ROMANIAN MAIZE LOCAL GERMPLASM

DANELA MURARIU

SUCEAVA GENEBANK-ROMANIA

EVA Maize – Malanirs Kickoff

26-27 February, 2025

Bergamo, Italy

Short Presentation of the Suceava Gene Bank

Latitude: 47^{0}34’59”N,
Longitude: 25^{0}45’00”E
Altitude: 360 m.

- established in 1990, as a autonomous institution of national importance, in the present being subordinated to Academy of Agricultural and Forest „Gheorghe Ionescu Șișești”, Bucharest, Romania
  - to keep the national collection for all seed propagated crop plants and their wild relatives;
  - to provide germplasm with high level of resistance to biotic and abiotic factors to Romanian plant breeding programs.

ECP/GR

Suceava Gene Bank Maize Collection

Zea mays subsp. mays

Biological status	No. of accessions	Biological status	No. of accessions
Active collection		**Base collection**	
Local landraces	3539	Locale landraces	1431
Inbred lines	1363	Inbred lines	1568
Synthetics cultivars	-	Synthetics cultivars	4
Obsolete cultivars	64	Obsolete cultivars	45
TOTAL	4966	TOTAL	3048
TOTAL 6212 accessions			

- 161 local landraces were sent to Svalbard;
- 1358 accessions are morphological characterized;
- 1148 accessions are biochemical analyzed;
- Seeds availability - Maize accessions that appear in EURISCO as active samples and do not have ownership rights over them from the donor institutions.

ECP/GR

BRGV Suceava

Rapoarte

Rapoarte
Grup de rapoarte
Rulează rapoarte
Diagrame
Afișează raportul tabel
Arată tabelele pivotante

Aplicații

Fermieri
Locații
Inventar
Harta
Raport

Setări

Administrare

Ajutor

EET (GMT+02:00)

