23.0008 **OECD Digitalization Project – Ideation Session**

Digitalization represents a significant opportunity for the OECD Seed Schemes to future-proof its existing certification system and provide new value-added to a modernizing seed sector. As a group, we identified the strategic drivers and the calls to action – we identified the why.

Efficiency Gains & Cost Reduction: Reduce administrative burden, simplify reporting requirements, reduce transition costs, and identify new value-added opportunities.

Risk Reduction: Increase trust in the OECD certification framework by reducing the risk of fraudulent products and increasing traceability.

Business Continuity: Build a more resilient seed sector and help protect supply chains against future disruptions, and help identify and manage risks more quickly.

Spark Innovation: Create a sustainable future for the seed sector and the value chain that utilize OECD certified seed.

We also explored how a platform like the Seed Lot Traceability Hub could enable new modular services that fundamentally change how NDAs, seed companies, and end-users interact with the OECD Seed Schemes. We identified the 'what'.

Future State Consideration	Seed Lot Traceability Hub	Digital Seed Tags	Seed Tag Validation Tool	Updates to Variety Database	Blockchain Ready
Seed Lot Traceability Hub		N	N	N	N
Digital Seed Tags	Y		N	N	N
Seed Tag Validation Tool	Y	Y		N	N
Updates to Variety Database	N	N	N		N
Blockchain Ready	Y	N	N	N	

That was the easy part….

Now, we need to change our mindset and stop thinking 'at a 3,000-foot level'. We need to get down into the 'weeds' and worry about the details – we need to start thinking about the 'how'.

At this point, the 'how' really starts with undertaking a more in-depth review of our core business processes (e.g., tagging, submitting varieties to the OECD listing, etc.) and understanding the flow of data (e.g., what data is required/where does it go/who needs it).

To facilitate this in-depth review, we will host two (2) virtual sessions with NDAs that are part of the Labelling Working Group. In these sessions, we will ask NDAs to think about their OECD Seed Scheme-related business processes, the associated data, and how they would answer the following questions.

- When it comes to the Seed Lot Traceability Hub,
  - What data do you think is required?
    - Name and address of national designated authority
    - Species name (scientific and common name)

- Denomination/breeders 'code
- Category of the seed (Pre-basic, basic or certified class)
- Country of origin/seed source
- Lot reference number serial number of tag and a range of the quantities
- Date of sampling
- Maintainer of the seed
- Parental line requirements in case of hybrids
- Amount of tags requested
- Amount of used and spoiled tags
- Quantities of seed sold and or destroyed
- Quantities of seed remaining in storage
- Quantities re-packed and re-labelled
- Phytosanitary certificate containing information on active ingredients of seed treatments

- When should OECD seed lot data be uploaded (e.g., after tagging?)
  - This should be generated from information already uploaded in the Hub as an output.
  - Please revisit the Uruguay Case Study in the Feasibility Study
- Who is involved (e.g., who are the actors)?
  - OECD secretariat
  - National Designated Authority (NDA)
  - Accredited seed companies
  - International, Regional and national seed associations
  - Other relevant stakeholders (Limited access on request)

- Who are the stakeholders involved (e.g., who will need to access the Hub)?
  - OECD secretariat
  - National Designated Authority (NDA)
  - Accredited seed companies (AC)
  - International, Regional and national seed associations
  - Other relevant stakeholders (Limited access on request) such as researchers and farmers (farmers associations)

  - Does access change what data they see?

  - The access should vary with the different stakeholders for example the AC should have access to the data concerning there material only. Other relevant stakeholders like researchers should have limited access on request depending on their research interest.
- Which external data sources should we be connecting to (e.g., ISTA Digital Certificates)
  - ISTA Digital Certificate
  - UPOV PLUTO database

- - - UPOV Gene database
    - IPPC databases (Relevant to seed health and trade)
  - What challenges/risks do you foresee?
    - Lack of harmonized data security legislations and regulations in Member States
    - Different levels of development of ICT infrastructure among Member States
    - Different levels of uptake and implementation the system by the different Member States
  - What happens with the data after uploading it to the hub? (archiving?)
    - The data should be stored long enough to be able to allow for validations and audits; case studies for purposes of awareness creation after which it should be achieved for a period to be agreed upon by the stakeholders.
  - Where will you be using the Hub (e.g., in the office, field, train, etc.)
    - Office (assist in future planning)
    - Field (assist in decision making)
    - Training (awareness creation)
    - Research and report writing (provide validated data for accurate reporting)

