

The value of sustainable food systems: Societal willingness to pay the sustainability price?

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STATUS QUO

Sustainable values in society?

- Food sector important for sustainable social development
→ Social relevance (EAT Lancet Commission, 2019)
- Consumers are increasingly interested in sustainable product qualities
(incl. Zander & Hamm, 2010; Zander, K., Stolz, H., & Hamm, U., 2013)
 - Ecological production
 - Ethics (aspects of animal welfare)
 - Regional production (Valor, Carrero, & Redondo, 2014)
 - Individual relevance
- Changes to sustainable production often faster on the market (Vanhonacker & Verbeke, 2014)



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STATUS QUO

Is 'sustainable nutrition' suitable for everyday life?

- Social legitimacy and value of sustainable lifestyles and Germany
- Changes in diet require will and reflection on cultural norms and daily routines
- Sustainable nutrition in everyday life still requires a lot of planning, coordination and communication
- Sustainable nutrition is increasingly available, but further distribution channels must be developed
- Create additional distribution channels + enhance established distribution channels
 - Lower barriers to entry for sustainable out-of-home catering
 - Rethinking community catering concepts
 - Expand sustainable nutrition (training) offers and integrate them into the community
- Reestablish food culture

(Dallacker, Mata und Hertwig, 2019, Korn, Poets, Schneider, Metz 2011, Korn, 2011, Risius und Radda 2019, Risius 2018, Risius et al. 2018, Risius und Hamm 2018, Spiller 2019, Stoll-Kleemann und Schmidt 2017))

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COMBATS

Is 'sustainable nutrition' suitable for everyday life?

- Nutrition offers are available in abundance in the western world (land of plenty)
- Do we tend to live in an 'obese' environment where unhealthy food is always available
- Food production has not only demands for sustainability and ethical qualities, but also safety (and taste)

However, there are hardly any simple, everyday options for a healthy, sustainable diet in everyday life

- Nutritional recommendations are often contradictory
- Food labels are insufficient (for consumers as well as for markets)

Nutritional decisions require a doctorate...?...and a Nobel Prize for peace in everyday life?

(Dallacker, Mata und Hertwig, 2019, Korn, Poets, Schneider, Metz 2011, Korn, 2011, Risius und Radda 2019, Risius 2018, Risius et al. 2018, Risius und Hamm 2018, Spiller 2019, Stoll-Kleemann und Schmidt 2017))

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DEFINITION AND SCOPE

Sustainability

- Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs
 - Intergenerational justice
 - Intragenerational justice
- Taking into account the dimensions:
 - Economy
 - Social issues
 - Environment

(„Our common future“, Brundtland Report, UN 1987)

DEFINITION AND SCOPE

SDGs



<https://sustainabledevelopment.un.org/?menu=1300/>, 7.2.20

DEFINITION AND SCOPE

Food environment

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DEFINITION AND SCOPE

Food environment

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(Story et al. 2018)

STATUS QUO: MARKETS FOR SUSTAINABLE FOODS

Distribution channels

Distribution channels

- Regional/local Marketing (direct marketing) incl. farmers markets, CSA, on-farm shops
- Whole Sale and Discount

Product qualities

- Organic agriculture/ farming
- Animal welfare
- Ethical consumption
- Fair trade

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STATUS QUO: MARKETS FOR SUSTAINABLE FOODS

Framework for sustainable marketing

- Green marketing: facilitates the development and marketing of more sustainable products and services while introducing sustainability efforts into the marketing process and business practice.
- Social marketing: encourages sustainable behaviour among individuals, businesses and decision makers while also assess the impact of current commercial marketing on sustainability.
- Critical marketing can help to guide regulation and control, development of marketing practice, and to challenge the dominant institutions associated with marketing and the capitalist system, encouraging a marketing system in which sustainability is a key goal

(Gordon et al. (2011))

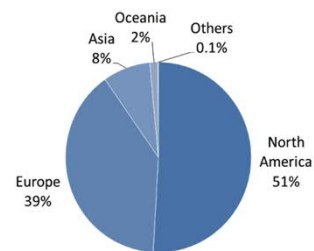
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STATUS QUO: MARKETS FOR SUSTAINABLE FOODS

Organic and Fairtrade: Distribution of retail sales

Organic: Distribution of retail sales value by region 2015

Source: FIBL-AMI survey 2017, based on retail sales with organic food



Fairtrade: Distribution of retail sales value by region 2015

Source: Fairtrade International 2016

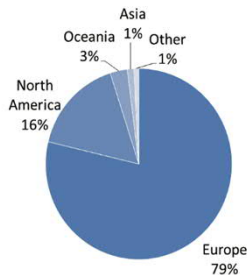


Figure 1: Organic and Fairtrade: Distribution of retail sales value by region 2015

Source: FIBL-AMI survey 2017, based on data from government bodies, the private sector, and market research companies.

