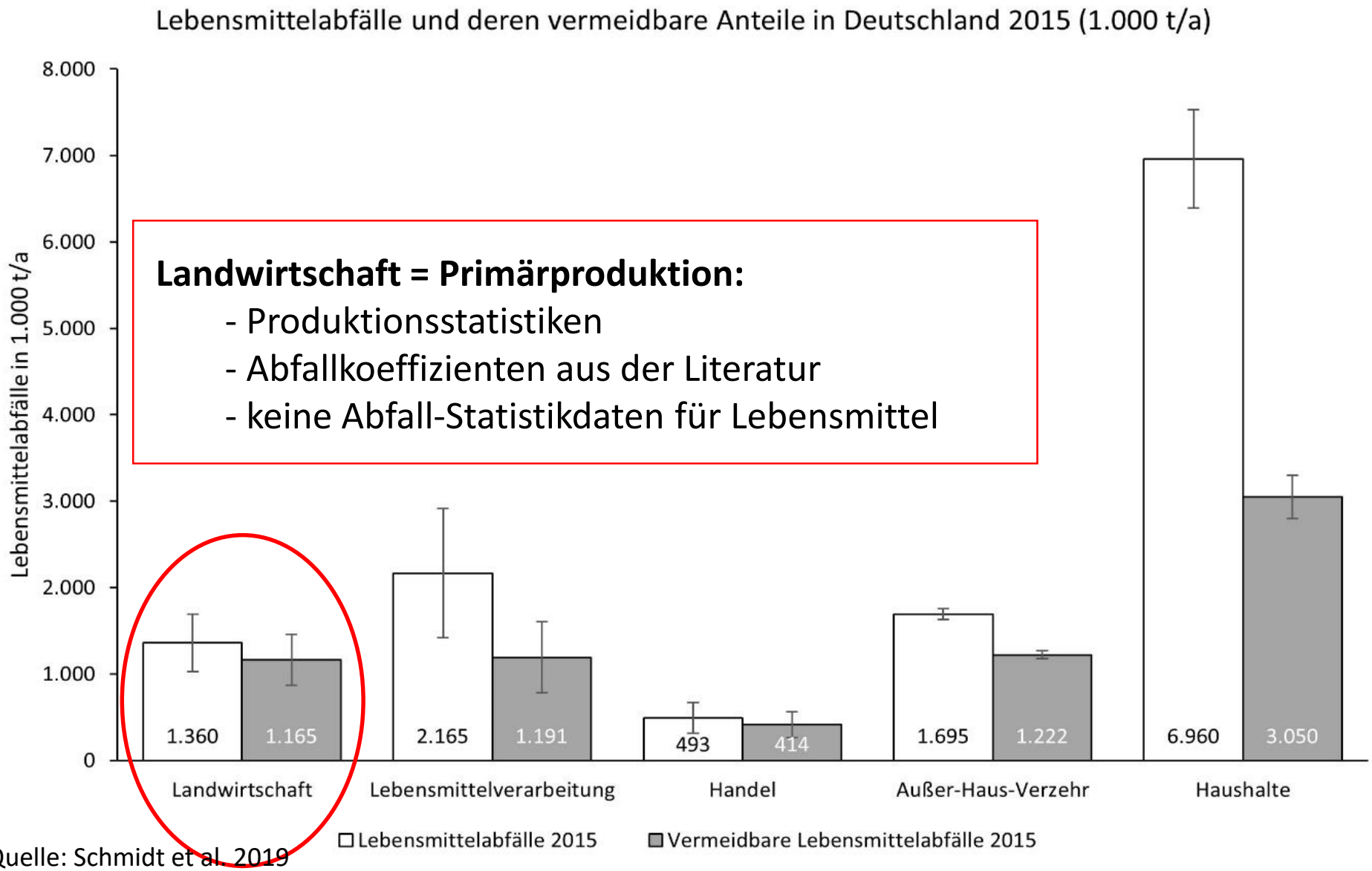
Thema - Lebensmittelverschwendung



Berichterstattung exklusive:
- Vorernte- und Ernteverluste, Vorleistungen
- Retouren an Wareneingangskontrollen
- Nebenprodukte
- Spenden, LM-Rettung
- Tierfutter
- Kanalisation
- Entsorgung

