

INNOMENTARIUM · OULU, FINLAND

See inside every seed.

In minutes.

Non-destructive X-ray seed quality assessment. AI-powered defect detection and lot viability estimation. Built for seed laboratories, breeders and quality control professionals.

SeediX

Vision for Better Imaging

Standard testing takes days. SeediX takes minutes.

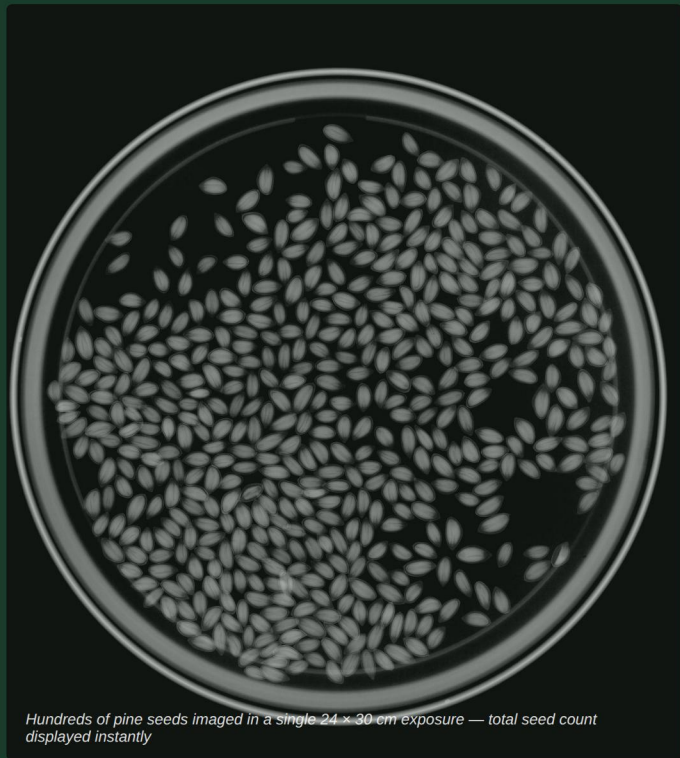
Germination tests — the industry standard for viability assessment — take days or weeks, destroy seed samples, and provide no information about the nature or location of internal defects. NIR and multispectral imaging are faster but surface-level only. Neither method can detect a cracked embryo, hollow cavity, or underdeveloped endosperm. SeediX changes that.

WHAT SEEDIX REVEALS INSIDE EVERY SEED

- Embryo condition and developmental integrity
- Endosperm presence and fill
- Shell cracks and structural damage
- Hollow cavities and empty seeds
- Insect infestation and larva presence
- Lot-level viability estimated automatically from defect rates



AI defect classification — orange: embryo defect · red: severe defect



Hundreds of pine seeds imaged in a single 24 × 30 cm exposure — total seed count displayed instantly

From batch to quality report in minutes



Mobile SeediX cabinet with integrated 24" hi-res monitor workstation — load the batch, press exposure, results on screen immediately

- 1 Seeds placed**
Whole batch loaded into the cabinet. The 24 × 30 cm imaging area captures hundreds of seeds in a single exposure. No preparation. Nothing destroyed.
- 2 X-ray capture**
Microfocus X-ray with up to 18× motorized magnification — plus 2.5× software zoom — reveals internal anatomy at microscopic level. Automatic contrast optimisation applied immediately.
- 3 AI analysis**
Each seed automatically counted, segmented and classified by defect type. Lot-level viability estimated from defect rates. Sample size determined instantly. No manual work required.
- 4 Decision made**
Batch receives a quality ranking. TIFF images saved with full seed lot metadata — locally, on external storage, or to the SeediX Image Archiving System. Remotely viewable. New species models added without new hardware.

TECHNICAL SPECIFICATIONS

24 × 30 cm

Imaging area

+ 2.5×

Software zoom

Microfocus

X-ray technology

Up to 18×

Geometric magnification

0.075 mm

Pixel size

Mobile

Lead-glass door cabinet

DEFECTS DETECTED

Embryo defects

Empty seeds

Shell cracks

Endosperm absence

Insect damage

Hollow cavities

SeediX Image Archiving System (SIAS)

Images sent automatically to a dedicated encrypted cloud workspace. Full seed lot metadata included. Customer controls access for colleagues and partners. Remotely viewable via secured connection.

Aligned with ISTA X-radiography guidelines (Chapter 14). EU Directive 1999/105/EC mandates quality assessment for all forest reproductive material.

SEEDIX · INNOMENTARIUM OY

For quotations and more information, please contact:



Jouni Ihme

CEO & Founder

jouni.ihme@innomentarium.fi



Raija Kilponen

COO, Radiographer

raija.kilponen@innomentarium.fi



Angelos Fylakis

Head of Research & Development

angelos.fylakis@innomentarium.fi

www.innomentarium.fi

Innomentarium Oy · Nahkatehtaankatu 2, 90130 Oulu, Finland