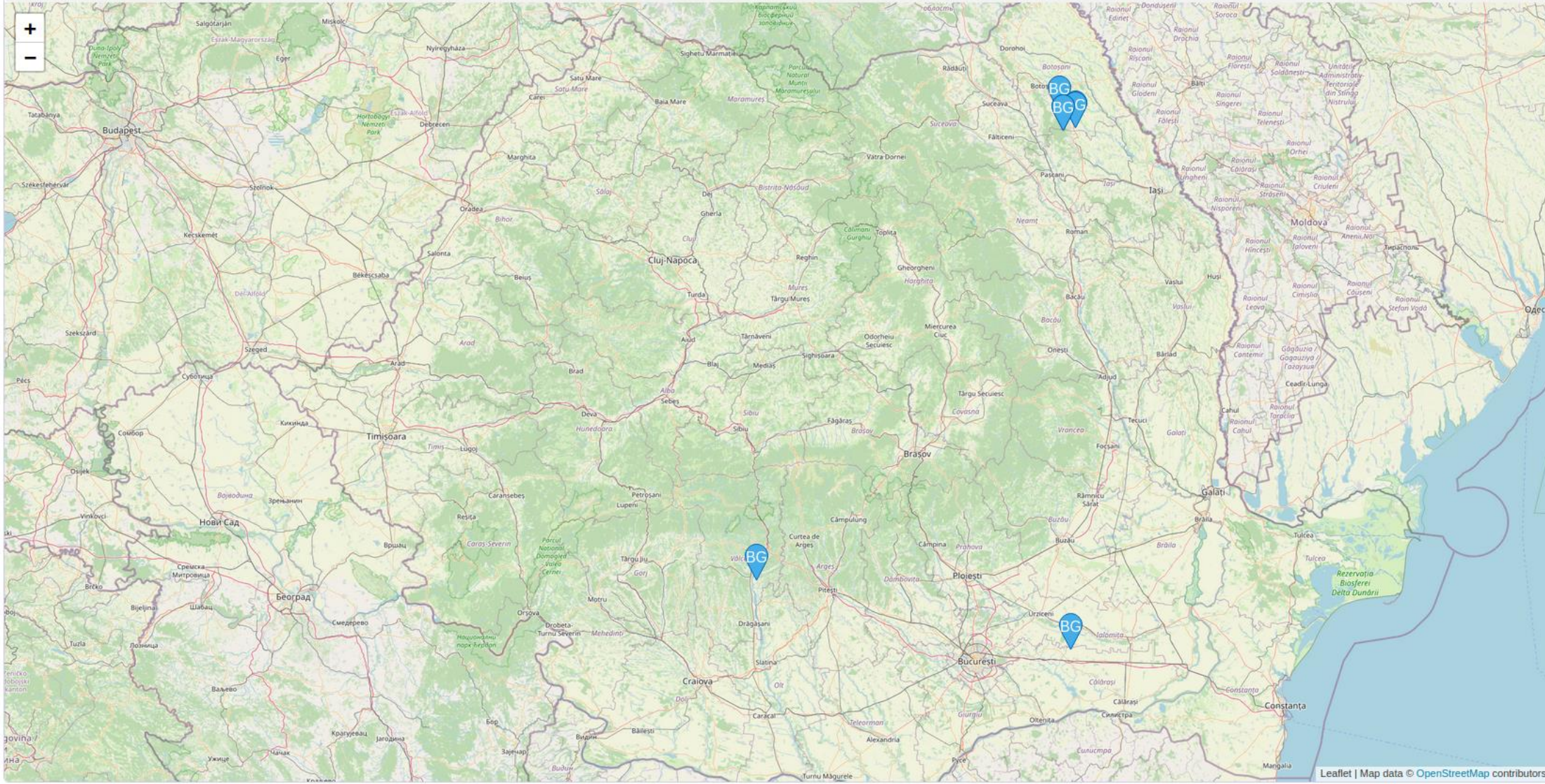
Administrator

Harta ×

Informații pentru hartă

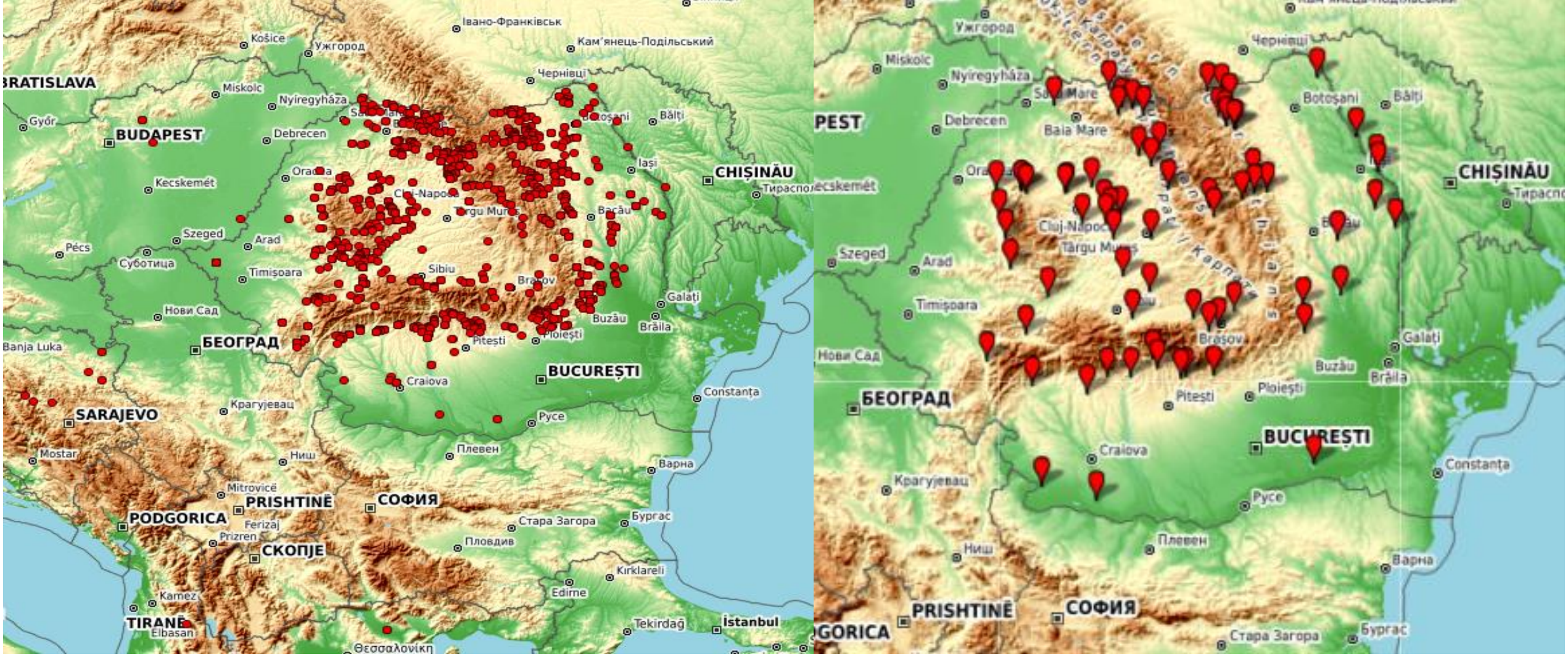
Harta cu inventarul culturilor

Artă pe hartă



Most Important Projects on Maize Carried out by Suceava Gene Bank

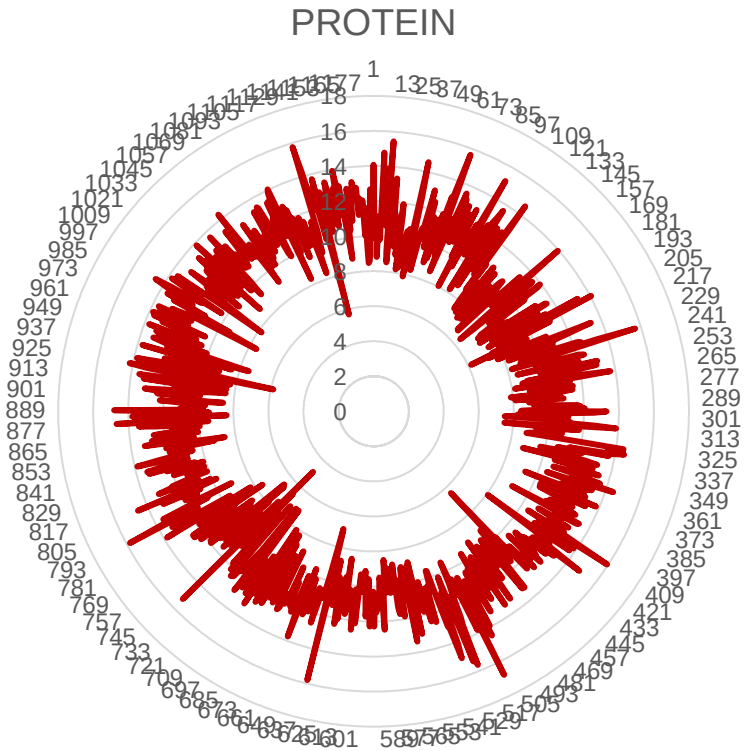
- **EVALUATION AND SUSTAINABLE USE OF GENETIC RESOURCES OF INTEREST IN IMPROVEMENT OF MAIZE INTENDED FOR CULTIVATION IN HUMID AND COLD AREAS OF ROMANIA (BIOMAIZE) (2007-2010);**
- **INCREASING THE EFFICIENCY OF USING AN IMPORTANT LOCAL MAIZE GERMPLASM FUND IN ROMANIA (LOCALMAIZE) (2009-2011);**
- **EUROPEAN MAIZE GERMPLASM EVALUATION NETWORK (EVA MAIZE) (2021-2022);**
- **RESEARCH ON THE GERMPLASM OF EXTRA-EARLY AND EARLY MAIZE HYBRIDS IN ORDER TO EXPAND THEM IN AREAS FAVORABLE TO MAIZE CULTIVATION IN DRY AREAS, WHILE MAINTAINING THE PRODUCTIVE PERFORMANCES AND QUALITY INDICES SPECIFIC TO HYBRIDS DISTRIBUTED IN DRY AREAS (2023-2026).**