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STATUS QUO: MARKETS FOR SUSTAINABLE FOODS

Organic food market

- Distinction between emerging and established markets
- Emerging markets in Europe: most organic sales through direct marketing or organic shops
- Mature markets in Europe: supermarkets more important (Padel et al. 2005)
- Supermarkets are the main sales channel for organic apples (unprocessed product) and milk (intermediate processed) emerging and mature markets, whereas the situation for organic pasta (highly processed) is more varied (Orsini et al. 2019)
 - Sales channels also may be influenced by product type (but data distinguishing between product categories are lacking) (Padel et al. 2005)
- Viability of the organic sector:
 - connection of organic farms with supermarkets undermines it by requesting a cheaper and more consistent product supply (Guthman, 2004; Smith and Marsden, 2004; Bui et al., 2019)
 - some supermarkets play an active role to encourage farmers to get a relatively high price and invest in product quality aspects (Aertens et al., 2009)

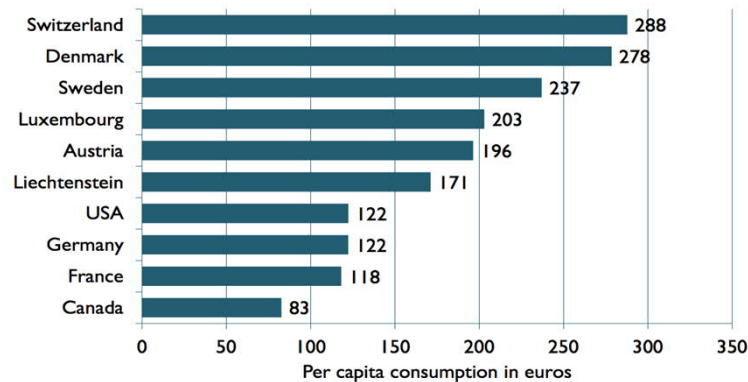
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STATUS QUO: MARKETS FOR SUSTAINABLE FOODS

Organic consumption per capita

The ten countries with the highest per capita consumption 2017

Source: FiBL-AMI survey 2019



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STATUS QUO: MARKETS FOR SUSTAINABLE FOODS

Fair trade and ethical consumption I

- Fair trade one of the major retail channels addressing "ethical consumerism" (Nicholls, 2002), fair trade → best known ethical label (Hainmüller et al. 2015)
- Retailers with corporate social responsibility → ethical consumerism (Nicholls, 2002)
- global sales of Fair Trade products have risen by around 30% annually over the past decade (Fair Trade Labeling Organizations International (FLO), 2012)
- two-digit growth rates over recent decades, their capacity to become large enough to generate substantial gains for producers is still uncertain (De Janvry et al., 2015)
- fair trade-certified importers must agree to long-term (minimum of one year) contracts with farmers and make available preharvest credit (up to 60% of the contract value). Fair Trade certification prohibits forced and child labor on farms along with ethnic and other forms of discrimination, and it restricts the use of potentially hazardous chemicals. Certification is generally restricted to small, family-owned farms and requires that farmers organize into cooperatives that decide democratically how to distribute or invest the fair trade premium paid on each contract (FLO, 2012)

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STATUS QUO: MARKETS FOR SUSTAINABLE FOODS

Fair trade and ethical consumption II

- holding other product attributes equal, the Fairtrade label increases sales by 10 percent (Coffee) (Hainmüller et al. 2011)
- the weight that consumers place on Fairtrade attributes is very heterogeneous (Hainmüller et al. 2015)
- when given a choice, people care more about the ethical treatment of animals (cage free) than people (fair trade) (Boling et al. 2019)

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STATUS QUO: MARKETS FOR SUSTAINABLE FOODS

Animal welfare values

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STATUS QUO: ASYMMETRIC INFORMATION, DYNAMICS, VALUES

Coordination, Relation and Communication

- Communication with sustainability seals and messages insufficient
 - Improve communication
 - Consider comprehensive communication
 - approach to consumer understanding (cognitive and linguistic)
 - Integration of different actors in the process chain
- Trust in sustainability seals low
 - Communicate process quality including the control procedure
 - Explore understanding and acceptance of controls
 - Understanding trust and relationships with regard to needs of sustainable foods

(Risius 2018)

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Bargaining power and contract farming

Jun. Prof. Dr. Thomas Kopp (FU Bozen)
Italy

Landscape structures as valuable qualities of sustainable production systems

Dr. Henning Schaak
Georg-August-Universität Göttingen
Department für Agrarökonomie und Rurale Entwicklung
Landwirtschaftliche Betriebswirtschaftslehre
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Values vs. Prices: Rethinking our communication and framing approaches in the sustainability movement

Florian Koch (Kartoffelkombinat e.V.)

