

Minutes

Diversifying Food Systems in the Pursuit of Sustainable Food Production and Healthy Diets

First workshop

Paris, 12th October 2018

ACTIA – 16, rue Claude Bernard 75005

Room: ACTIA, 4th floor

Chair: Monique Axelos, FR

Co-chair: Minna Huttunen, FI

Rapporteur: Floor Geerling-Eiff, NL

Task leaders: Minna Huttunen (FI), Monique Axelos (FR), Christophe Cotillon (FR), Ruairi Colbert (IE)

The aim of this cross-cutting issue is to increase awareness of MS on all aspects and impacts of decreasing / increasing diversity across the whole food systems on FNS in order to deliver advice on R&I strategies.

Rationale for increasing diversity / synthesis of current knowledge, options and problematic issues

Summary

Diverse: with respect to being open to a wide range of technologies, practices, approaches, cultures and business models

Food Systems diversity can be a combination of:

- **Primary Producer (Agricultural) diversification** – e.g. Organics, artisan Foods, renewable fuel production from agricultural crops etc. Non-intensive farming and sustainable farming. Mixed and traditional cropping
- **Food processing diversification** – e.g. diverse materials and technologies.
- **Retailer diversification** - in terms of offering and services provided.
- **Consumer Food and dietary diversification interventions** – e.g. Home gardening and Urban agriculture.

SOME TRENDS AND FIGURES RELATED TO AGROBIODIVERSITY¹

* Since the 1900s, some 75 percent of plant genetic diversity has been lost as farmers worldwide have left their multiple local varieties and landraces for genetically uniform, high-yielding varieties.

* 30 percent of livestock breeds are at risk of extinction; six breeds are lost each month.

* Today, 75 percent of the world's food is generated from only 12 plants and five animal species.

* Of the 4 percent of the 250 000 to 300 000 known edible plant species, only 150 to 200 are used by humans. Only three - rice, maize and wheat - contribute nearly 60 percent of calories and proteins obtained by humans from plants.

* Animals provide some 30 percent of human requirements for food and agriculture and 12 percent of the world's population live almost entirely on products from ruminants.

Source: FAO. 1999b

The Intergovernmental Panel on Climate Change (IPCC) published a landmark report examining the vulnerability of human and natural systems to climate change. The report highlighted a lack of resilience in the global food system, rooted in a radical decline in food diversity²

It is not for the benefit of our health or wellbeing that these crops have come to dominate our diet. It's because conversion of these crops into meat and processed foods is highly profitable; because these raw materials are cheap, and can be broken down, reformulated, packaged, and sold for profit.

Diversity lends resilience to a food system. By eating in turn with the seasons and focusing our diet on local variety, by avoiding processed foods and eating less but better meat, and by supporting those farmers who support a rich and varied wildlife.

Ultimately, food diversity cannot be sustained unless the food chain and the technologies to support it are environmentally appropriate. Cooking, without renewable energy sources, is a critical example³

There has been significant discussion amongst the group on how to define this priority 'increasing diversity' and what are the consequences of increasing diversity along the value chain. Three questions were raised that required answers:

Question 1 – What are the benefits and inconvenient of diversity for Food Systems?

Question 2 – How diversity can contribute to the sustainability of the Food Systems?

Question 3 – How to promote diversity in the Food Systems?

To answer these questions a workshop entitled “diversity and food systems” was held. The aim of the workshop was to bring together experts working in this area who would give the group a greater understanding of diversification thus providing answers to the three questions.

Workshop on “diversity and food systems”

The workshop kicked off with presentations from experts of diversity and food systems.