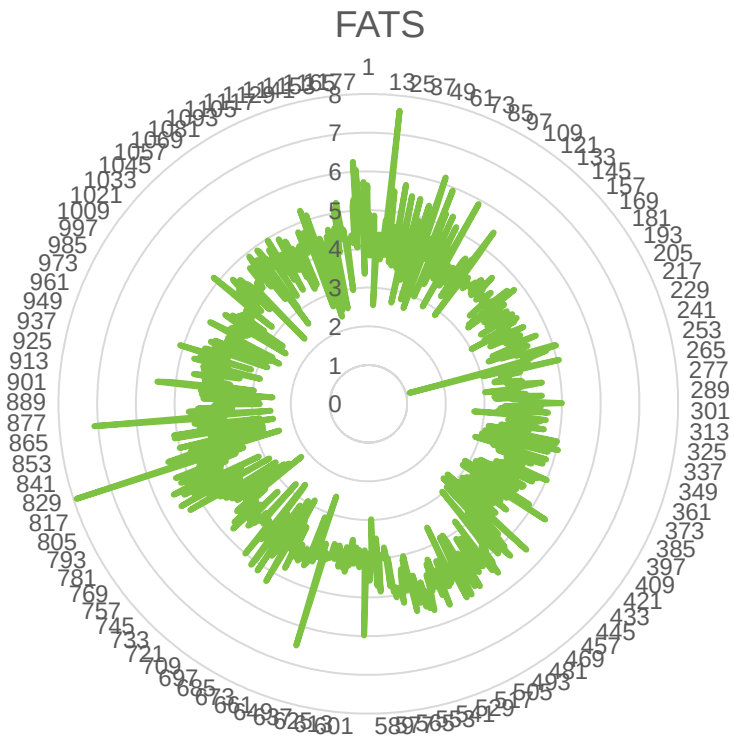


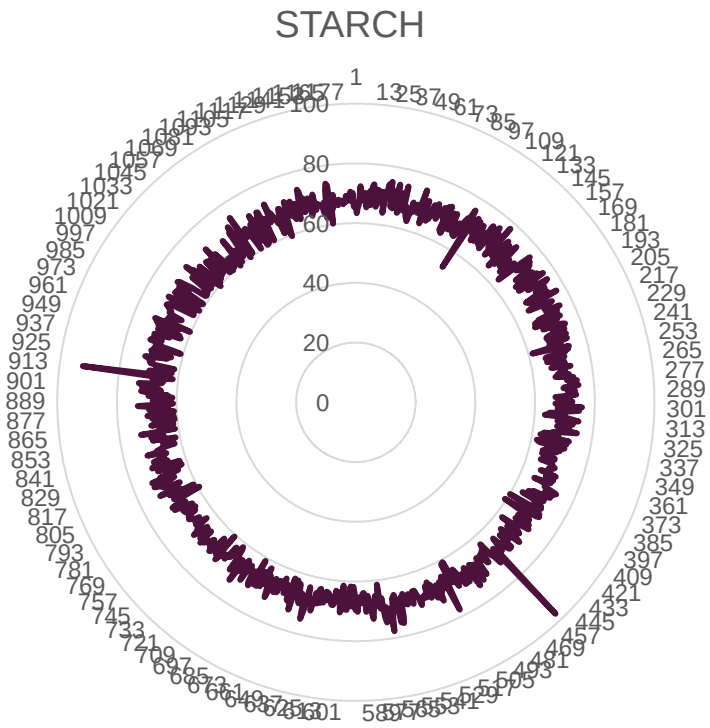
Geographical distribution of Romanian collected local maize landraces and proposed for NIRS analysis

Statistical values of biochemical parameters analyzed – 1184 maize accessions (1991-2003)