Berichterstattung inklusive:
- unvermeidbaren Verlusten

Baseline 2015



Landwirtschaft = Primärproduktion:

- Produktionsstatistiken
- Abfallkoeffizienten aus der Literatur
- keine Abfall-Statistikdaten für Lebensmittel

Quelle: Schmidt et al. 2019

Ursachen für diese Verluste

- Wetterereignisse
- Schädlingsbefall und Krankheiten
- Marktsituation, Zusammenspiel von Angebot und Nachfrage

- Optische Standards (makellos, einheitliches Kaliber)
- Grenzwerte für Pflanzenschutzmittel
- Verpackungsvorgaben
- Gestaltung der Geschäftsbeziehungen

- Interaktionen zwischen den Stufen der Lieferkette
  Ernteentscheidung: (a) Gibt es eine aktuelle Nachfrage? (b) Deckt der Preis die Erntekosten?
  (c) Wie ist die Qualität des Produktes? (d) Wie hoch ist das Risiko einer Warenannahmeverweigerung?
  (e) Gibt es andere prioritäre Früchte zu ernten?

Quellen: Beausang et al. (2017), Canali et al. (2014), Ludwig-Ohm et al. (2019) , Johnson et al. (2019)

Stand der Wissenschaft

→Verlustursachen sind weitestgehend bekannt

→Verlustmengen weniger bekannt:

Wenig Zahlen zu Vorernteverluste, Ernteverluste und Nachernteverluste
- da Befragungen unsichere Ergebnisse hervorbringen
- direkte Quantifizierung aufwändig ist
- keine einheitliche Methode vorliegt
- keine amtliche Statistik erhoben wird

→Datenlage auch international mangelhaft

→Kaum Untersuchungen zur (Politik-) Folgenabschätzung

→Was soll die Wissenschaft leisten?
→Grundlagen schaffen, für Entscheidungen!

Quellen: Redlingshöfer et al. (2017), Schneider et al. (2019), Hartikainen et al. (2018), WRAP (2019)

Thema - Indikator

Bereich	Fokus	Indikator
Politik	SDG 12.3	Tonnen Frischmasse
Ökologie	z.B. Klima	$CO_{2\text{-Äquivalente}}$
Wirtschaft	Finanzen	€
FAO	LM-Verschwendung	kcal
Konsum	vermeidbare LMA	Tonnen Frischmasse

Wie schaffen wir Grundlagen für Entscheidungen?

Thema - Bewertung

1 **Was soll bewertet werden?**
- Skalen (regional, zeitlich)
- welche Produkte/Stufen der Wertschöpfungskette

2 **Wie groß ist das Reduktionspotenzial?**
- Arten des Abfalls (vermeidbar, nicht vermeidbar)
- inklusive aller Vorleistungen sowie Entsorgung bzw. Weiterverarbeitung

3 **Datenqualität des Monitorings** (Sensitivität, Unsicherheit)

4 **Bewertung der Nachhaltigkeit**
- ökologisch, ökonomisch, sozial (Indikatoren)
- Netto-Einsparungen (input-output)

5 **Qualitative Bewertung**
- Verhaltensänderung/Wertschätzung
- Bereitschaft zur Maßnahmenumsetzung, Business Image

6 **Übertragbarkeit** (Langzeiteffekt, Skalierbarkeit, Schnittstellenproblematik)

Quellen: Goossens et al. 2019, 2020.

