# NIVA
## NEW IACS VISION IN ACTION

# WP3 Harmonization and Interoperability progress

## NIVA Stakeholder webinar -  23 June 2020

# WP3 objectives

- Provide common recommendations, methodologies, standards
    - To make NIVA tools easily reusable in Europe
        - With limited adaptation
    - To open IACS data to domains other than CAP management

## Plan

- Focus on first achievements

- Recommendations for
  - Core geospatial data
  - Crop type list(s)

# Core geospatial data

## Core geospatial data

- Current IACS data

- Mainly LPIS and part of GSAA

- Necessary for most of NIVA Use Cases

- Defined by Common European Regulation

- But with various national implementations

# WP3 work

- Identify what is (or should be) common
  - Provide common terminology
  - To be used by the NIVA tool developers

- Make developers aware of what is different
  - Push them to make these topics as adaptable /configurable as possible

# WP3 sources

- ## JRC data model

  - Good starting point for common terminology

- ## Questionnaire about semantic interoperability

  - For Paying Agencies

  - State-of-play of existing practices
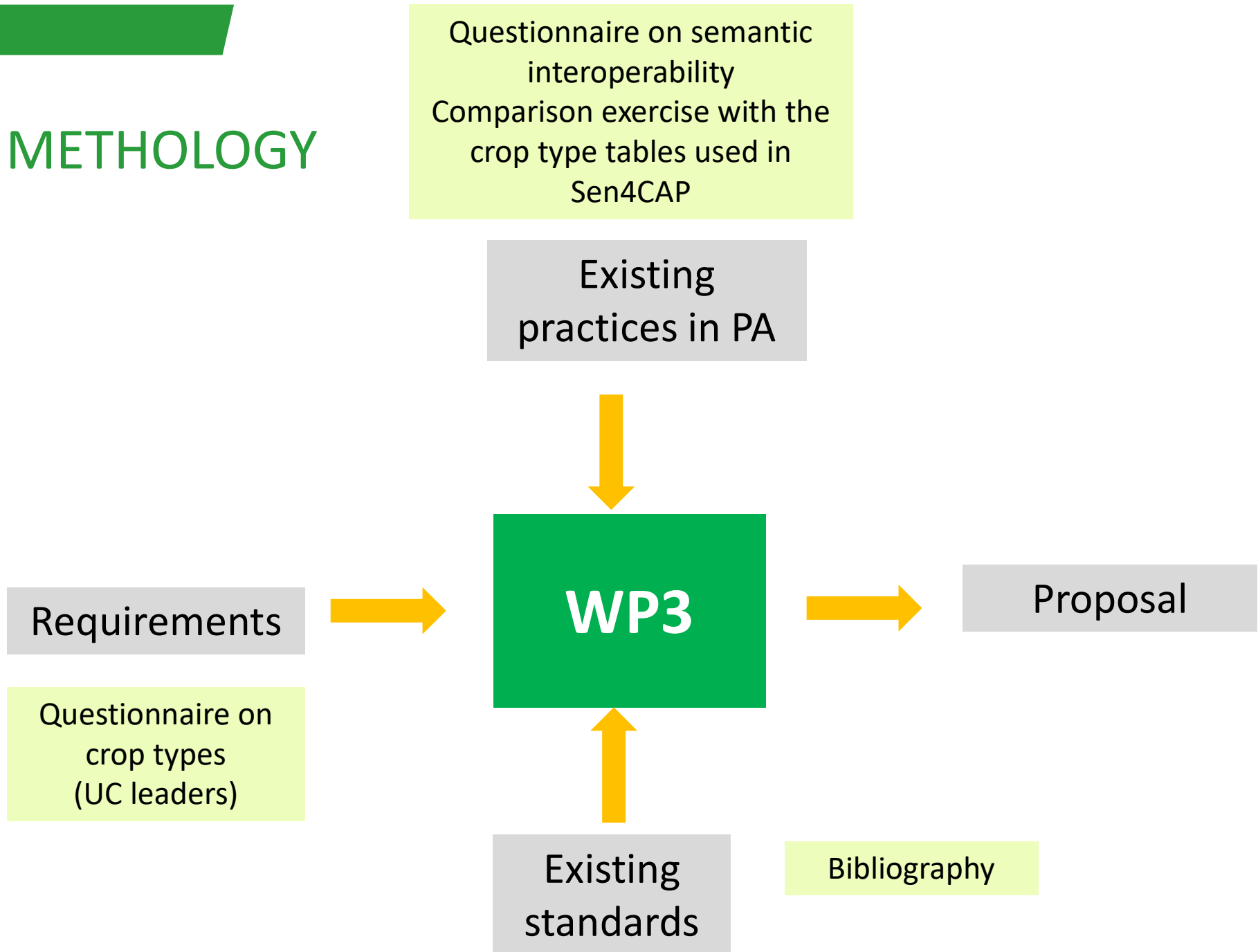
# Common crop type list(s)