Communication as means to value formation for sustainable food systems

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IMPULSE: COMMUNICATION AND VALUES

Value für ‚sustainable‘ beef steak

| Attribute | Without communication impact WTP in € | With communication impact WTP in € |
|---------------------------------|------------------------------------------|---------------------------------------|
| Organic Production | 8,18 | 3,18 |
| Extensive Pasture-based rearing | 2,07 | 4,65 |
| Pasture based-rearing | 2,19 | n.s. |

(Risius und Hamm 2017)



The effect of information on beef husbandry systems on consumers' preferences and willingness to pay
 Antje Risius*, Ulrich Hamm
 University of Applied Sciences, Faculty of Organic Agriculture, Food and Agricultural Marketing, Seelze 38106, Germany



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IMPULSE: COMMUNICATION AND VALUES

Values, consumer heterogeneity, acceptance of pasture based steak

| | Class 1 | | Class 2 | | Class 3 | |
|----------------------------------|-------------|---------|-------------|---------|-------------|---------|
| Average class probability (in %) | 0.492 | | 0.111 | | 0.397 | |
| | Coefficient | P-Value | Coefficient | P-Value | Coefficient | P-Value |
| Utility function | | | | | | |
| Price | -1.071 | 0.208 | -1.014 | 0.932 | -1.439*** | 0.000 |
| Organic | 1.867*** | 0.000 | -0.713 | 0.165 | 0.074 | 0.523 |
| Pasture-based rearing | 0.002 | 0.992 | 0.423 | 0.585 | 0.634*** | 0.002 |
| Extensive Suckler cow rearing | 0.421* | 0.054 | -1.824 | 0.115 | 0.436** | 0.048 |
| ASC Status-quo | -2.928 | 0.000 | 0.879 | 0.385 | -5.705*** | 0.000 |
| ASC NoBuy | -0.964 | 0.005 | 1.703* | 0.092 | -2.245*** | 0.000 |
| Latent structures | | | | | | |
| Constant | 0.123 | 0.532 | -1.771*** | 0.000 | • | |
| Natural resource concerned | 0.530*** | 0.009 | -0.399 | 0.2042 | • | |
| High quality food | 0.545** | 0.024 | -0.461 | 0.177 | • | |
| Peer groups | -0.004 | 0.985 | -0.725** | 0.023 | • | |

(Risius and Hamm 2018)

23 Preferences and attitudinal components measured through LCMLM towards sustainable food choice (control group) ***, **, * = Significance at 1%, 5%, 10% level, • =reference, fixed to 0.

IMPULSE: COMMUNICATION AND VALUES

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(Risius and Hamm 2018)

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IMPULSE: COMMUNICATION AND VALUES

Altruistic values in relation to respondent

| Latent Class Analysis | | | | | | |
|-----------------------|----------------------|----------|--------------------------|----------|---------------------------------|----------|
| Variable | Class 1 - Irrational | | Class 2 - Natural Givers | | Class 3 - Animal Welfare Driven | |
| | Mean | Std. Dev | Mean | Std. Dev | Mean | Std. Dev |
| Giving Control | 1,065 | (0,082) | 1,911 | (0,072) | 2,849 | (0,058) |
| Giving AWO | 0,545 | (0,033) | 2,359 | (0,029) | 4,788 | (0,046) |
| Giving AWO Bully | 1,046 | (0,129) | 2,015 | (0,112) | 3,681 | (0,091) |
| Fraction | 0,31 | | 0,40 | | 0,29 | |

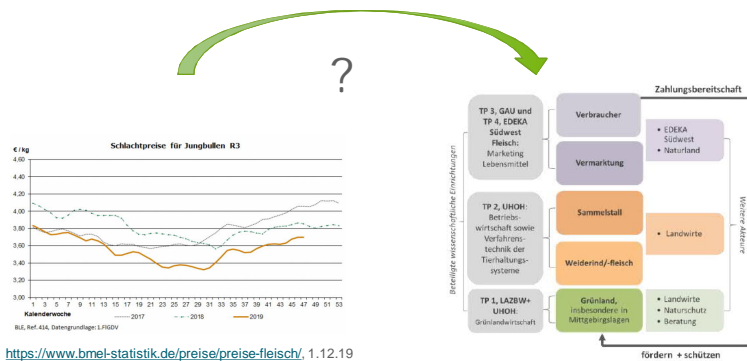
Notes: Single (*), double (**), and triple (***) asterisks are used to denote significance at the 0.1, 0.05, and 0.01 levels respectively.

