

# Seedling Emergence of Romanian Tomato and Pepper Varieties

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# Seedling Emergence of Romanian Tomato and Pepper Varieties

- ▶ Healthy food - a main concern in today's society
- ▶ Genotype-assisted breeding programs
- ▶ Seedling emergence indicators
  - ▶ Percentage of emergence
  - ▶ Mean emergence Time
  - ▶ Homogeneity
  - ▶ Mean emergence rate
  - ▶ Uncertainty of emergence
  - ▶ Synchrony of emergence

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- ▶ Romanian tomato varieties: Kristinica, Florina 44, Andrada, Buzău 1600, Buzău 47 (SCDL Buzău), Argeş 11, Argeş 20, Ştefăneşti 24, Ştefăneşti 22 (INCDBH Ştefăneşti-Argeş).
- ▶ Romanian pepper varieties: Decebal, Vladimir, Galben Superior, Splendens, Cosmin, Roial, Vladimir (SCDL Buzău).

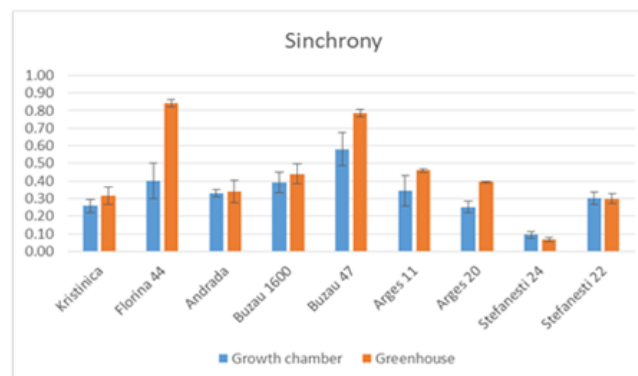
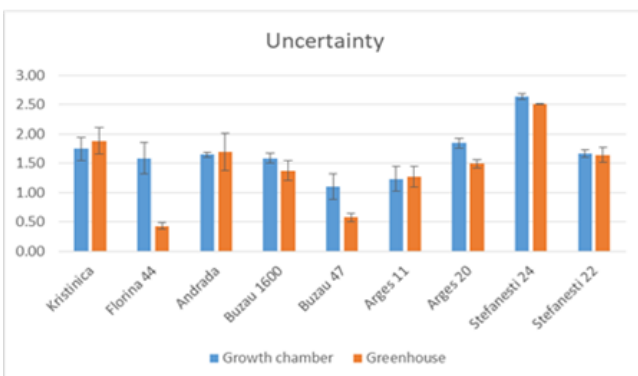
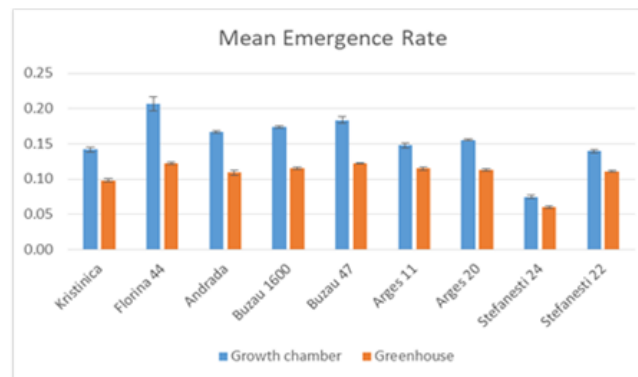
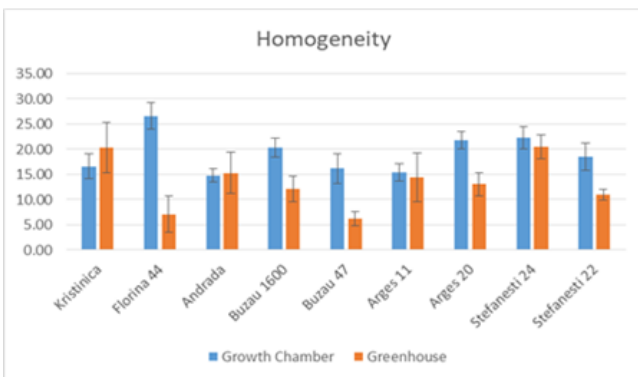
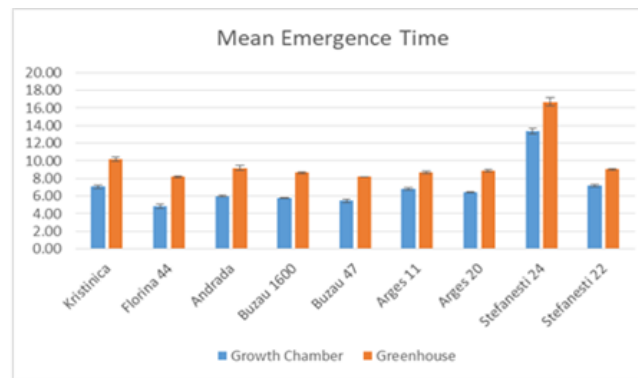
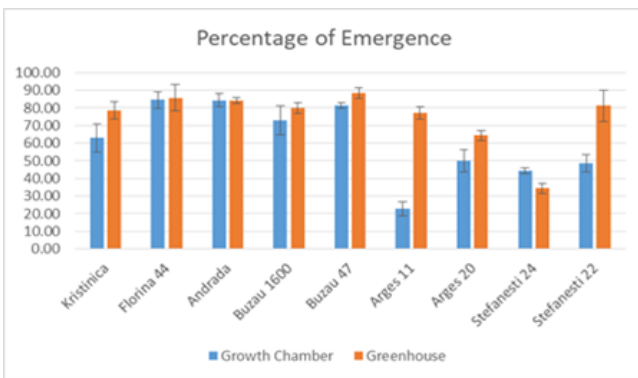