Estimators	protein content (%)	fats contents (%)	starch content (%)
Average	11.03	4.13	68.04
Maximum	16.84	7.92	58.33
Minimum	4.9	1.1	97.44
Variance (s2)	2.855	0.414	12.419
CV(s%)	15, 30	15.58	5.17







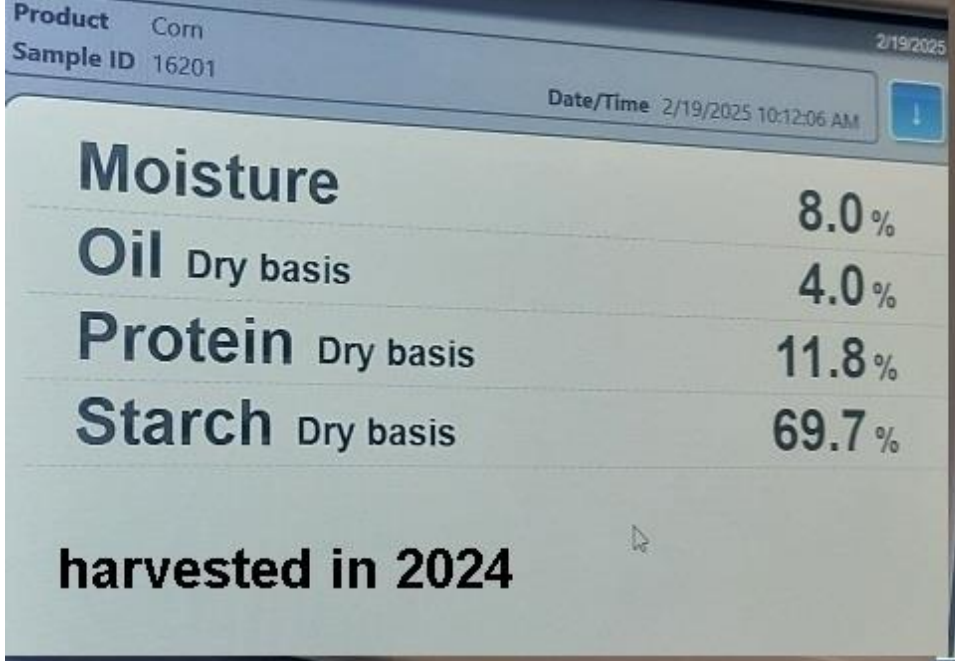
PerkinElmer
Science with Purpose

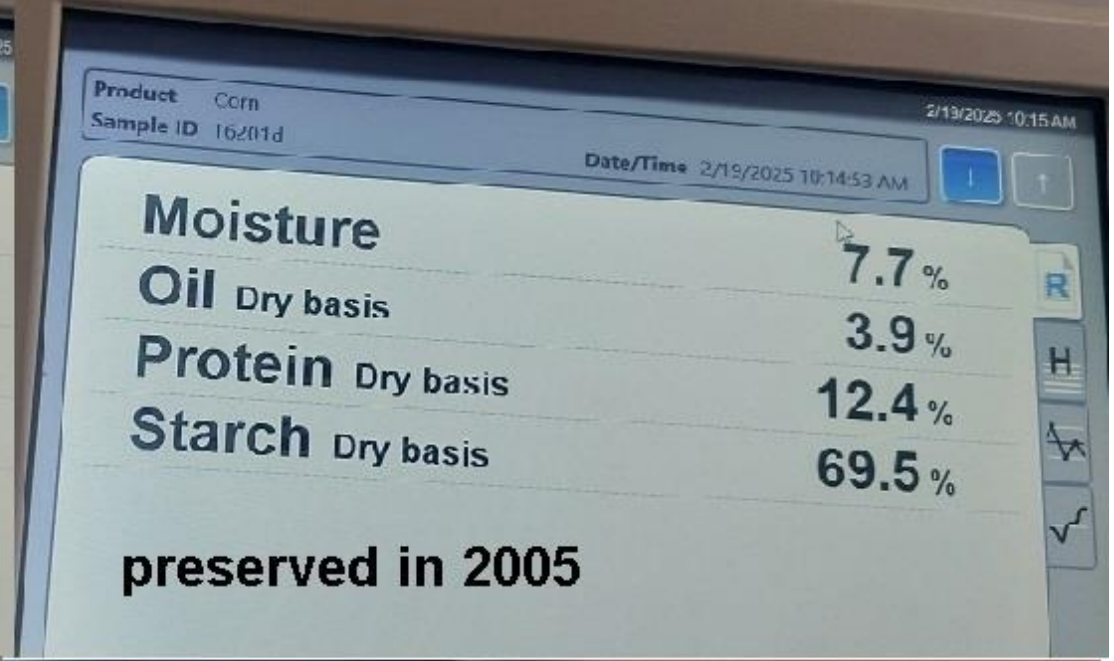
