## Impact of the Data Act on the Agricultural Data Economy and Existing Power Imbalances

by Car**Fungean Agrigultural Data Governance Conference** by the University of Freiburg

6 December 2024, Freiburg, Germany







### EU Regulations Wave and 'Brussels Effect'

#### Table 1: Overview of EU Legislations in the Digital Sector

	92	1	30		316	(c) (c)					
Research & Innovation	Industrial Policy	Connectivity	Data & Privacy	IPR	Cybersecurity	Law Enforcement	Trust & Safety	E-commerce & Consumer Protection	Competition	Media	Finance
Digital Europe Programme Regulation, (EUI 2021/894	Recovery and Resilience Facility Regulation, (EUR 2021/241	Frequency Bands Directive, (IEEC) 1987/372	ePrivacy Directive, ECIDO02/68, 2017/98839CODE	Database Directive, ECI 1996/9	Regulation for a Cybersecurity Act, IELE 2019/861, 2025/0108/COD	Law Enforcement Directive, SELS 2016/680	Product Liability Directive (PLD), (EEG) 1985/374, 2022/1002/000	Unfair Contract Terms Directive (UCTD), IFECI 1993/13	EC Merger regulation, (EC) 2004/139	Satellite and Cable Directive, SEECH 1993/63	Common WAT system, (EC) 2006/112, 2022/0407/CNS)
Hortzon Europe Regulation, (EU) 2021/895, (EU) 2021/764	InvestEU Programme Regulation, SEU 2021/522	Radio Spectrum Decision, SC3 2002/675	European Statistics, (EC: 2009/223, 2023/0237/EC08	Community Design Directive, 650 2002/6, 2002/039 1(000)	Regulation to establish a European Cybersecurity Competence Centre, <u>658 2021/987</u>	Directive on combating fraud and counterfeiting of non-cash means of payment. SEA 2019/713	Toys Regulation, IEC 2009/46, 2023/5029000005	Price Indication Directive, SEGI 1998/6	Technology Transfer Block Exemption, (EUR 2014/316	Information Society Directive, IEG-2001/29	Administrative cooperation in the fleid of taxetton, (EU) 2011/16
Regulation on a pilot regime for distributed ledger technology, gills populated	Connecting Europe Facility Regulation, (EUS 2021/1153	Open Internet Access Regulation, (EUS 2015/2120	Ceneral Data Protection Regulation (COPPI), (ESE 2016/679	Enforcement Directive (IPR), (EC) 2004/48	NS 2 Directive, #LA 2022/2555	Regulation on Interoperability between EU information systems in the field of borders and visa, EUs 2019/817	European Standardzation Regulation, 658 201 2/1025	E-commerce Directive, (EC) 2000/31	Company Law Directive, IEUS 2017/1132, 2023/00896COD	Audio-visual Media Services Directive (AVASS) (EU 2010/13	Payment Service Directive 2 (PSD2), (EII) 2015/266, 2023/02/04/DDD
	Regulation on High Performance Computing Joint Undertailing, IEEE 2021/1173, 2024/0018/0NS	European Electronic Communications Code Directive (EECC), (ELE 2018/1972	Regulation to protect personal data processed by EU institutions, booles, offices and agencies, EUI 2018/1725	Directive on the protection of trade secrets, (ELI) 2015/943	Cybernecurity Regulation, SELS 2023/2841	Regulation on terrorist content online, SLI 2021/784	Radio Equipment Directive (RED), SUA 2014/53	Unfair Commercial Practices Directive (UCPO), (EC) 2005/29	Market Survellance Regulation, SEU 2019/10/20	Portability Regulation, ELB 2017/1128	Digital Operational Resilience Act (DORA Regulation), (EUR 2022/0554