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- ▶ Growth chamber conditions: 80% humidity, constant temperature of 22°C, and 14 hours day/10 hours night conditions
- ▶ Greenhouse conditions: temperature of 23-27°C daytime/17-18°C night time, and an average of 55% humidity
- ▶ Kekkila brown OPM 0.25W substrate in trays with 7x10 cells.

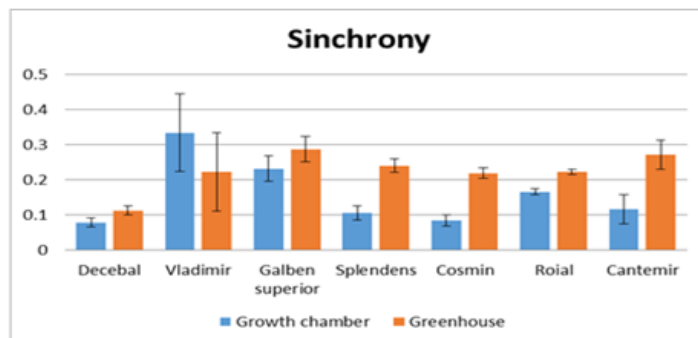
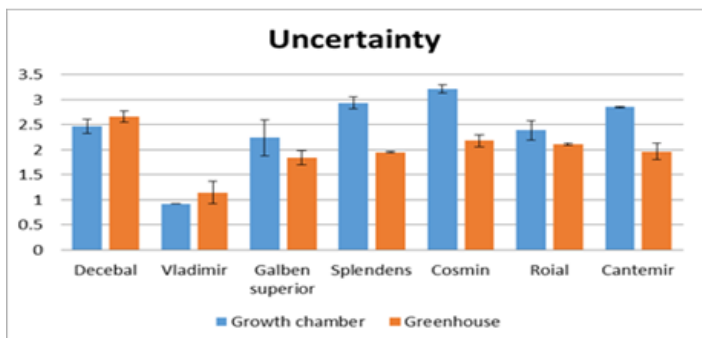
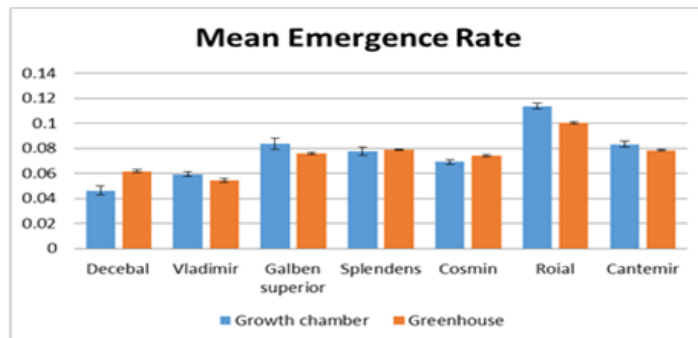
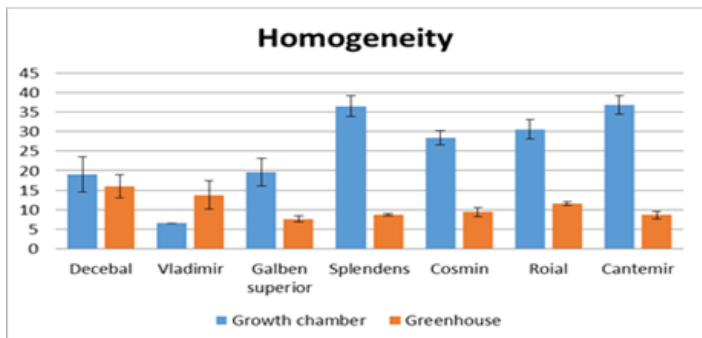
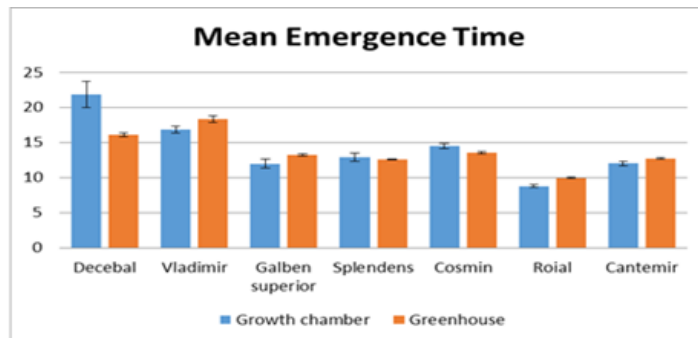
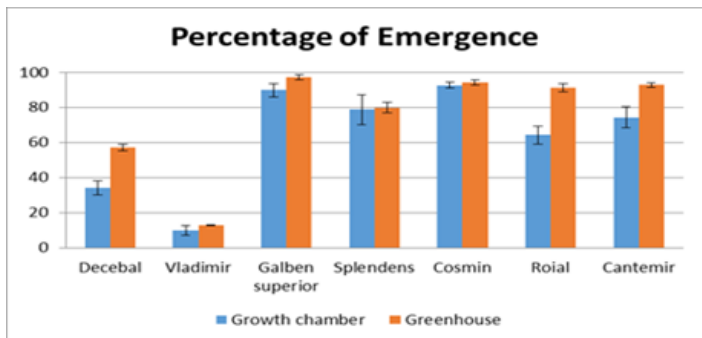


# Tomato seedlings emergence



Seedling emergence indicators for the nine tomato varieties studied: Kristinica, Florina 44, Andrada, Buzău 1600, Buzău 47, Argeș 11, Argeș 20, Ștefănești 24, Ștefănești 22. Error bars represent standard error of the mean.

# Pepper seedlings emergence



Seedling emergence indicators for the seven pepper varieties studied: Decebal, Vladimir, Galben Superior, Splendens, Cosmin, Roial, Vladimir. Error bars represent standard error on the mean.

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## ► Conclusions

- Significant differences in the seedling emergence indicators were observed among the tomato and pepper varieties studied both in the growth chamber and in the greenhouse.
- Percentage of emergence, mean emergence time and synchrony was similar or higher in the greenhouse as opposed to the growth chamber conditions
- Homogeneity, mean emergence rate and uncertainty were similar or lower in the greenhouse compared to the growth chamber conditions
- Further genotyping studies are needed to correlate the phenotyping traits studied in this survey with DNA sequence differences, in order to select plants with multiple superior traits in genotype-assisted breeding programs, with the final goal of creating novel ecological varieties of tomato and pepper, which will appeal to the Romanian consumers

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## ► Acknowledgments

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