  - What type of device would you use?
    - Laptop/desktop
    - Digital devices (Like tablets, cellular phones and smart phones)

  - What does the ideal system look like? A flexible system that is able to integrate with existing systems and is able to adopt to the evolving technology landscape.
  - What would it do? It should be customer friendly (easy to navigate) and allow quick access of the needed information to the necessary stakeholders to allow them to make prompt, effective and informed business decisions.
    - Top 5 Challenges
      - The cost of developing a robust digitalization infrastructure
      - Lack of harmonized data security legislations and regulations among Member States
      - Different levels ICT development infrastructure among Member States
      - Lack of harmonization on uptake and implementation of the system by the different NDAs
    - Top 5 Solutions
      -

- When it comes to the Digital Seed Tags,
  - What data should be required (e.g., data points on the OECD Tag)?
    - Species name (scientific and common name)
    - Category of the seed (Pre-basic, basic or certified class)
    - Country of origin/seed source
    - Lot reference number serial number of tag and a range of the quantities

- ▪ Date of sampling
- ▪ Maintainer of the seed
- ▪ Parental line requirements in case of hybrids
- ▪ Quantities re-packed and re-labelled
- ▪ Phytosanitary certificate containing information on active ingredients of seed treatments

- o Should we restrict the system to regulatory data (e.g., data to fulfill OECD certification) (The regulatory data should be a minimum requirement hence, mandatory) or allow seed companies to enter additional voluntary information? (Considering seed trade is a dynamic business the system should allow seed companies to enter additional voluntary information as long as that information is useful in the value chain of the seed business)
- o Should the HUB generate the QRs? Or should we define the parameters and allow NDAs/seed companies to generate the QR codes? The parameters should be defined and allow the NDAs/authorized seed companies to generate QRs for ease of regulation, implementation and follow up.
- o What challenges/risks do you foresee?
  - ▪ Lack of a common identifier when bringing separate data sources together.
  - ▪ Lack of harmonization on uptake and implementation of the system by the different NDAs
  - ▪ Dealing with big amount of data and huge volumes of seed at different classes (Pre-basic, basic, and the different certification classes).

- When it comes to the OECD variety listing,
  - o What data elements would be required to enable NDAs to onboard their own varieties to the OECD Listing?
    - ▪ Species name (scientific and common name)
    - ▪ Category of the seed (Pre-basic, basic or certified class)
    - ▪ Country of origin/seed source
    - ▪ Lot reference number serial number of tag and a range of the quantities
    - ▪ Date of sampling
    - ▪ Maintainer of the seed
    - ▪ Parental line requirements in case of hybrids
    - ▪ Quantities re-packed and re-labelled
    - ▪ Phytosanitary certificate containing information on active ingredients of seed treatments

  - o Should the HUB make variety descriptions accessible? Yes. If so, what format should they be in? They should be electronic versions that can be downloaded into PDF formats.
  - o What reporting would you require?

Additional Considerations:

As we answer these questions and identify the data elements required for this project, we will be asking additional questions like:

- What is the minimum feature set that is required (e.g., what does a Minimal Viable Product look to you?). When you think about this, consider common functions/elements across all NDAs.
    - Species name (scientific and common name)
    - Company name
    - Category of the seed (Pre-basic, basic or certified class)
    - Country of origin/seed source
    - Lot reference number serial number of tag and a range of the quantities
    - Date of sampling
    - Maintainer of the seed
    - Parental line requirements in case of hybrids

- Where does this data element come from? Some of the data elements will be entered by the seed company such as species name, Company name, Country of Origin etc. while the rest of the data elements will be generated by the NDAs.
- Does this data element follow a standard, or is it standardized across NDAs?
    - The data elements should be standardized across NDAs.
- Who should be able to interact with this data element?
    - NDSs
    - Seed companies
- Is this data element considered confidential? The data should be confidential. Or is it available in the public domain? The information thus generated from this data can be made public.
- Are you aware of any national legislation which will affect:
    - the submission of the seed data to an international database (OECD Hub)
    - handling sensitive info which OECD need to take into account
    - National legislation does not allow sharing sensitive info

Path Forward - Expectation Settings:

The next milestone with this project is the January Technical Working Group (TWG) meeting. In the lead-up to the TWG meeting, we will take the input/feedback received as part of this session and use it to create high-level wireframes of the Seed Lot Traceability Hub. The wireframes will allow us to have discussions on the Hub and get agreement on the path forward before any development work begins. This approach will ensure we get the foundation correct, saving us time and resources (e.g., measure twice, cut once).