(Kassas, Palma, Busch, Risius, in prep)

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WILLINGNESS TO PAY

Target costing for beef products



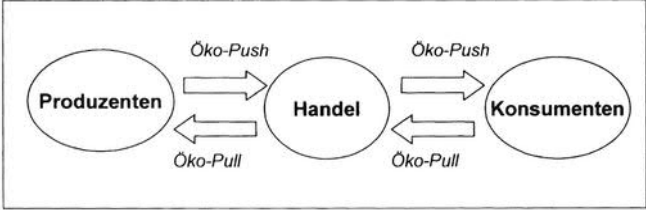
Project: Grünlandschutz durch ein innovatives Weiderindkonzept (GiB)

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MARKETS OUTLOOK

Better market structures for beef

- Traditional: food retailing (in D) as a classic distributor of goods
- But also: Trade as an 'ecological gatekeeper'?



(Hansen, 1988)

- Result: 'Innovative retailers' explicitly select sustainable quality: Possibility to get out of trading pressure. (Schulze, Spiller, Risius 2019)

Food Ethics
https://doi.org/10.1007/s40551-019-00040-w

RESEARCH ARTICLE

Check for updates


Food Retailers as Mediating Gatekeepers between Farmers and Consumers in the Supply Chain of Animal Welfare Meat - Studying Retailers' Motives in Marketing Pasture-Based Beef

Maureen Schulze¹ · Achim Spiller¹ · Antje Risius¹

Accepted: 28 May 2019 / Published online: 11 June 2019
© Springer Nature Switzerland AG 2019

Abstract
Although there is increasing public criticism of intensive livestock production, the market share of meat with an animal welfare standard exceeding legal requirements remains small. Food retailers, in their role as gatekeepers, can influence changes in production and consumption patterns. Their strategic role between farmers and consumers allows them to control

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THINK TANK

Ideas for discussion

- 1) Which distribution channels are suitable? Especially for food with short "value chains" (rather unprocessed food)? When?
- 2) How is communication and the actual exchange of goods with the customer successful? (especially in the area of conflict between quality and food waste) Which strategies and efforts are effective? (Keywords: positive messages/negative messages/framing)
- 3) How do we integrate agricultural services that go beyond the physiological value of goods? And how can we communicate them in a measurable way? (ecosystem services and cultural values)
- 4) What are the most important elements for creating other social structures through other food production?

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RESEARCH PROJECTS

- NMWK, Pflanzlich-orientierte Ernährungsstile als Schlüssel zur Nachhaltigkeit (Kurz: Nachhaltige Ernährungsstile) (laufend)
- BMEL, Grünlandschutz durch ein innovatives Bio-Weiderindkonzept (GiB) - Teilprojekt 3 (in Kooperation mit der Uni Hohenheim und Edeka-Südwest) (laufend)
- BMEL, Konzept zur Produktdifferenzierung am Rindfleischmarkt - Kommunikationsmöglichkeiten und Zahlungsbereitschaft für Rindfleisch aus extensiver, artgerechter Mutterkuhhaltung auf Grünland (abgeschlossen)
- DBU, Wege zu gesellschaftlich akzeptierten Formen der antibiotikareduzierten Erzeugung von Fleisch und Milch im internationalen Vergleich (abgeschlossen)
- NMWK, Potenziale der nachhaltigen Nutzung regionaler Rassen und einheimischer Eiweißfuttermittel in der Geflügelproduktion (PorReE) (laufend)
- BMEL, Authentizität und Vertrauen bei Bio-Lebensmitteln: Innovative Kommunikationsansätze entlang der Produktkette und in der Gesellschaft (AVOeL) (laufend)

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NES

TAKE AWAYS: EAT LANCET FOR FARMERS

Quo Vadis: Transformation der Fleischproduktion I

Für die ökologische Nachhaltigkeit gibt es kein Patentrezept aber bestimmte Schlüsselprinzipien sind wichtig:

- Mischen und kombinieren Sie Nutzpflanzen, Techniken, Praktiken und Technologien, um mehr auf weniger Land zu produzieren, den Nährstoffverlust durch Wasser zu begrenzen, Kohlenstoff im Boden zu speichern und Platz für die Entfaltung der biologischen Vielfalt zu schaffen.
- Konzentrieren Sie sich auf Praktiken, die die Kohlenstoffkonzentration im Boden verbessern, den Nährstoffaustritt von den Feldern reduzieren und die Effizienz der Wassernutzung in der Landwirtschaft verbessern.
- Die Kohlenstoffbindung in landwirtschaftlichen Böden und über Tage muss deutlich zunehmen.