Laufende Aktivitäten

1 Initiativen

- Einzelpersonen und Gruppen, Bund und Länder
- Unternehmen in Landwirtschaft und Einzelhandel, Verarbeitung, AHV

2 Forschung

- Verbundprojekte: z.B. REFOWAS, NAHGAST, REFRESH, AVARE, LOWINFOOD
- Projekte zu Qualitätsstandards, Labeling, innovativer Verpackung etc.
- Promotionsvorhaben Thünen-Institut (Ronja Herzberg) zu Schnittstellen

3 Politik (Bund)

- Nationale Strategie zur Reduzierung der Lebensmittelverschwendung
  > Zielvereinbarungen mit Verbänden und Unternehmen
  > Dialogforum Primärproduktion mit Modell- und Demonstrationsvorhaben
- Initiative ´Zu gut für die Tonne´

4 Monitoring

- im Rahmen des Dialogforums Primärproduktion
- alle EU-Mitgliedstaaten bauen zurzeit ein Monitoringsystem auf

Fazit

1 Verluste in der landwirtschaftlichen Produktion:
- bisher nur grobe Schätzungen

2 Ursachen für diese Verluste:
- vielfältig und bekannt

3 Stand der Wissenschaft:
- methodische Grundlagen fehlen

4 Laufende Aktivitäten:
- viele Initiativen, wenig koordiniert

Literatur

Beausang, Ciara; Hall, Clare; Toma, Luiza (2017): Food waste and losses in primary production: Qualitative insights from horticulture. In Resources, Conservation and Recycling 126, pp. 177–185. DOI: 10.1016/j.resconrec.2017.07.042.

Canali, Massimo; Östergren, Karin; Amani, Pegah; Aramyan, Lusine; Sijtsema, Siet; Korhonen, Otso et al. (2014): Drivers of current food waste generation, threats of future increase and op-portunities for reduction. FUSIONS Project. Bologna.

Gillman, Anne; Campbell, David C.; Spang, Edward S. (2019): Does on-farm food loss prevent waste? Insights from California produce growers. In Resources, Conservation and Recycling 150, p. 104408. DOI: 10.1016/j.resconrec.2019.104408.

Goossens Y, Wegner A, Schmidt TG (2019) Sustainability assessment of food waste prevention measures: review of existing evaluation practices. Front Sustain Food Syst 3(Oct.):Art. 90, DOI:10.3389/fsufs.2019.00090.

Goossens Y, Schmidt TG, Kuntscher M (2020) Evaluation of food waste prevention measures - The use of fish products in the food service sector. Sustainability 12(16):6613, DOI:10.3390/su12166613.

Hartikainen, Hanna; Mogensen, Lisbeth; Svanes, Erik; Franke, Ulrika (2018): Food waste quantification in primary production - The Nordic countries as a case study. In Waste management (New York, N.Y.) 71, pp. 502–511. DOI: 10.1016/j.wasman.2017.10.026.

Johnson, Lisa K.; Bloom, J. Dara; Dunning, Rebecca D.; Gunter, Chris C.; Boyette, Michael D.; Creamer, Nancy G. (2019): Farmer harvest decisions and vegetable loss in primary production. In Agricultural Systems 176, p. 102672. DOI: 10.1016/j.agsy.2019.102672.

Ludwig-Ohm, Sabine; Dirksmeyer, Walter; Klockgether, Kathrin (2019): Approaches to Reduce Food Losses in German Fruit and Vegetable Production. In Sustainability 11 (23), p. 6576. DOI: 10.3390/su11236576.

Meyer, Christian H.; Frieling, Dominik; Hamer, Martin; Oertzen, Gero (2017): Food Losses in Supply Chains for Fruits, Vegetables and Potatoes between Field and Retail Shelf in North-Rhine Westphalia, Germany.

Redlingshöfer, Barbara; Coudurier, Bernard; Georget, Martine (2017): Quantifying food loss during primary production and processing in France. In Journal of Cleaner Production 164, pp. 703–714. DOI: 10.1016/j.jclepro.2017.06.173.

Schmidt TG, Schneider F, Leverenz D, Hafner G (2019) Lebensmittelabfälle in Deutschland - Baseline 2015. Braunschweig: Johann Heinrich von Thünen-Institut, 103 p, Thünen Rep 71, DOI:10.3220/REP1563519883000.

Schneider, Felicitas; Part, Florian; Göbel, Christine; Langen, Nina; Gerhards, Christian; Kraus, Günther F.; Ritter, Guido (2019): A methodological approach for the on-site quantification of food losses in primary production: Austrian and German case studies using the example of potato harvest. In Waste management (New York, N.Y.) 86, pp. 106–113. DOI: 10.1016/j.wasman.2019.01.020.