# First requirements

- General will within NIVA to have common crop type list(s)
  - For NIVA tools
    - Monitoring Use Cases
    - Farm Registry
    - ....
  - For opening IACS data to other domains
    - INSPIRE
    - Statistics
    - Open Linked data
    - ....

Data publication

METHOLOGY

Questionnaire on semantic interoperability
Comparison exercise with the crop type tables used in Sen4CAP

Existing practices in PA

Requirements

Questionnaire on crop types (UC leaders)

WP3

Proposal

Existing standards

Bibliography

# Characteristics of a crop type list

- **Definition and Concepts**
  - What is a crop type?
  - Which criteria should be taken into account?

- **Level of detail and Completeness**
  - What is the number of values ?
  - Are these values covering all crop types?

- **Community of use**
  - Who has produced the standard?
  - Who is using the standard?

# Definition & concepts

- Main learning from investigation :
  - Various practices
    » Paying Agencies: species, use of the crop, agricultural practice, eligibility rule, land tenure …
    » Existing standards : species, variety, crop cycle, season, land use, land cover …
  - But 2 main trends
    » **Botanical classification**
    » Product classification (use of the crop)

# Definition & concepts

- ## WP3 understanding :

  – Concepts under crop type should be limited

    » Botanical classification

    » Product classification



  – If necessary, other concepts (agricultural practice, eligibility rule, …) should be in other attributes and other code lists