1. **Food systems thinking and (bio)diversity- *Monika Zurek, University of Oxford (UK)***
Think beyond agriculture, think of the full food system. Consumers and retailers drive food systems more than farmers.
Co-ordinated approach across food systems. New dialogue across the sectors.
Need metric for where we are now and measure change. SUSFANS. Where are Food Systems now?
2. **Diversity in agri-food systems: An asset for sustainability issues- *Cécile Detang – Dessendre, Inra***
Cecile gave an overview of diversity at agriculture level. Discussed specialised vs diversified food systems.
Economic value is the most important point to be able to analyse the impact of diversity? Which Agriculture food system should we follow – specialised vs diverse systems.
Ans: We don't know what is better however we do know that we need diversity. Agriculture can't change alone – needs to be a citizen and political discussion. Farmer can't do it alone. Need to have a discussion on this. Food Systems are based on economic return at present.
3. **Embedding cultivated diversity within the European territories for resilient food systems and high quality food- *Véronique Chable, Inra***
Organisations / groups need to work together to address diversification issues and problems. We need to have common goals. Overall – working together and not alone. Diversity driven by demand. Organic farming is an excellent example of this. Organic farming has expanded over the years.
Demonstrated how working together we can address diversify issues e.g. organic farming, making more diverse seeds available to the organic farmer.
Diversity takes time...no quick solution.
4. **Dietary diversity, dietary quality, and human health- *François Mariotti, AgroParisTech***
Francois indicated that food diversity cannot be a standalone recommendation / solution. It needs to be reconnected to diet quality, as dietary patterns. Need more than diversity – demonstrates that diversity is complex. Can't be addressed on its own – need to consider everything together. Diversity won't address nutritional intake issues alone.

5. **Raw milk dairy products : biodiversity as an advantage?**- *Valérie Michel, Actalia*
 Diversity using raw milk can be an advantage however there are also potential negatives
 Raw milk cheeses have greater flavours and intensity.
 Impact on pathogens development –living biofilm limits L monocytogenes growth.
Managing diversity is a challenge: there are reduced risks and increase risks using raw milk.
 Manage milk microbial and control it during processing.

Conclusions from presentations

Brain Storming Session

Three questions were presented to three groups.

Question 1 – What are the benefits and inconvenient of diversity for Food Systems?		
	Benefits	Inconvenient
Primary Producers	Alternative crops that can be plant due to adverse weather. Landscape biodiversity – multiple types of crops – not just all the same crops. Rural Renaissance. Reduction in the use of pesticides, fertilisers – environmental sustainable impact. Risk Management with more resilient options available Reduced impact of price volatility by planting a more diverse range of crops.	Labour costs – small scale production systems more labour and time intensive. Regulatory issues with novel food innovations – e.g. insects. More knowledge and information required to service the diverse range of systems. Greater investment required for multi systems.
Food Processors	More space for small companies using niche materials and innovative technology. Lead to innovation - SMEs	Regulatory issues. Greater investment due to equipment costs due to new processes, production lines etc.. Processing made challenging due to diverse raw materials
Retailers	Able to offer greater choice of products (e.g organics, gluten free, free from etc.) which leads to competitive advantage.	Stocking Issues More supplier – more cross compliance (audits) Potential traceability issues with more products from greater number of smaller suppliers.
Consumer	Group 1 Enjoyment from new tastes and products. Positive health Impacts Higher quality of life with greater choice Group 2 More options for the	Consumer acceptance – e.g. insects. Too much choice – make the wrong product decisions may lead to an unbalanced diet. More expensive products due to small scale production systems
All	More research fields	Increased carbon food print due to the diverse range of systems in place. Food safety and traceability might decrease: trying to do too many things...

Question 2 – How diversity can contribute to the sustainability of the Food Systems?

Increasing diversity would lead to food and nutrition security. Effect on climate change.

More resilience processes.

Healthy Eco-System – environment and socio-economic – less pesticides and fertilizer use

Diversity of materials – choosing the most sustainable ones e.g. packaging and feed ingredients - Don't need diversity of packaging but diversify in packaging materials

Opportunity to transition to more sustainable foods (insects / algae)

Diet diversification Plant vs protein. New / alternative proteins

Less risk in the long term from using diverse range of methods / crops etc.

Social acceptance of the food systems

Dialogue and communications

Better use of biomass. Linked to bio-economy.

Innovation of organization of FS. Short term – costs, long term – advantages

Opportunity for additional income. Use of local resources.

Social and cultural identity – respect cultural identity amongst countries.

Question 3 – How to promote diversity in the Food Systems?

Positive and clear message on diversity – **need to communicate with all actors**. Communication and education, information and innovation. **Multi Actor approach**. Sharing societies. Build networks for solutions. Education (at school) – chefs and cooks - School meals diversification

Flexible technologies for transformation. Add value to products. Alternative proteins.

Urban food production systems. Diversity at catering level.

Diversity as part of a larger political framework.

