WatchITgrow, the future of the Belgian potato value chain starts now!

Romain Cools – Belgapom

Co-authors
The future of the Belgian potato chain starts now!

• The Belgian potato sector: a long history but facing new directions!
The future of the Belgian potato chain starts now!
The future of the Belgian potato chain starts now!

- **The Belgian potato sector: a long history but facing new directions!**
  - Potato consumption in Belgium and the EU: potatoes remain the major staple food product in most of the EU countries:
    - Fresh & home consumption: under pressure
    - Processed & out of home consumption: increasing
  
  - Global demand for fresh potatoes (locally grown) and processed potato products (food service) in increasing: increased population and middle class in Asia, Africa & South America.

  - Processed potato products are produced in and close to the best growing areas (land, climate, knowledge, disease & pest controls): EU-5 (BE/NL/DU/FR/UK) and Northern America (US/CA) – highest average yield/ha.

  - Global exports are quality, price and logistics driven (EU-5, US, CA).
The future of the Belgian potato chain starts now!
The future of the Belgian potato chain starts now!

Investments Belgian potato processing industry
1995 - 2018

Source: Belgapom
The future of the Belgian potato chain starts now!

Source: World Potato Markets
The future of the Belgian potato chain starts now!

- **Why does the value chain need new instruments?**
  - **Nature product**: soil, weather, fertilisers, seed potatoes / varieties, disease & pest prevention...
  - Potatoes have evolved from a ‘side crop’ to a ‘main crop’ for arable farmers: need for **professionalization and R&D**.
  - Potatoes are a part of ‘crop rotation’: need for arable land and efficient land use (max. 100,000 ha in a 1/3 rotation available in the best potato growing area in the world).
  - Potato **yields have capacity to increase** (now +/- 45 t/ha ... 60t/ha is not unrealistic in the future).
  - **Food losses** prevention: focus on the highest achievable usage of the potato for the destination it has been grown for!
  - The potato market has been a strong **volatile market**, and to cover risks farmers, traders & processors are stepping more and more into contracts (+/- 70%). **Sales contracts** are being signed while the crop is still growing (= risk). But also for the growers stability and certainty are crucial (financing).
  - **Quality policy and traceability** require follow up of the potato parcels: Vegaplan food & plant safety & sustainability system can be linked to WIG (parcel registration).
The future of the Belgian potato chain starts now!

- **Ipot project**
  - **Stereo III Belspo project**: Belgapom, VITO, CRA-W & ULG(Arlon) : 3 year project
    “webbased geo-information platform to follow up the potato crop in Belgium”
WatchITgrow uses time series of satellite images:

- **Sentinel-2:**
  - 10m pixels
  - Since August 2015
  - Every 10 and soon every 5 days

- **DMC/Deimos:**
  - 22m pixels
  - since 2009
  - Every 2 days
Crop growth monitoring

Emergence →
1 May 2016
8 May 2016
28 May 2016
6 June 2016
10 July 2016
20 July 2016
9 Aug 2016

Senescence →
26 Aug 2016
5 Sept 2016
8 Sept 2016
15 Sept 2016
25 Sept 2016
28 Sept 2016
5 Oct 2016

Based on “greenness index”

Use of this info:
• Field management
• Planning / logistics
• Input for yield models

Emergence → Senescence →

Greenness index
0
12.5
25
37.5
50
62.5
75
87.5
100

www.watchitgrow.be
The result in watchITgrow...

www.watchitgrow.be
The result in watchITgrow...

www.watchitgrow.be

Weather – soil – registration per field - field data – CropSar (Vito) ...
The result in watchITgrow...

**Timing:**

- **2017 – 2018:**
  - Launch WatchITgrow: Interpom Primeurs / Press event: media attention
  - Open for farmers / traders / processors + applied science bodies (PCA – Inagro / CARAH / ...)
  - Free usage also follow up fields with other arable crops
  - Input data = follow up yield & production per field (potatoes)

- **2019 – 2021:**
  - Further development of the tool / links to precision agriculture
  - Financing by VITO, Boerenbond & Belgapom
  - Free usage by farmers
  - Premium paid by trade & processors to farmers completing their registration and follow up though WatchITgrow for their contracted crop (investment of +/- €850,000/season)
  - Extend to the Netherlands & France
The result in watchITgrow...

• **Timing:**

- Following years:
  - Further development / motor of modernisation & professionalism
  - Full crop advice instrument based on A.I.
  - Paid by users (farmers per ha)
  - Governance by Belgian branch organization (under construction)
  - VITO will offer the tool also abroad (other crops, developing countries)
Thank you!