# Level of detail & completeness

- Main learning from investigation:
    - PA practices and standards
        - » Most existing lists are hierarchical
        - » Most standards are covering whole range of crops
        - » Various practices **(number of possible values)**
            - Paying Agencies: a few hundreds
            - Existing standards : from ≈100 to ≈ 100 000
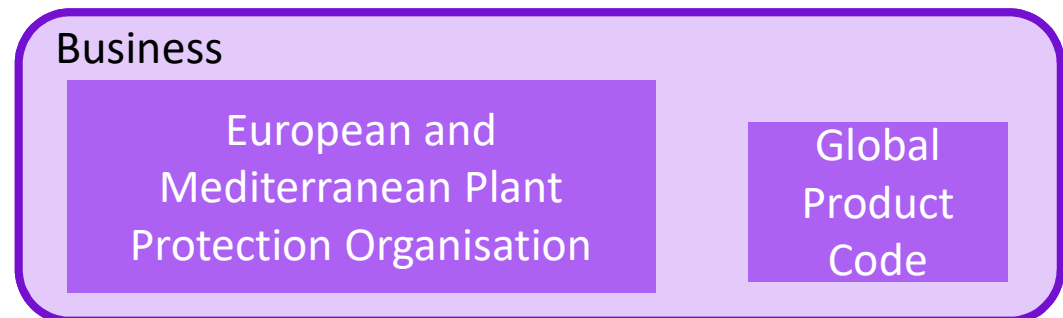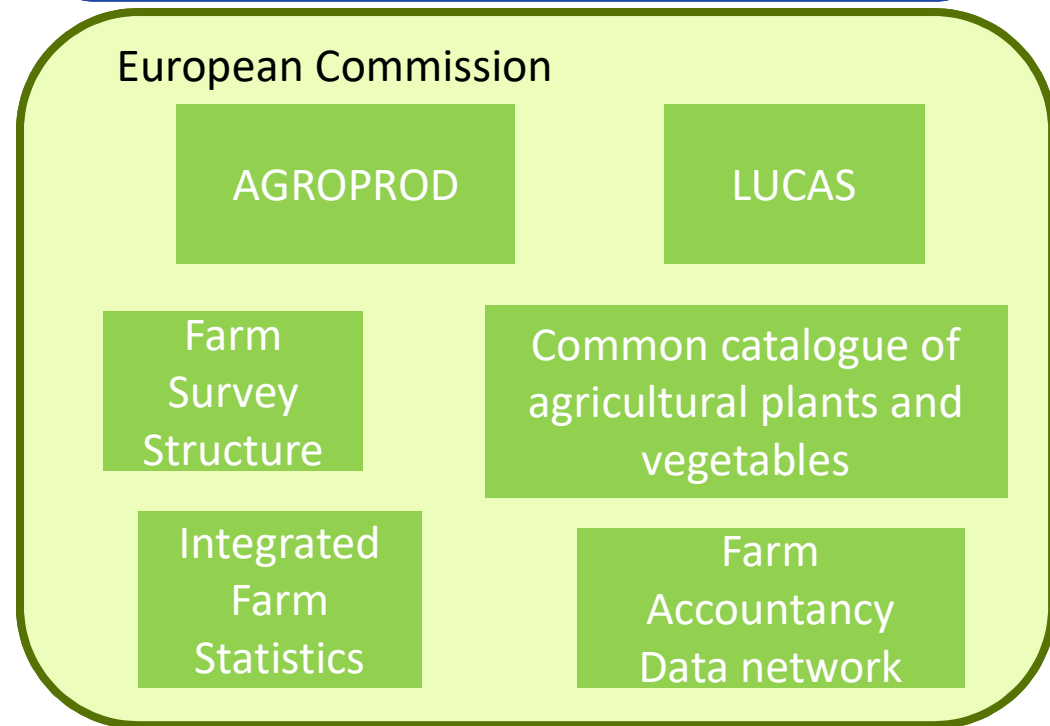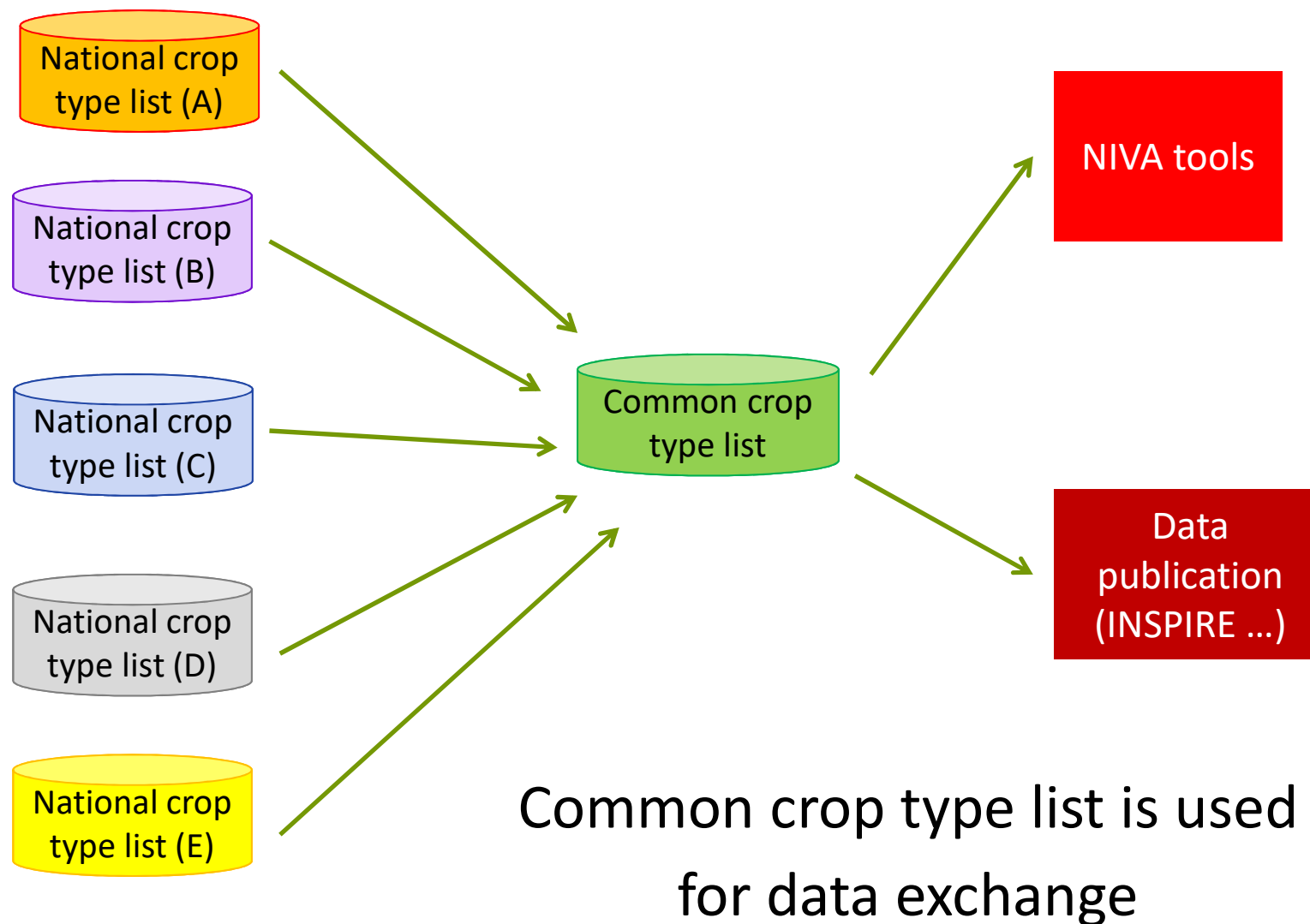
# Level of detail & completeness