Incentives through CAP – Farmer level or nudging

Social recognition – metric. Diversity in policy

Taxes at processor and retailer level.

Metrics – measurement of positive effects – more science on this

Super foods

Cultural importance of products....

Conclusion

Recommendation on outcome of question 3 for Commission – report on diversity and European projects on diversity. Promotion of diversity.

Integration of SUSFOOD and HDHL FACCE. Core Organic – ERA-NET.

MS national policy documents on biodiversity?? Difficult on each MS how to adapt diversity

A lot of trade-off between different actors. Common ideas with a lot of enrichment.

Workshop has harmonised the knowledge on diversity within the group.

SUSFOOD diversify possible topic on next call....where is the research needed in this area. Fund the right research....

Complimenting each other...

Take diversify as a driver for change...

What kind of research is needed in this area?

ANNEX

1. Agenda

Diversifying Food Systems in the Pursuit of Sustainable Food Production and Healthy Diets First Workshop

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09.30-10.00	<i>Registration and welcome coffee</i>	
10.00	Welcome speech and Introduction	<i>Monique Axelos, Christophe Cotillon</i>
10.15 – 12.45	Presentations from experts of diversity and food systems (20 mn) Questions and answer for each presentation (10 mn)	
	Food systems thinking and (bio)diversity	<i>Monika Zurek – University of Oxford (UK)</i>
	Diversity in agri-food systems: An asset for sustainability issues	<i>Cécile Detang – Dessenre, Inra (FR)</i>
	Embedding cultivated diversity within the European territories for resilient food systems and high quality food	<i>Véronique Chable – Inra (FR)</i>
	Dietary diversity, dietary quality, and human health	<i>François Mariotti - AgroParisTech (FR)</i>
	Raw milk dairy products: biodiversity as an advantage?	<i>Valérie Michel – Actalia (FR)</i>
12.45	Wrap up and summary of the presentations	<i>Minna Huttunen, Ruari Colbert</i>
13.00-14.00	Lunch break	
14.00-15.50	Brain storming session around 3 questions: One group per question and 30 minutes brainstorming exercise for each group All participants answer to the 3 questions:	

	Question 1 – What are the benefits and inconvenient of diversity for Food Systems? Question 2 – How diversity can contribute to the sustainability of the Food Systems? Question 3 – How to promote diversity in the Food Systems?
15.50	Restitution of the brain storming exercise for the 3 questions by 3 rapporteurs (comments on stickers)
16.20	Conclusions and wrap up of the meeting <i>Monique Axelos, Minna Huttunen</i>
16.30	<i>End of the workshop</i>

2. List of Participants

SCAR FOOD SYSTEMS SWG WORKSHOP ON DIVERSITY AND FOOD SYSTEMS Paris, 12-10-2018 ACTIA – 16, rue Claude Bernard, Paris 75005 LIST OF PARTICIPANTS			
	MS	Name	Organisation
1	EC	Natalia BRZEZINA	DG Agriculture and Rural Development Unit B2 – Research and innovation
2	DE	Nikola Hassen (Schulz)	Forschungszentrum Juelich GmbH (for BMBF)
3	DE	Johannes Bender	Federal Office for Agriculture and Food (BLE)
4	ES	Angeles Alonso de Blas	INIA
5	ES	María Blanco	INIA
6	FI	Minna Huttunen	Ministry of Agriculture and Forestry
7	FI	Anne Pihlanto	Natural Resources Institute Finland Luke
8	FR	Monique Axelos	INRA
9	FR	Louis-Georges Soler	INRA
10	FR	Béatrice Darcy-Vrillon	INRA
11	FR	Christophe Cotillon	ACTIA
12	FR	Anastasiya Terzieva	INRA
13	HU	Viktória Szűcs	Hungarian Chamber of Agriculture
14	IE	Ruairi Colbert	Department of Agriculture, Food and the Marine

15	IT	Aida Turrini	CREA
16	IT	Silvia Baralla	Ministry of agricultural, food and forestry policies - MIPAAF
17	IT	Eda Maria Flores Rodas	IZSLT - Istituto Zooprofilattico Sperimentale del Lazio e della Toscana
18	LT	Loreta Basinskiene	Kaunas University of Technology
19	PL	Paweł Chmieliński	Institute of Agricultural and Food Economics
20	SE	Susanne Johansson	FORMAS