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COMPARATIVE ASSESSMENT OF ORGANIC GRAPE PRODUCTIVITY IN VRANCEA COUNTY, ROMANIA: A STUDY OF THREE WHITE GRAPE VARIETIES DURING 2025 - 2026

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Abstract

This study compared the productivity of three organically cultivated white grape varieties-Fetească Regală, Sarba, and Sauvignon Blanc-in /rancea County, Romania, during 2025-2026. Yield per hectare, yield per vine, and average bunch weight were evaluated using descriptive statistics All varieties recorded productivity increases in 2026. Sauvignon Blanc achieved the highest estimated yield (8,800 kg/ha), while Sarba showed the greatest relative increase (+13.89%). The findings highlight varietal differences and provide preliminary information for organic vineyard management.

Introduction

✓ Organic viticulture is an important component of sustainable agriculture, aiming to reduce environmental impacts while maintaining vineyard productivity. Productive performance depends on grape variety, environmental conditions, and cultivation practices.

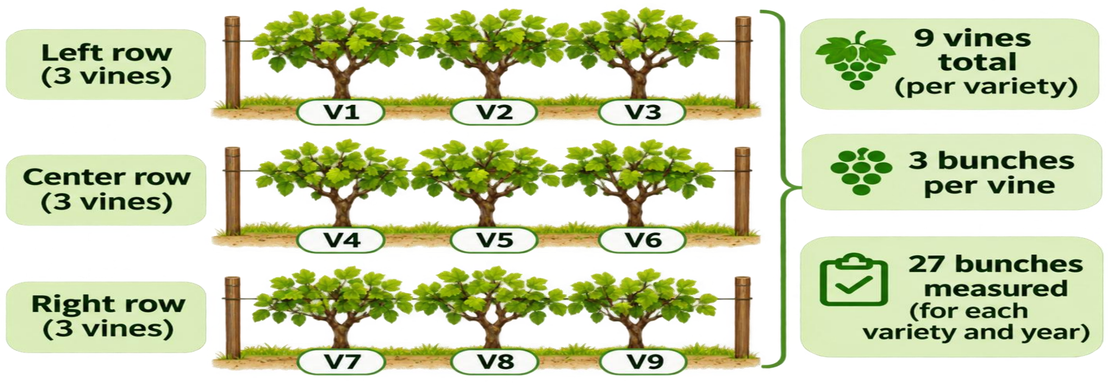


Objective: To compare the productivity of Fetească Regală, Șarba, and Sauvignon Blanc cultivated under organic farming conditions in Vrancea County during the 2025 and 2026 growing seasons.

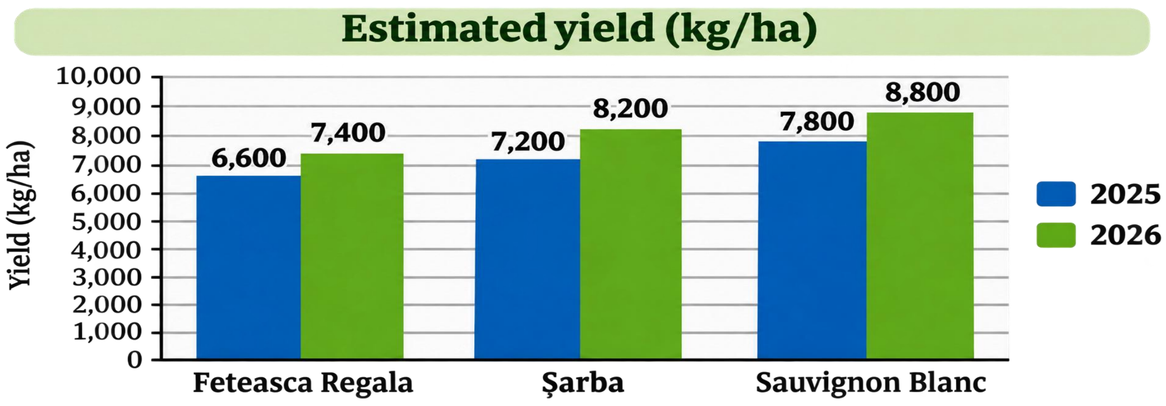
Material and method

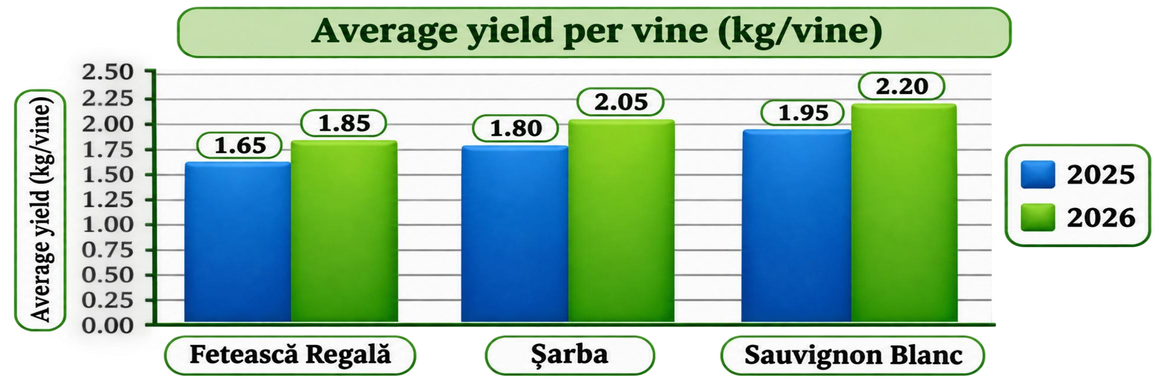
- Study area: Vrancea County, Romania
- Varieties: Fetească Regală, Șarba, Sauvignon Blanc
- Organic cultivation system
- Area investigated: 1 ha/variety
- Planting density: 4,000 vines/ha
- Indicators: yield per hectare (kg/ha), average yield per vine (kg/vine),average bunch weight (g)
- Growing seasons: 2025 and 2026

Sampling design



Results and discussions





Average yield per vine

Variety	2025 (kg/vine)	2026 (kg/vine)	Relative increase
Fetească Regală	1.65	1.85	+12.12%
Şarba	1.80	2.05	+13.89%
Sauvignon Blanc	1.95	2.20	+12.82%

Discussion:

- ❑ - All agronomic indicators increased in 2026 compared with 2025.
- ❑ - Sauvignon Blanc recorded the highest productivity values in both years.
- ❑ - Sarba showed the greatest relative increase in grape yield.

Conclusion

1. All three varieties showed higher productivity in 2026.
2. Sauvignon Blanc had the highest estimated yield in both years.
3. Șarba recorded the greatest yield increase (+13.89%).
4. Further multi-year research is needed to assess yield stability and climatic influences.

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