WRAP (2019): Food waste in primary production in the UK. An estimate for food waste and food surplus in primary production in the UK. WRAP. Banbury.

Status Quo – Ausmaß und Ursachen von Lebensmittelverlusten in der Landwirtschaft

Dr. Thomas G. Schmidt
Institut für Marktanalyse
Johann Heinrich von Thünen-Institut
Bundesforschungsinstitut für Ländliche Räume, Wald und Fischerei
Bundesallee 63
D-38116 Braunschweig
Phone: +49 (0)531 596 5314
E-mail: thomas.schmidt@thuenen.de
Internet: http://www.thuenen.de

06. April 2021

Für Mensch & Umwelt

Umwelt Bundesamt

Lebensmittelverschwendung beginnt schon auf dem Acker
Diskussion von Ursachen und Lösungen

Umwelt- und klimarelevante Qualitätsstandards im Lebensmitteleinzelhandel

Frederike Balzer, FG Landwirtschaft

Ergebnisse des Sachverständigengutachtens „Umwelt- und klimarelevante Qualitätsstandards im LEH“

AUFTRAGNEHMER:

AFC Public Services GmbH

Dr. Volker Ebert

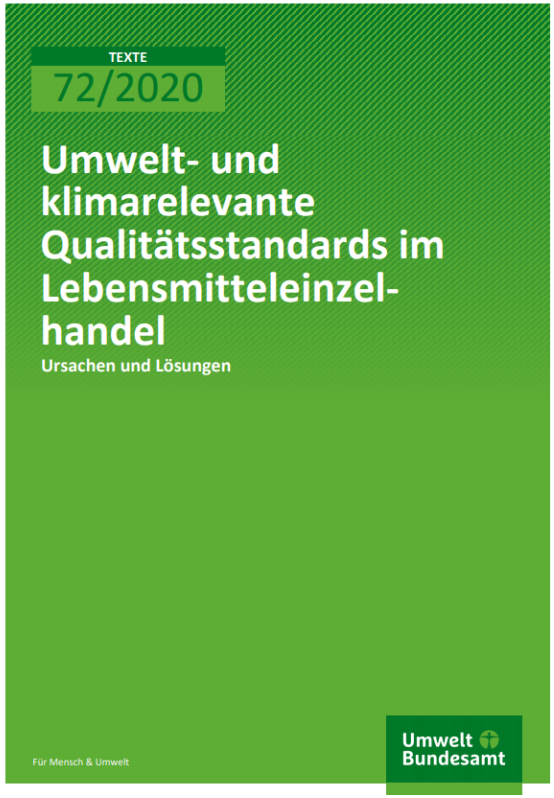
Elisabeth Gerwing

AFC Consulting Group

Umweltplanungsbüro entera

Dr. Thomas Horlitz

Lauren Mityorn



VERÖFFENTLICHUNG:

14.09.2020 auf

https://www.umweltbundesamt.de/publikationen/umwelt-klimarelevante-qualitaetsstandards-im

Interviewpartnerinnen und -partner

Landesamt für Natur, Umwelt und Verbraucherschutz Nordrhein-Westfalen

Landwirtschaftskammer Nordrhein-Westfalen

AGRAR GbR Gross Kiesow

BEHR GEMÜSEGARTEN

Landwirtschaftskammer Niedersachsen

Obst aus dem Alten Land

Dienstleistungszentrum Ländlicher Raum Rheinpfalz

FiBL

Kartoffelhof Hennies
Unser MitMachHof
GmbH & Co. KG

GERIESINGENIEURE
BÜRO FÜR STANDORTERKUNDUNG GMBH

Die Freien Bäcker
Zeit für Verantwortung e.V.

REWE

WWF

EDEKA

KONTROLLVEREIN ÖKOLOGISCHER LANDBAU

föko
Fördergemeinschaft Ökologischer Obstbau e.V.