	Regulation on Joint Undertakings under Hortzon Europe, (BLB 2021/2085, 2022/00035NLE)	au top-level domain Regulation, IBM 2019/517	Regulation on the free flow of non-personal data, (BJ) 2018/1807	Design Directive, 2002/0392400001	information Security Regulation, 2022/0084/0008	Temporary CSAM Regulation, (BJI) 2021/1232 2022/0188(DOD)	elDAS Regulation (European Digital Identity Framework), (EU) 2014/910	Directive on Consumer Rights (CRD), (EU) 2011/83	P28 Regulation, SSJ 2019/1150	Satelite and Cable II Directive, SSU12019/789	Crypto-assets Regulation (MICA), IEM 2023/1114
	Decision on a path to the Digital Decade, (BJS 2022/2481)	Roaming Regulation, IELE 2022/612	Open Data Directive (PSI) (BU) 2019/1024	Compulsory licensing of patents, 2023/012860003	Cyber Resilience Act, 2022/02/72/00/08	E-evidence Regulation, IEU8 2023/1543	Regulation for a Single Digital Gateway, 83.8-2018/1724	e-Involcing Directive, (ISA 2014/55	Single Market Programme, (EUS 2021/690	Copyright Directive, SELII 2019/790	Pinancial Data Access Regulation, 2023/0208 (COD)
	European Chips Act (Regulation), (ELS 2025/1761)	Union Secure Connectivity Programme, IELA 2022/588	Data Governance Act (DGA Regulation), (ELB 2022/968	Standard essential patents, 2023/013390000	Cyber Solidarity Act (Regulation), 2023/01/08/CODS	Digitalisation of cross-border judicial cooperation, IEU) 2023/2844	General Product Safety Regulation, IELS 2023/2008	Regulation on cooperation for the enforcement of consumer protection laws. (EU 2017/2004	Vertical Block Exemption Regulation (VBER), (BUB 2022/720)	European Media Freedom Act, (EUR 2024/1083)	Payment Services Regulation, 2023/02/10/0008
	Establishing the Strategic Technologies for Europe Platform (STEP), (EUR 2024/795	Olgabit infrastructure Act. (EU) 2004/1309	European Data Act (Regulation), (EU) 2023/2854			Directive on combating violence against women, 2022/0086/COS	Machinery Regulation, (ELB 2023/1230	Geo-Blocking Regulation, IBUR 2018/202	Digital Market Act (DMA Regulation), gttl/2022/1926	Remuneration of musicians from Paid, countries for recorded music played in the EU	Digital euro, 2023/0212 (000)5
	European critical new materials act (Regulation), IELB 2024/1252	New radio spectrum, policy programme RSPP, 2.01	Interoperable Europe Act, IEUR 2024/903			Directive for combeting sexual abuse and child sexual abuse material, 2024/003560003.	Al Act (Regulation), 2021/010800000	Digital content Directive, IBUS 2019/770	Regulation on distortive foreign subsidies, SEU 2022/2560		Regulation on combating late payment, 2023/032380008
	Net Zero industry Act, 2023/0081/CODE	Diobal Nebeorka Act	Regulation on data collection for short-term rental, IRUs accentions			Digitalization of travel plocuments	Eco-design Regulation, 2022/0098/CODE	Directive on certain aspects concerning contracts for the sale of govern.	Hostrontal Block Exemption Regulations (HBER), ISLB 2023/1065 SUI 2023/1067		
	EU Space Law		European Health Data Space (Regulation), 2022/014000006				Al Liability Directive, 2022/09090000	Digital Services Act (DSA Regulation), (EUR 2022/2005	Platform Work Directive, 2021/041480005		
			Harmonisation of GDPR enforcement procedures, 2023/020280068					Political Advertising Regulation, (EUS 200346900	Single Market Emergency Instrument (SMED, 2022/02780CODS		
			Access to vehicle data. functions and resources Sizeen Data fall					Right to repair Directive, 2022/000850005 Consumer protection: strangthened enforcement.	Source:		





https://www.kaizenner.eu/laws

### Relevant Legal Framework in the EU

#### Horizontal Regulations

GDPR (2016)