EAT-Lancet Commission Brief for Farmers

The EAT-Lancet Commission presents a global planetary health diet that is healthy for both people and planet. Discover the report's key takeaways and the specific actions that farmers can take to contribute to the Great Food Transformation.



<https://eatforum.org/lancet-commission/farmers/>, 1.12.19

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<https://eatforum.org/lancet-commission/farmers/>

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TAKE AWAYS: EAT LANCET FOR FARMERS

Quo Vadis: Transformation der Fleischproduktion II

- Darüber hinaus sind auch Futtermittelzusatzstoffe und die Futterreformulierung vielversprechend, um zur Emissionsreduzierung beizutragen.
- Expansion der Landwirtschaft stoppen, indem Sie der Maximierung der Nahrungsmittelproduktion auf bestehenden Produktionsflächen Priorität einräumen und sich darauf konzentrieren, Ertragslücken zu schließen. Naturschutzflächen einräumen.
- Pflanzen Sie gesunde und nachhaltige Pflanzen. Um sicherzustellen, dass die Ernährung von 10 Milliarden Menschen gesund und nachhaltig ist, muss die Produktion von Obst, Gemüse, Hülsenfrüchten und Nüssen jährlich um 9 % und bis 2050 um 50-150 % gesteigert werden.

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TAKE AWAYS: EAT LANCET FOR FARMERS

Quo Vadis: Transformation der Fleischproduktion III

- Wählen Sie die richtige Ernte für die richtige Stelle. In den kommenden Jahrzehnten wird sich das Wahrscheinlichkeitsrisiko für heiße und trockene Jahre weltweit weiter steigern. Landwirte sollten Sorten auswählen, die besser an sich ändernde Klimabedingungen angepasst sind und eine größere Vielfalt an Lebensmitteln produzieren.
- Reduzierung und Wiederverwendung der Nährstoffe. Einführung von Precision Farming-Techniken, die einen genaueren Zeitpunkt für die Nährstoffzufuhr ermöglichen und eine übermäßige Anwendung auf den Boden vermeiden. Darüber hinaus sollten Sie Maßnahmen ergreifen, um Nährstoffe aus Anbausystemen über den Ackerbau oder die konservierende Bodenbearbeitung zu recyceln und die Tiere nach Möglichkeit in den Betrieb zu integrieren.

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<https://eatforum.org/lancet-commission/farmers/>, 1.12.19

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TAKE AWAYS: EAT LANCET FOR FARMERS

Quo Vadis: Transformation der Fleischproduktion IV

- Unterstützung der Bemühungen der Landwirte um den Schutz und die öffentliche Gesundheit. Drängen Sie auf eine stärkere Anerkennung des Beitrags der Landwirte zum Naturschutz und zur öffentlichen Gesundheit

EAT-Lancet Commission Brief for Farmers

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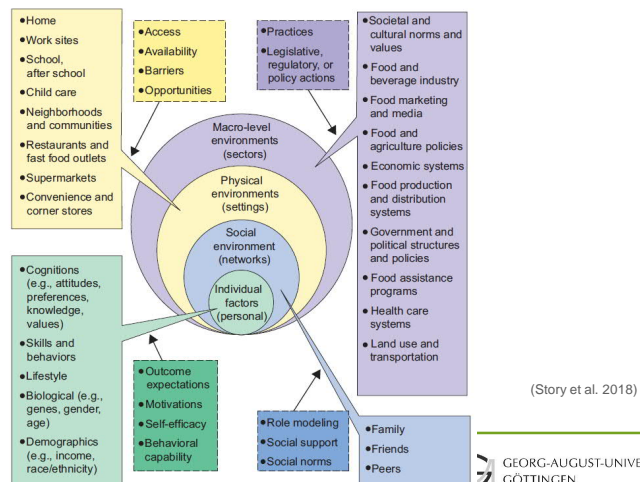


<https://eatforum.org/lancet-commission/farmers/>, 1.12.19

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ENTSCHEIDUNGSREGELN IM ALLTAG

Ist ‚nachhaltige Ernährung‘ alltagsfähig?



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