Kaufland

ALNATURA

verbraucherzentrale
Bundesverband

Gesetzliche Normen, Standards und weitere Anforderungen

Es gibt drei Kategorien von Vorgaben:

1. Gesetzliche Vorgaben (sichern die Qualität und die gesundheitliche Unbedenklichkeit) Ausgestaltungsspielraum durch HK II, HK 1 und Extraklasse groß
2. Freiwillige nationale und internationale Standards (UNECE, GlobalGAP, QS, quasi-obligatorisch für Erzeuger-Betriebe)
3. Anforderungen des LEH (betreffen Erscheinungsbild, z.B. die Einheitlichkeit und Makellosigkeit, die Farbe, Größe, Gewicht etc.)

- Relevanz der zusätzlichen Anforderungen prinzipiell groß, aber deutliche Unterschiede durch
  - untersch. Strukturen im LEH (Eigenverantwortung/Zentrale Steuerung)
  - saisonale Schwankungen
- Einkäufer haben Schlüsselfunktion als Verhandlungspartner mit Ermessensspielraum
- Ges. Normen, quasi-obligatorische Standards und zusätzliche Anforderungen des Handels haben große Relevanz für ErzeugerInnen
- Nichteinhaltung oder Abweichung führt zu finanziellen Einbußen bis hin zur Produktannahmeverweigerung
- Hohe Relevanz resultiert auch aus einem Mangel an alternativen Vermarktungswegen

Effekte auf Lebensmittelverluste

Lebensmittelverluste:

- rund 20% der Ernte gehen aufgrund ästhetischer Standards verloren (FAO 2011)
- Große Schwankungen bei untersch. Sorten, saisonale Schwankungen
- Totalverlust kann durch Zweitverwertung vermieden werden (z.B. Saft, bei Gemüse schwierig)

Betrachter Bereich	Verluste in Prozent	Land/Kontinent /Region	Quelle/Studie
Obst und Gemüse insgesamt	16	Industrialisierte Länder	Gustavsson et al. (2011)
Obst und Gemüse insgesamt	20-40	Europa	Zeit online (2012)
Landwirtschaft insgesamt	15	USA	Kreuzberger & Thurn (2011)
Gemüse insgesamt	35-40	Deutschland	Winterer (2015)
Gemüse insgesamt	bis 30	Großbritannien	Fox & Fimiche, (2013)
Karotten	15	Großbritannien	Gustavsson et al. (2011)
Kartoffeln	40-50	Deutschland	Kreuzberger & Thurn (2011)
Äpfel	bis 25	Großbritannien Europa	Terry et al. (2011)
Erdbeeren	12	Österreich	Global (2000)
Salat	bis 25	Österreich	Frieling et al. (2013)

UBA (2020), S. 78. Tabelle nach Runge und Lang (2016), Ergänzung nach Priefer und Jörissen (2012).

Effekte auf Umwelt und Klima

Umweltauswirkungen:

- Zusätzliche PSM- und Düngemittelgaben haben Auswirkungen auf Grundwasser, Boden und Artenvielfalt
- Übermäßiger Wasserverbrauch und erhöhter Ausstoß von Treibhausgasen
- Quantifizierung der Umweltbeeinträchtigungen nicht möglich

- Gleichzeitig tritt LEH als Katalysator für eine umweltschonendere Bewirtschaftung auf:
  - Viele LEH bekennen sich zum nachhaltigen Handel und bemühen sich ihr Angebot umweltgerechter zu gestalten.
  - Unklar aber, ob es sich um „Imagepflege“ oder ernsthaft umgesetzte Maßnahmen zum Umweltschutz handelt

Beispiele

Gemüse: Stückgröße und –gewichte

- Hoher Stickstoffbedarf für geforderte Größe/Gewicht
  - Brokkoli mind. 500g,
  - Kohlrabi 10-12cm Durchmesser
  - sechs gleichgroße Blumenkohlköpfe pro Kiste
- Gemüse, das den geforderten Größen nicht entspricht, wird entsorgt
- Geforderte Größen/Gewicht können nur mit intensiver Düngung erreicht werden

Lösungen

- Flexibilisierung der Bemessungsgrundlage Größe und Gewicht
- Volle Ausschöpfung der staatlichen Normen (Allgemeine Vermarktungsnorm)
- Akzeptanz kleinerer Größen (entsprechend der gesetzlichen Norm)

