



Co-funded by the European Union



# We are facing severe challenges in securing our food supplies Agriculture requires a massive transformation **NOW** to nourish our next generation

#### **Outlook**

By the year

2050

farmers will have to produce more food than has been grown in the whole of history.

Global warming could cause a

30% reduction

in food production in many regions

#### Status-Quo

European soils

>60% unhealthy

suffering from erosion, compaction, sealing, pollution, desertification and loss of organic carbon, nutrients, water and biodiversity.

Costs of soil degradation

€50 bn per year

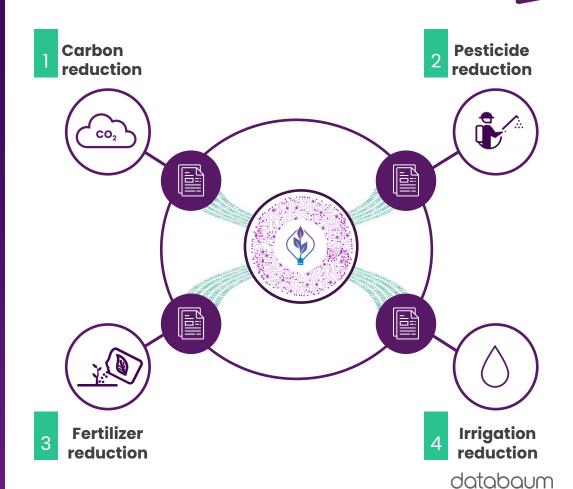
in the EU have been estimated by EU authorities.

# databaum's aim: A greener tomorrow with 1m tons less CO<sub>2</sub> Resulting from a reduction of pesticides, fertilizer and water usage in agriculture

Overview of crops by dabaum focus and reduction potential across key ecological impact areas in EU					
Сгор	Cultivation area in '000 (ha)	CO <sub>2</sub> reduction in '000 (t)	Pesticides usage in '000 (t)	Fertilizer usage In '000 (t)	Water usage In '000 (I)
<b>∰</b> Grape	6.730	334.593	142.202	92.013	100.378
Apple	4.820	103.152	43.840	23.209	36.103
Orange	3.930	93.109	32.588	23.277	37.243
Potato	18.130	21.232	4.802	2.688	13.872
	220.760	32.853	7.392	4.107	21.355
<b>№</b> Paddy	165.250	243.154	54.710	54.710	133.734
<b>Sugarcane</b>	26.350	64.570	15.143	9.686	38.742
<b>Coffee</b>	11.332	17.836	4.013	2.230	11.594
Cocoa	11.536	1.412	35	177	1.200
Corn	205.870	97.886	10.768	10.768	76.351
🐉 Sugar beet	4.400	39.895	12.966	2.992	23.937
Total	679.113	1.049.802	329.457	225.835	494.510

databaum is the solution to solve various ecological key challenges

Through our data, technology and platform we have the opportunity to impact the agriculture sector in the most meaningful areas



## Precise field data is key to generate meaningful insights

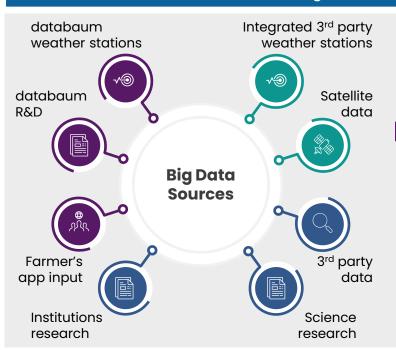
databaum notifies farmers about required actions to sustain field health

Data input - Comprehensive data collection feeds various databaum algorithms

Data operations and analytics

– Making data insightful

Data app – Field/ plant mamt. platform



# databaum algorithms

- Al algorithms to bring the valuable information
- Precision increases with more highquality data

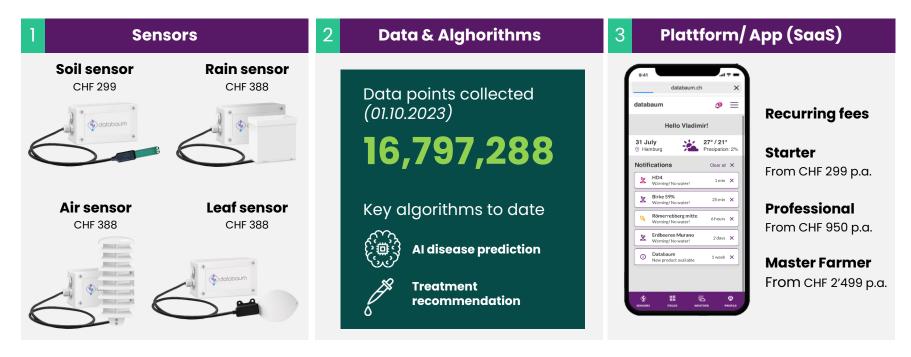
#### databaum app



- Insights are being pushed to app
- Action advice is provided in the app
- App is fully functional and in use already



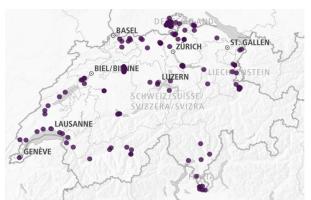
# We developed our own sensors, algorithms and user platform Key is to have an independent solution to provide farmers an unmatched experience