Free-flow of Non-personal Data Regulation (2018)

Data Governance Act (2022)

Data Act (2023)

Voluntary Rule-making

EU Code of Conduct (2018)

Common European Data Spaces

Including in Agriculture (CEADS)

Possible Follow-up Regulation(s)

Regulation for CEADS

Ag-data Regulation





Source:

https://integrityriskintl.com/eu-regulatory-compliance-trends-2022/

#### **Prominent Issues**









### Data Lockins

A-Legal ambiguities B-Technical barriers

# Fragmented Isolated Data Sets

Data Access Puzzle

Lack of Trust

#### **General view:**

'Data ownership' problems should be regulated, but how?



#### Data Act (2023) A Framework for All Sectors

Chapter II - B2C and B2B data sharing upon users' request:

**Art. 3)** Access by design -- **Art. 4)** Access by request -- **Art. 5)**Sharing by request

Chapter III – Obligations for data holders

Art. 8) FRAND conditions Art. 9) Compensation Art. 10) Dispute settlement

- Chapter IV Unfair contractual terms Art. 13) Unilaterally Imposed Unfair Terms
- Chapter V Public bodies' data access in exceptional situations
- Chapter VI Switching cloud services
- Chapter VIII –
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y (obligations for "Participants in data

### Data Act - Chapter II: B2C and B2B Data Sharing

- **Art. 3)** Access by design "Connected products shall be designed and manufactured in such a manner that product data and related service data ... are ... directly accessible to the user."
- Art. 4) Access by request "Where data cannot be directly accessed by the user from the connected product, data holders shall make <u>readily available data</u> ... accessible <u>to the user</u> easily, securely, <u>free of charge</u>, ... and <u>where ... technically feasible</u>, <u>continuously and in real-time</u>. This shall be done with <u>a simple request</u> through electronic means ..."
- **Art. 5**) Sharing by request "Upon request by a **user**, or by a party acting on behalf of a user, the data holder shall make available <u>readily available data</u> … to a third party without undue delay, easily, securely, <u>free of charge</u> **to the user**, … <u>where relevant and technically feasilated as a finite of the user</u>."



#### General Limitations of the Data Act

#### General limitations:

- ✓ Data Act will apply 20 months after September 2025.
- ✓ Art 3(1) will apply 32 months after
- ✓ Chapter II is not applicable to SME data holders;

Art. 7: "Chapter II shall not apply to data generated through the use of connected products manufactured or designed or related services provided by <u>a microenterprise</u> (10 persons and <u>EUR 2 million turnover</u>) and <u>small enterprise</u> (50 persons and EUR 10 million turnover) ..."

The same shall apply to ... **medium-sized enterprise** (250 persons and EUR 50 million turnover) for less than one year and to connected products for one year after the date on which they were placed on the market by a medium-sized enterprise."



### Limitations of the Data Act from the Sectoral Perspective

- Sectoral limitations: Definitions: 'product', 'related service', 'user', 'readily available data'
  - Art. 1(12): <u>'user'</u> means a natural or legal person <u>that owns a connected product</u> [<u>IoT device</u>] or to whom temporary rights to use that connected product have been contractually transferred, or that receives related services;
  - Art. 1(6): 'related service' means a digital service, ..., which is connected with the product at the time of the purchase, rent or lease in such a way that its absence would prevent the connected product from performing ... its functions.;
  - Ø Art. 1(13): 'data holder' means a natural or legal person ... to use and make available data, including, where contractually agreed, product data or related service data which it has retrieved or generated during the provision of a related