Inframatic grain analyzer

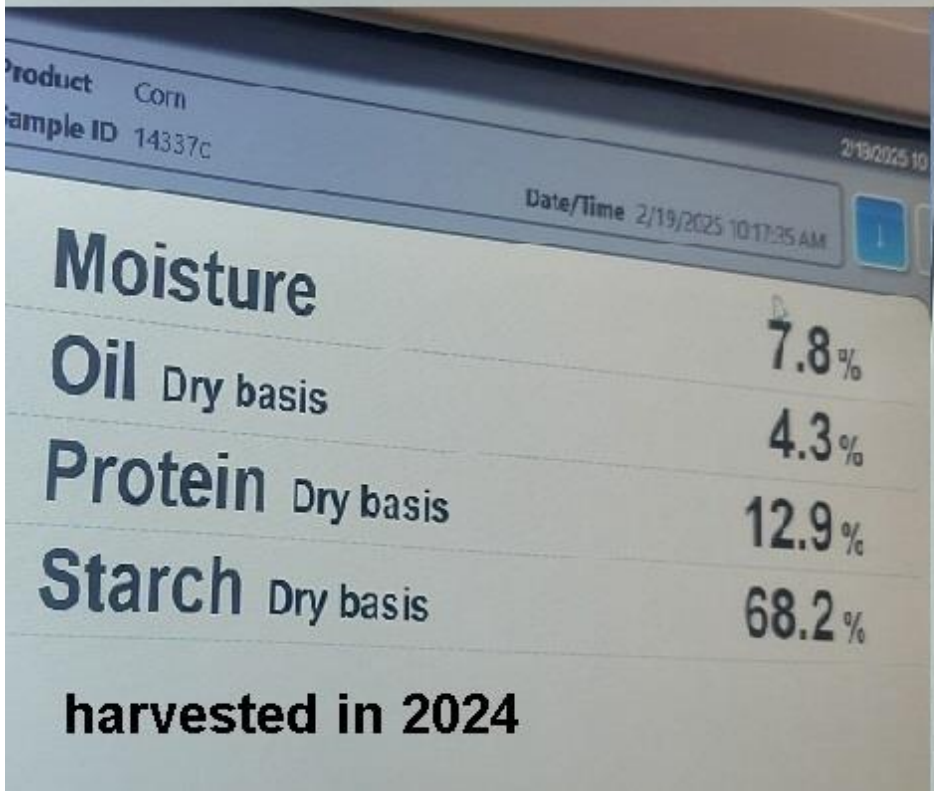
9500 NIR

The Inframatic 9500 model is the newest NIR analyzer that offers the highest accuracy available. It is a precise and robust instrument designed for the analysis of cereals and oilseeds in less than 30 seconds.