Gemüse: Nicht verzehrfähige Blätter

- Zusätzlicher Bedarf PSM/Dünger für den Erhalt schöner Blätter (Frischesymbol)
- Gilt für Kohlrabi/Radieschen/Bundmöhren
- Blätter werden meist weggeschmissen – Verlust N
- Höhere Verdunstungsrate führt zu schnellerer Welkung

Lösungen

- Verkauf ohne Blätter
- Vermarktungsaktion mit dezidierter Aufklärungsfunktion

Makel beim Aussehen

LEH-Anforderungen

- Keine Verwachsungen (Kartoffeln, Möhren, Pastinaken, etc.)
- Keine kosmetischen aber gesundheitlich unbedenklichen Makel (Thripse bei Porree)

➢ Gemüse, das Anforderungen nicht entspricht, gelangt i.d.R. nicht in den Handel

Lösungen

- Volle Ausschöpfung der staatlichen Normen (AVN) unter Nutzung der Toleranzen
- Aufklärung der Verbraucher*innen
- Verkauf von Porree mit gekürztem Laub

Verbraucher*innen

- Akzeptanz von „unschönem“ Gemüse
- Akzeptanz von Porree mit gekürztem Laub

Obst: Optik

- Erhöhter Bedarf an PSM um makelloses Aussehen der hohen Handelsklassen zu erfüllen (Klasse Extra, Klasse I)
- Kaum Vermarktung von HK II
- Optische Mängel (leichte Schalenfehler bei Äpfeln & Birnen) nicht erwünscht

Lösungen

- Stärkere Vermarktung von HK II – Äpfeln unter Nutzung der Toleranzen
- Verzicht auf Pflanzenschutzmitteleinsatz gegen gesundheitlich unbedenklichen Schorf und Insekten, Ernte und Verkauf trotz Frostschäden.
- Verbraucher*innen: Akzeptanz von optisch nicht makellosen Äpfeln und Birnen.

Fazit

Eine Lockerung von hohen Qualitätsstandards für Gemüse kann zu Win-Win-Situationen für Landwirte, LEH und Umwelt führen

- Landwirte können wirtschaftlicher arbeiten, da sie weniger Ressourcen einsetzen müssen, um sehr hohe Standards zu erfüllen und mehr von ihrer produzierten Ware verkaufen können (da weniger aussortiert wird)
- Die Umwelt/Gewässer/Klima werden geschont
- Für den LEH wird der Einkauf einfacher, das Gemüse bleibt länger frisch und er kann sein Image aufbessern
- Teilw. Verbesserung für den Kunden (z.B. längere Frische ohne Blätter)

Dazu muss

- Der LEH Spielräume bestehender Standards nutzen
- Problematik quantitativ besser erfasst werden (Forschung)
- Die Akzeptanz/Wissen/Nachfrage der Konsument*innen gestärkt werden

Literaturquellen

UBA (2020) (Hrsg.): Umwelt- und klimarelevante Qualitätsstandards im Lebensmitteleinzelhandel - Ursachen und Lösungen.
Unter https://www.umweltbundesamt.de/sites/default/files/medien/479/publikationen/texte_72-2020_umwelt-_und_klimarelevante_qualitaetsstandards_des_leh_fin.pdf

FAO (2011): Global Food losses and food waste – extent, causes and prevention.

Runge, F.; Lang, Dr. H. (2016): Lebensmittelverluste in der Landwirtschaft durch Ästhetik –Ansprüche an Obst und Gemüse – Gründe, Ausmaß und Verbleib.

Priefer, C.; Jörinssen, J., 2012: ITA-Monitoring "Frisch auf den Müll". Verringerung der Lebensmittelverluste als Ansatz zur Verbesserung der Welternährungssituation.

Umwelt Bundesamt

Vielen Dank für Ihre Aufmerksamkeit!

Frederike Balzer

FG Landwirtschaft

Tel.: 0340 2103 3052

Email: frederike.balzer@uba.de

www.uba.de/