### Data Act (2023) – Sectoral Implications

**Significant Development:** Data Access and Sharing Rights

**Scope:** machine-generated data if user owns device

**Remaining issues:** <u>Other ag-data + Re-use of data?</u>



#### Data Re-use and Power Imbalances

#### **Exclusive Control**

VS

**Complete Opennes** 

Distorts Data Collection Incentives

Trade Secrets & IP Rights

Potential of Big Ag-data

Innovation

- Problems

- Farmers (as the weakest party in the data access puzzle)
- Whether farmers should have a say on data reuse decisions?
- Whether *landowners* have a say?
- Whether farmers/landowners need to get a share from 'reasonable compensation' or other revenue?
- Data holders
- How to keep their incentives and interests?
- **Access seekers** (rethinking essential facilities doctrine)
- Rivals' access for re-use purposes
- Potential rivals' access requests
- Impartial parties' access requests
- Whether there must be an eased way of access for SMEs/Startups? 10





### Common European Agricultural Data Space - Key Points

- Aim: unlocking the potential of data-driven economy
- CEADS envisions a <u>network of interoperable</u> <u>Data Sharing Initiatives (DSIs)</u> with Key goals:
  - Innovation, efficiency, responsible data sharing, inclusivity
- A Decentralised Approach based on around 400 already existing data-sharing initiatives mapped across Europe.
- Only a *catalogue of data sets* by listing data holders & data intermediaries



### Possible Follow-up Sectoral Regulation(s)

- Regulation for Agricultural Data Agriculture Specific Data Act?
- Regulation on Common European Agricultural Data Space

(Example: Proposal for a Regulation on the European Health Data Space - COM/2022/197 final)

### The solution should cover a trilogy

- **i)** Legal framework (not limited to user rights: principles/guidelines for data re-use via CEADS)
- ii) Data standards/interoperability obligations (not limited within CEADS) &
- iii) Pata governance infrastructure (CEADS) to facilitate data re-use

### The most recent publication: Updating the EUCC

https://www.nature.com/articles/s41599-024-03710-1



Humanities & Social Sciences
Communications



#### ARTICLE

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The future of agricultural data-sharing policy in Europe: stakeholder insights on the EU Code of Conduct

Mark Ryan® 1M, Can Atik1, Kelly Rijswijk1, Marc-Jeroen Bogaardt1, Eva Maes2 & Ella Deroo2

In 2018, the EU Code of Conduct of Agricultural Data Sharing by Contractual Agreement (EUCC) was published. This voluntary initiative is considered a basis for rights and responsibilities for data sharing in the agri-food sector, with a specific farmer orientation. While the involved industry associations agreed on its content, there are limited insights into how and to what extent the EUCC has been received and implemented within the sector. In 2024, the Data Act was introduced, a horizontal legal framework that aims to enforce specific legal requirements for data sharing across sectors. Yet, it remains to be seen if it will be the ultimate solution for the agricultural sector, as some significant agricultural data access issues remain. It is thus essential to determine if the EUCC may still play a significant role to address sector-specific issues in line with the horizontal rules of the Data Act. During six workshops across Europe with 89 stakeholders, we identified how the EUCC has been (1) received by stakeholders, (2) implemented, and (3) its future use (particularly in response to the Data Act). Based on the workshop results and continued engagements with researchers and stakeholders, we conclude that the EUCC is still an important document for the agricultural sector but should be updated in response to the content of the Data Act. Hence we propose the following improvements to the EUCC: 1. Provide clear, practical examples for applying the EUCC combined with the Data Act; 2. Generate model contractual terms based on the EUCC provisions; 3. Clarify GDPR-centric concepts like anonymisation and pseudonymisation in the agricultural data-sharing setting 4. Develop a functional enforcement and implementation framework; and 5. Play a role in increasing interoperability and trust among stakeholders.