Products	Wheat, wheat flour, barley, corn, soybeans, oilseeds, and others.
Parameters	Moisture, protein, oil, hectoliter weight (optional), starch, wet gluten, fiber, ash (for flour).
Analysis time	~25 sec. without the hectoliter weight (HLW/TW) module.
Sample volume	400 ml (600 ml with the HLW/TW module).
Sub-samples:	Up to 20 per sample.
Working principle	Transmittance.
Wavelength range	570 -1100 nm


Product Corn
Sample ID 16201
2/19/2025
Date/Time 2/19/2025 10:12:06 AM
Moisture 8.0 %
Oil Dry basis 4.0 %
Protein Dry basis 11.8 %
Starch Dry basis 69.7 %
harvested in 2024


Product Corn
Sample ID 16201d
2/19/2025 10:15 AM
Date/Time 2/19/2025 10:14:53 AM
Moisture 7.7 %
Oil Dry basis 3.9 %
Protein Dry basis 12.4 %
Starch Dry basis 69.5 %
preserved in 2005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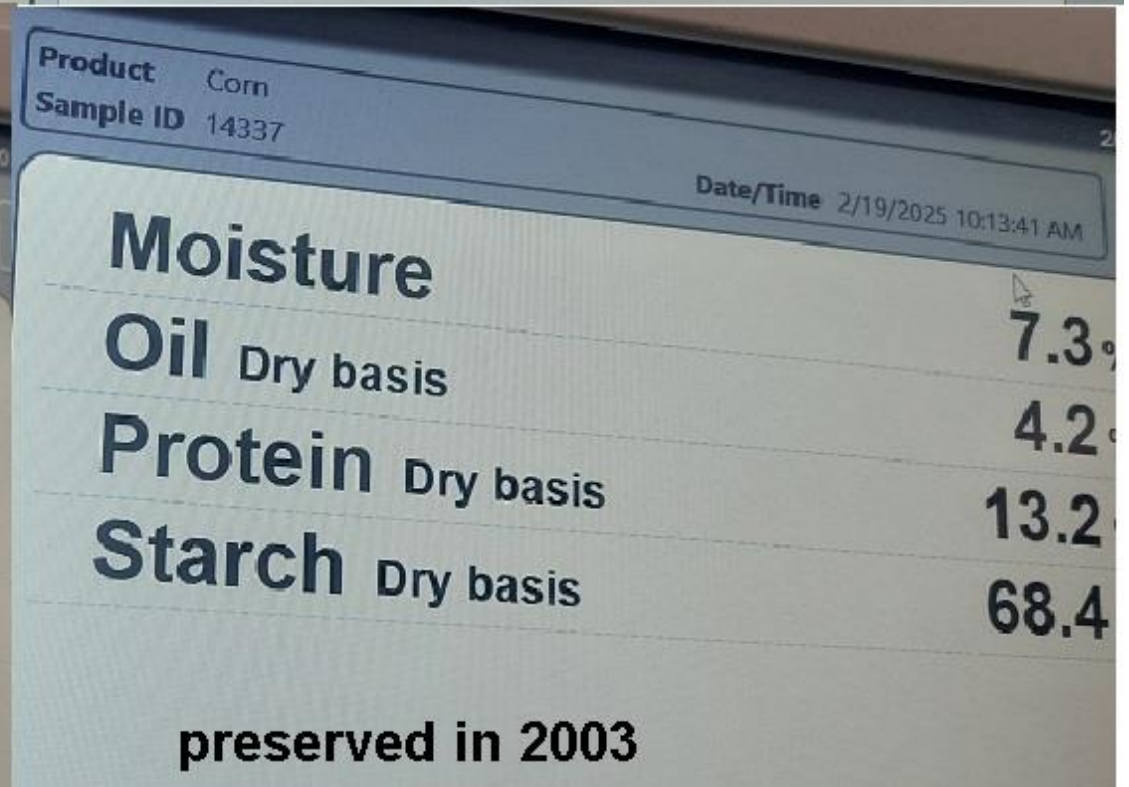
Sample ID 14337c
Date/Time 2/19/2025 10:17:35 AM
Moisture 7.8 %
Oil Dry basis 4.3 %
Protein Dry basis 12.9 %
Starch Dry basis 68.2 %
harvested in 2024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Sample ID 14337
Date/Time 2/19/2025 10:13:41 AM
Moisture 7.3
Oil Dry basis 4.2
Protein Dry basis 13.2
Starch Dry basis 68.4
preserved in 2003

Thank you for attention!