- Main learning from investigation:
  - Conflicting requirements
    - » As detailed data as possible (UC3 – Farm Registry)
    - » Small list would be enough
      - **INSPIRE** (**LUCAS** ≈150 values best candidate in DG AGRI discussion paper about interoperability)
      - Existing statistical lists have a few hundreds of value
      - EO monitoring enables to make distinction only between ≈100 crop types maximum
    - » Small list might even be better
      - Make matching easier (for Paying Agencies)
      - Make understanding easier (for users)

# Community of use

- Existing standards provide from and/or are used mainly by

    – Public bodies

        » European level

        » Global level

    – Agro-food business

**FAO**

| Land Cover Classification System | Indicative Crop Classification |
|---|---|

**European Commission**

| AGROPROD | LUCAS |
|---|---|

| Farm Survey Structure | Common catalogue of agricultural plants and vegetables |
|---|---|

| Integrated Farm Statistics | Farm Accountancy Data network |
|---|---|

**Business**

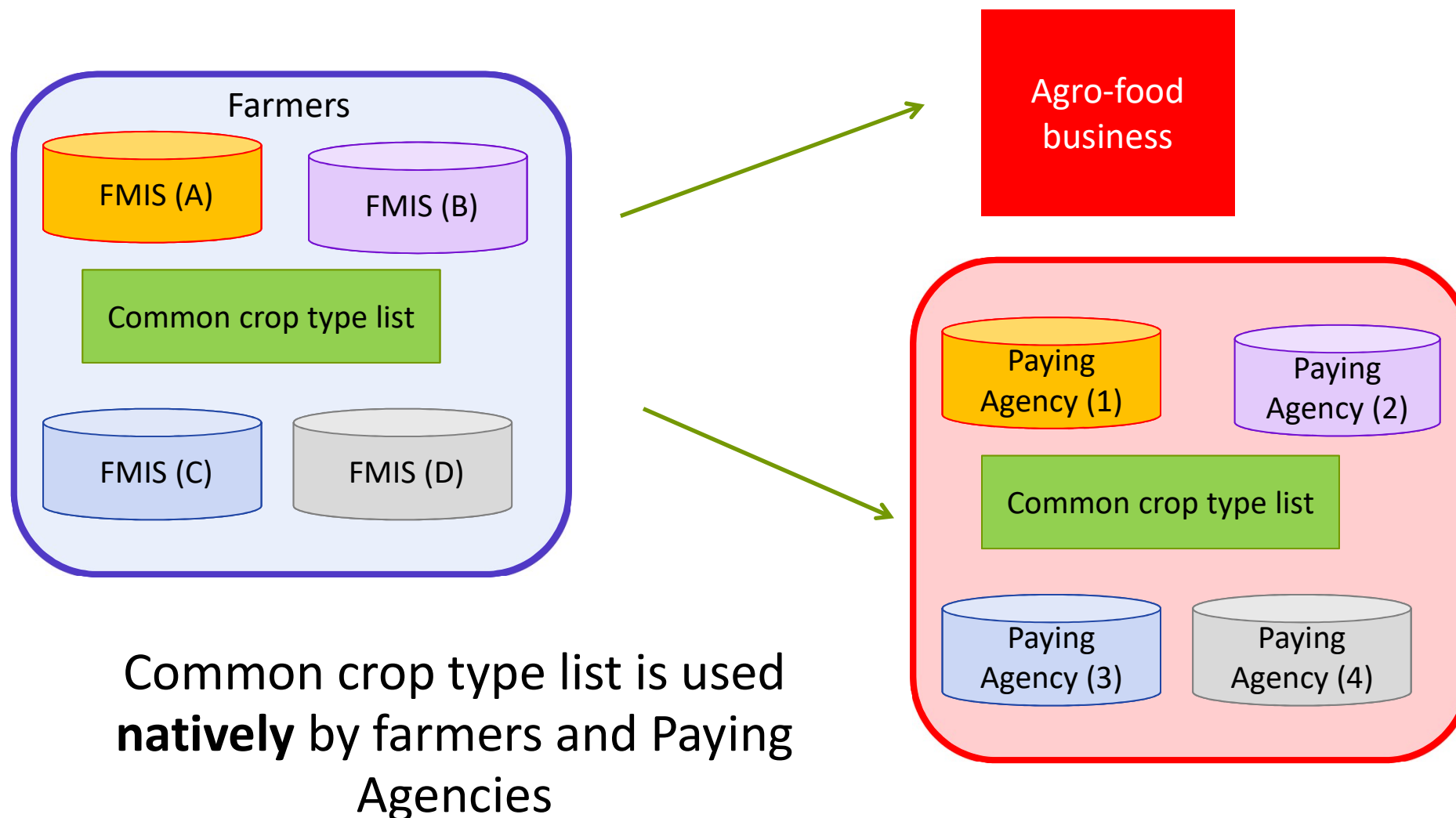| European and Mediterranean Plant Protection Organisation | Global Product Code |
|---|---|

# Scenario 1: common crop list for data exchange

- LUCAS is (currently) best candidate:

  - Botanical classification

  - Simple

    - Limited number of values ($\approx$ 150)

    - Common names (but clear definitions)

  - Already in use at European level

  - Candidate crop type list for INSPIRE

    - **Would enable PA to use same standard for INSPIRE and for NIVA**

    - **But to be confirmed by DG AGRI**

Good solution
- Dealing with current IACS
- Aggregated information
- Targeting public bodies and public awareness

# Scenario 2: common crop type list for native adoption

- A promising approach

  - Combine EPPO (botanical) and GPC (product)

    » With consistency rules

  - Standards widely used in **agro-food business**

  - Experimented in Netherlands

  - Would enable **powerful data**

    » detailed and exhaustive

    » for professional users

- **Potential solution for future IACS**

  - To be investigated in NIVA by UC3 (Farm Registry)

  - Some efforts required

- But not all Paying Agencies willing to adopt natively a common crop type code list

# THANK YOU!