GODAN
Global Open Data
for Agriculture & Nutrition

Available Open Datasets in Agriculture Technology and Production

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Building a platform for agricultural technology sharing?

Linking data?

Which datasets are currently open??

What does GODAN call "open data"?

Findable

Accessible (Machine Readable)

Interoperable

Reusable

Data FAIRport

Boundaries

- Global

- Production to Harvest

- Various Crop Varieties

- Various Production Systems

Data FAIRport

goDAN

What is Agricultural Technology?

Machinery and buildings
Irrigation
Satellite technology
Fertilizers
Pesticides
Genetically Modified Organisms (GMOs)
Investments
Patents
Personal technology

Sources

Government	11
Industry	6
International Organization	6
University / Research Centre	5
UN Body	4
NGO	1

Agriculture Machinery

Number of datasets found: 6

Scale: Global, usually country level

Years: Various

Sample indicators and metrics
Emissions from Ag Machinery - Fuel use
Agricultural machinery, tractors per 100 sq. km of arable land
Agriculture machinery manufacturers
Tractor Registration Statistics
International agricultural machinery shipment statistics

How FAIR? 3 are machine readable. Others are in text form.

Irrigation

Number of datasets found: 3

Scale: Global, usually country level

Years: Various

Sample indicators and metrics
Global Map of Irrigation Areas
Sprinkler and Micro Irrigated Area

How FAIR? 1 is machine-readable, 2 are in text format

Investments and Patents

Number of datasets found: 5

Scale: Global

Years: Various

Sample indicators and metrics
National agricultural research expenditure data
National agricultural researchers

How FAIR? 2 are machine readable, 1 historical data, 1 not machine-readable, 1 subscription based

Satellite Technology - Crops

Number of datasets found: 18

Scale: Global

Years: Various

Sample indicators and metrics
Production – crops
Area Harvested (ha)
Crop Calendar Dataset
Crop Yield Forecasting
Early Warning
Monitoring

How FAIR? 2 , others are not freely available or machine readable

Satellite Technology – Land use and climate

Number of datasets found: 5

Scale: Global

Years: Various

Sample indicators and metrics
NDVI Anomaly (Normalized Difference Vegetation Index, unitless)
Soil Moisture Anomaly: SMOS Level 2 soil moisture products
Evaporative stress index
Average surface air temperature

How FAIR? 4 machine readable

Personal Technology

(cell phones, access to internet)

Number of datasets found: 2

Scale: Global

Years: Various

Sample indicators and metrics
Mobile cellular subscriptions (per 100 people)
Internet users (per 100 people)

How FAIR? 2 are machine readable

Genetically Modified Organisms

Number of datasets found: 3

Scale: Global

Years: Various

Sample indicators and metrics
Approved GMO Database

How FAIR? 2 are machine readable

Fertilizers and Pesticides

Number of datasets found: 5

Scale: Global

Years: Various

Sample indicators and metrics
Toxicity Forecasting
Fertilizers (production, trade, consumption)
Historical production, trade and consumption statistics
Fertilizer Tradeflow Map
Pesticide Maximum Residue Level (MRL)

How FAIR? 2, others are subscription based

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Call for interoperability!

GODAN Action

Work Packages

- Standards
- Impact
- Capacity Building

Thematic Areas

- Weather data
- Nutrition data
- Land use data

GODAN envisions Global Data Ecosystem

- Finding business models that provide incentives
- Encouraging data standards
- Automating data collection
- Annotating datasets
- Building trust
- Ensuring sustainability
- Following the FAIR principles
- Using the data

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