IP - Trademark is registered.Patent filing (technical character to serve a technical purpose) - Q2, 2024

# Key disease prediction technology has been validated in 2022 More than 100 farmers are already using our solution in Switzerland our pilot market

#### Market validated in CH and exempt of customers



- >100 farmers in the Swiss German & Italian parts of CH (~40% of market) became databaum customers in 2023
- Leading plant protection market players are among our customers (e.g. fenaco, stähler)



#### Disease prediction model for grapevines





Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra



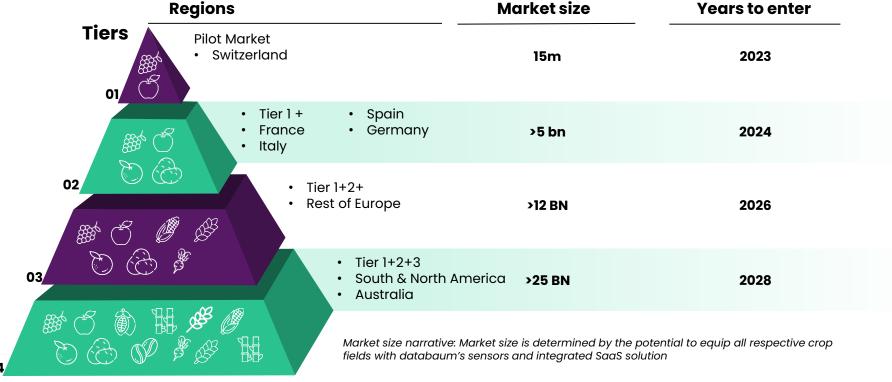
Bundesamt für Landwirtschaft BLW Office fédéral de l'agriculture OFAG Ufficio federale dell'agricoltura UFAG Uffizi federal d'agricultura UFAG

## fenaco

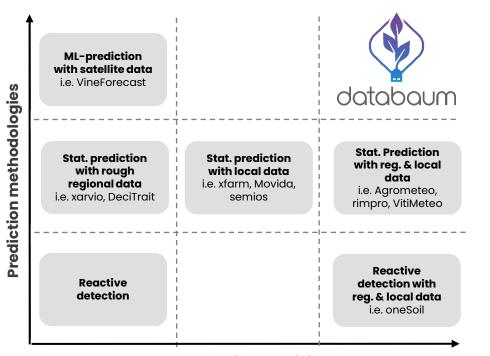
- Mechanistic model validated by independent third parties fenaco and WBZW in 2022
- Swiss Federal Agency for Agriculture funded research project for AI prediction validation in cooperation with Agroscope and WBZW
- Research project is running until 2025
- Al model will be validated in 2024 by databaum independently



### Now it is time to tap into a vast and growing market Initiating expansion from Switzerland our pilot market from 2024 onwards



## Combining AI with latest research for our customers databaum is ahead of the competition in Europe



#### databaum is different

- We use real-time local field data and AI to maximize prediction precision
- Only company providing customized disease predictions on plant variety level
- Only company engaging customers to collect and input data into the application
- Largest up to date data on plant health (grapes) in the world
- One of few companies integrating third-party sensors

**Data collection precision** 

Comment: Competitors classified based on their main business segment

<sup>&</sup>lt;sup>1</sup> Mechanistic models are based on parameters that are known about pathogens (e.g. at 19.3°C, releasing of spores takes at least 4.2 hours of uninterrupted leaf wetness).

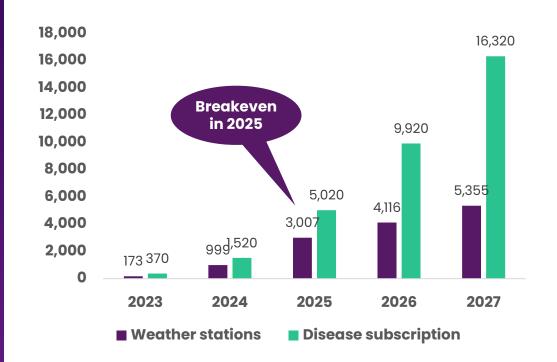
<sup>&</sup>lt;sup>2</sup> We use static models to predict things that rarely change like the amount of rain it takes to wash down a specific pesticide.

## Our sales strategy Value chain partnering

- 1. Farming cooperatives (e.g. fenaco)
- 2. Wholesalers/PPP producer (e.g. Andermatt, Stähler)
- Sensor manufacturers (e.g. Senscrop, leovaSMART)
- 4. Direct sales

#### **Growth forecast:**

Number of weather stations and subscriptions sold 2023 - 2027





## Meet databaum's key team members

Building a sustainable company with impact for a sustainable world



Dr. Saurabh Pandey CSO



Johannes Eifert
CTO



Andrew Moore

CEO



Dr. Luciano Moffatt Biological Math.



Dr. Dimitra Bourou ML/ AI



Luke Kronenberg
Software Engineer





#### Unlocking the potential for healthy and sustainable farming



**Dr. Saurabh Pandey** 

Andrew Moore

Joe Eifert

saurabh@databaum.ch +49 172 379 62 94

andrew@databaum.ch +41 79 216 29 46

joe@databaum.ch +41 76 534 12 34 databaum GmbH c/o OBC Suisse AG Aeschgraben 29 4051 Basel Switzerland databaum GmbH Holsteinischer Kamp 80 22081 Hamburg Germany



databaum.ch