### Research Outputs

3. Understanding the role of agricultural data on market power in the emerging Digital Agriculture sector: a critical analysis of the Bayer/Monsanto decision1

Can Atik

#### 3.1 INTRODUCTION

Although there might be a perception that agriculture is a rural activity that is far from technology,2 modern agricultural production has become densely data-driven with advanced Big Data implementations3 thanks to the proliferation of the Internet of Things (IoT) and cloud computing technologies.4 Agricultural data (ag-data) is collected via various methods and used in agricultural decision-making processes such as implementing sensors in fields to track and prevent crop diseases, using drones and satellite images to observe crop developments, or using IoT infrastructure in glasshouses to

This chapter has been presented at the 14th ASCOLA Conference on 27-29 June 2010 in Aix on Provence France and enhiected to double blind near review. This research has been conducted with the support of the postgraduate scholarship program of the Ministry of National Education, Republic of Turkey.

See the ever-present perception that agriculture is even behind the industry, 'industrialization' or 'modernization' of agriculture theories after the 1980s, and the EU regulations' implicit adoption of these developments at Francis Synder, New Directions in European Community Law (1st edn., Weidenfeld and Nicolson, 1990), pp. 109–119. Michael E. Sykuta, 'Big Data in Agriculture: Property Rights, Privacy and Competition in Ag Data Services' (2016) 19 International Food and Agribusiness

Management Review 57, p. 58. Harald Sundmaeker et al., 'Internet of Food and Farm 2020', in Ovidiu Vermesan and Peter Friess (eds), Digitising the Industry – Internet of Things Connecting the Physical, Digital and Virtual Worlds (River Publishers, 2016), pp. 132–133, Sjask Wolfert et al., 'Big Data in Smart Farming – A Review' (2017), 155 Agriculture Systems, pp. 69-75

Competition Problems and Governance of Non-

personal Agricultural Machine Data: Comparing Voluntary Initiatives in the US and EU

#### In Can Stile and Restin Mastons

Abstract: The arrival of digital data in agriculdata into markings and devices that reduce compa

able. Regulatory intervention that facilitates nortabilby and interoperability might be useful for farmers to overceme data lock-ins, but designing data access rights is a complicated issue as many parties conaccess rights. Minor changes in who gots access to which data under which conditions may have signif-izant effects on stalisholders. We conclude that dig-ital agriculture still has some way to go to reach eq-uitable and efficient solutions to data access rights. Similar situations are likely to occur in other indus-

#### Keywordsi smart farming, agricultural data; data governance; non-personal machine data; data access rights;

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#### A Introduction

1 In conventional agriculture, decisions on farm iputs and processes are taken by farmers, based or seir personal know-how. Today, the introduction

(IoT) technologies and big data analytics in Smar Farming or Digital Agriculture' result in machine \* Can Atik is a PNO-candidate at Tilliurg Law School with affil-

Tilburg Institute for Law, Technology, and Society (TILT).

by the posteruduate scholambio program of the Ministry of National Education, Republic of Turkey, Bertin Martens in proped in this paper are the authors' and do not reconstriby reflect those of the lotet Research Centre or the European Commission

Xuan Pham and Martin Hack, 'How data analytics is transform-ing agriculture' (2008) 61 Business Horizona, p. 127; Harald Sundmarker and others. 'Internet of food and farm 2000' in Oxidia Vermean and Peter Frien (eds). Districts the Industr

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Horizontal intervention, sectoral challenges: Evaluating the data act's impact on agricultural data access puzzle in the emerging digital agriculture sector



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#### ARTICLE INFO

Smart farming Digital agriculture Earlusive data control Data access Data portability Data governance

ABSTRACT

highly relevant to investigate the possible implications of the horizontal Data Act proposal from the sectional perspective. This paper sizes to map the prominent data access problems It this entroping security argument to become bounces for the secretar changing, introduction what the Data. Art brings, and discuss to what cealest this behavioral framework is beightful to overcome the sectoral problems connected to the architegiather on agricultural data across. Thus, this pince also identifies the remaining beaute that may need to be addressed by a possible Data over a sectoral regulation and competition time. © 2023 Can ATTE. Published by Dawler Ltd.

