New Polish strawberry clones in the field trials at the National Institute of Horticultural Research in Skierniewice, Poland

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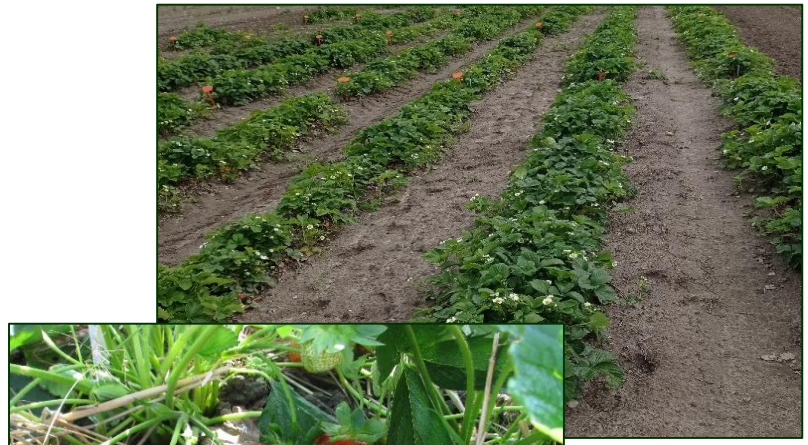
Objectives

Strawberry breeding at the National Institute of Horticultural Research has been carried out for many years. Every year, tens of crosses were made, thousands of seedlings were produced and assessed, the best of them were selected for further studies. Based on multiannual evaluation of breeding material in the field trials, several valuable and advanced clones with innovative features were selected.



Material and methods

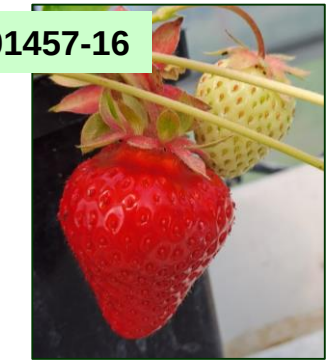
- Six strawberry clones (T-201457-16, T-201458-20, T-201536-06, T-201567-04, T-201525-05, T-201556-16, ‘Honeoye’ as the reference) were evaluated in the field trial at InHort, Skierniewice, Central Poland in 2023-2024.

- Traits assessed:
  - Fruit yield (g/plant),
  - Weight of 1 fruit (g),
  - Fruit attractiveness (ranking scale 1-5),
  - Fruit firmness (by Instron 5542 penetrometer in N),
  - Extract (by refractometer in mg/100 g),
  - Ascorbic acid content (by high performance liquid HPLC chromatography in mg/100 g),
  - Anthocyanins (by HPLC chromatography in mg/100 g),
  - Total phenols content (by spectrophotometer in mg/100 g),
  - Plant infection by white leaf spot, leaf scorch and powdery mildew (ranking scale 0-5).

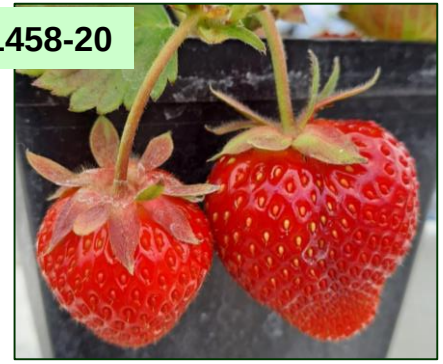
T-201436-06

T-201567-04

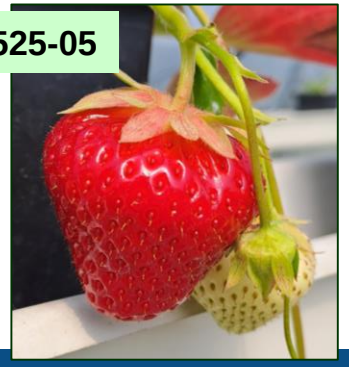
T-201457-16



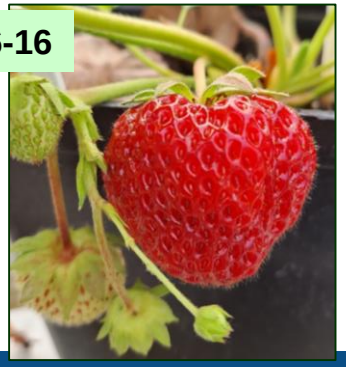
T-201458-20



T-201525-05



T-201556-16



Results and discussions

Characteristics of strawberry clones evaluated in the field trial
(Skierniewice, Pomological Orchard, *average values for 2023-2024*)

Clone number	Pedigree	Yield (g/plant)	Fruit weight (g)	Fruit attractiveness (1-5*)	Fruit firmness (N)
T-201457-16	Grandarosa × Elsanta	358	9,3	4,4	2,7
T-201458-20	Pink Rosa × Elsanta	196	8,6	4,2	4,7
T-201536-06	Clery × Grandarosa	287	11,5	4,7	3,7
T-201567-04	Patty × Panvik	255	11,5	4,5	3,9
T-201525-05	Cifrance × Panvik	340	8,9	4,1	3,5
T-201556-16	Marmolada × Pink Rosa	536	8,4	4,2	3,5
Honeoye	reference	300	7,1	3,3	2,3

Clone number	Extract (mg/100 g)	Ascorbic acid (mg/100 g)	Anthocyanins (mg/100 g)	Total phenols content (mg/100 g)	Infection level by		
					White leaf spot	Leaf scorch	Powdery mildew
T-201457-16	9,4	37	14	313	0,00	3,25	0,00
T-201458-20	6,8	35	28	201	0,38	1,63	0,00
T-201536-06	8,0	42	15	246	0,25	2,63	0,00
T-201567-04	8,3	37	25	201	0,25	1,50	0,00
T-201525-05	9,9	43	34	223	0,00	1,69	0,13
T-201556-16	8,8	59	30	232	0,00	3,00	0,00
Honeoye	9,3	32	40	353	0,00	1,75	0,13

Summary

- **T-201457-16 (Grandarosa × Elsanta): medium late; fruits large, cordiform, light red, firm, rich in extract. Plants resistant to white leaf spot and powdery mildew, susceptible to red leaf scorch.**
- **T-201458-20 (Pink Rosa × Elsanta): medium early; fruits large, cordiform, light red, very firm, medium rich in ascorbic acid. Plants resistant to white leaf spot, powdery mildew and red leaf scorch.**
- **T-201536-06 (Clery × Grandarosa): medium early; fruits large, conical, light red, firm, medium rich in extract and ascorbic acid. Plants resistant to white leaf spot and powdery mildew, susceptible to red leaf scorch.**
- **T-201567-04 (Patty × Panvik): early; fruits large, conical, intensive red, very firm, medium rich in extract and ascorbic acid. Plants resistant to white leaf spot and powdery mildew, low susceptible to red leaf scorch.**
- **T-201525-05 (Cifrance × Panvik): early; fruits large, conical, intensive red, very firm, very rich in extract and rich in ascorbic acid. Plants resistant to white leaf spot, powdery mildew and red leaf scorch.**
- **T-201556-16 (Marmolada × Pink Rosa): medium late; fruits large, cordiform, intensive red, firm, rich in extract and ascorbic acid. Plants resistant to white leaf spot and powdery mildew, medium susceptible to red leaf scorch.**

Acknowledgements

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