This is an onen access article under the CC BY NC ND Scena horizontal data obaring across sectors.<sup>40</sup> It sime to address no

competition increases entry barriers and necessity data as

compensate, increased entry surriers and prevents cars in cose and use by more players. On March 2022, represents time of the Member Status came to a common understanding regarding the 'negotiation reaedata' authorizing the Counc-of the European Union to negotiate with the European Padia

<sup>3</sup> Proposal for a Regulation of the European Parliament and of the Council on harmonised rules on his access to and use of data (Data Art), COM (2002) 68 foral, 2002-2022 [the 'proposal' hence-

se to and use of data (Data Act) has been released on 2.

Aris, Tests Art: Legal Implications for the Digital Agriculture Sector (2022) TILE: Discussion Papers Section DF202-013, it is hough fundamentally re-structured in line with the reviewing

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Towards Comprehensive European Agricultural Data Governance: Moving Beyond the "Data Ownership"

Can Atik@

pted: 13 April 2022/Published online: 2 June 2022

Abstract Farming has become more productive and less costly thanks to the effective usage of data-driven "digital agriculture" services. However, this new form of "smart farming" has also brought about data-related concerns connected with the ambiguity regarding who owns the data, who has what rights over it, and ultimately whether there is a need for regulation. The idea of providing a "data ownership" right to farmers is predominantly defended by the sectoral literature and has even been adopted already through the voluntary agricultural data codes of conduct developed by stakeholders both in Europe and the US. This paper approaches this debate from the perspective of the sectoral market failures inc data lock-in, data fragmentation, data access problems, and a lack of trust on the par of former. It demonstrates that the year in which ownership is framed is not adequate to address these problems and has the potential to exacerbate them. An alternative legal design should be flexible enough to remove the reasons for these problems. Creating rules/rights might not be enough to remove all the issues though. A holistic approach including a legal design and infrastructural opportunities assumes great importance in this regard on the eye of the Common European Agricultural Data Space and possible sectoral regulatory intervention following the horizontal framework provided by the recent Data Act.

Earlier versions of this paper have been presented at various events including the TILTing 2021 and CLEEN 2021 conferences. Beyond valuable comments from the participants of these events, I sincerely thank Giorgio Monti, Wolf Sauter, Bertin Martens and Inge Graef for their comments on the final version

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EUROPEAN COMPETITION JOURNAL https://doi.org/10.1080/1744105620232200618



∂ OPEN ACCESS <a>® €hook for updates</a> Addressing data access problems in the emerging

digital agriculture sector; potential of the refusal to deal case law to complement ex-ante regulation

PhD, Tilburg Law School, Tilburg Law and Economics Center (TILEC), Tilburg Institute for Law, Technology, and Society (TILT), Tilburg, The Netherlands

ABSTRACT
Tailored data-driven "Digital Agriculture" solutions bring about many benefits. However, there are also challenges related to complicated data access needs in the farm-to-fork chain. Farm-specific data are mostly locked in by the first-mover companies. This prevents farmers from switching to a better or cheaper alternative. This also hinders agricultural data-driven innovation due cheaper alternative. In its also miscosh agricultural data-driven innovation due to unaninversid access seekers. Moreover, already powerful players build exclusive data exchange dusters that further exclude small rivals and other access seekers. Also, upstream input producers have exclusive control over their products' performance data, which generates critical advantages for their downstream data-driven services. These conditions endanger the digital agriculture sector and bring about the risk of reflection of the oligopolistic upstream players in this new sector. This paper explores the adequacy of EU upstream payers in this new sector. This paper explores the adequacy of EU competition law enforcement to address the ag-data access related concerns – hoping to contribute to the sectoral literature that is currently dominated by regulation-centred discussions

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KEYWORDS Smart farming digital agriculture; exclusive data control; abuse of dominance; collusion; data acress; data mortability; exceptial facilities doctrine; effued to deal

Implementation of "Internet of Things" (IoT) systems in agricultural production processes opens up a new form of data-driven decisionmaking for farmers, namely, "Smart Farming". This, in turn, created

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Thank you for your

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