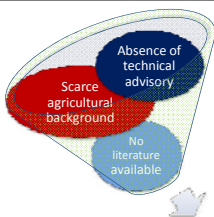


Use of HORTIVAR for retrieving information: potentialities for the urban gardener

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Daily choices of the urban farmer



Proper cultivar identification may result in lower incidence of plant biotic and abiotic stresses, greater yield, better and peculiar quality parameters (e.g. when traditional or exotic varieties are chosen).

No cultivar selection!

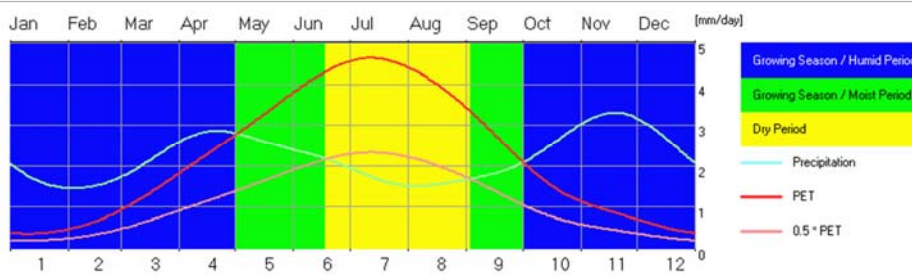


HORTIVAR is FAO's database on the performance of horticultural crop cultivars worldwide and also a platform to access and exchange horticultural knowledge.

HORTIVAR may enable urban farmers to select optimal genotypes for geo-climatic regions, have access to crop features and required practices. Furthermore, it may represent a lively information exchange platform, where urban farmers may get connected and mapped as well as share seeds and recommendations.

The Hypothetical Urban Garden

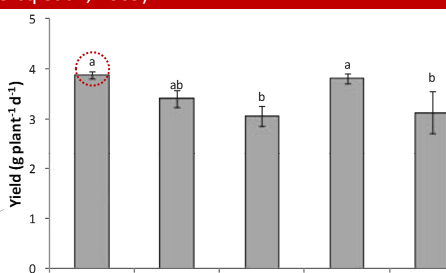
Garden located in Bologna, Italy (44°30' N, 11°20' E, 15 m a.s.l.). Urban farming family composed by 2 adults (35 years old) and 2 children (5 and 2 years old).



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ave
T °C (Mean)	2.2	5.0	9.5	14.0	18.5	22.3	24.8	24.5	21.2	15.6	12.6	4.5	14.6
T °C (Min)	-0.7	1.5	5.4	9.5	13.6	17.5	19.7	19.2	16.5	11.6	6.3	1.8	10.2
T °C (Max)	5.0	8.3	13.5	18.3	23.2	27.2	30.1	29.7	26	19.6	18.7	7.3	18.9
Ground Frost Frequency [%]	42	28	9	0	0	0	0	0	0	0	6	26	9
Effective Rain [mm]	43	43	58	77	64	61	45	48	49	67	85	72	712
Effective Rain Ratio [%]	92	93	90	86	88	89	92	92	92	88	84	87	89
Rainy Days	9	8	10	12	9	8	5	6	7	10	14	14	112
Solid Precipitation Ratio [%]	24	12	3	1	0	0	0	0	0	1	1	14	4
Koepfen Climate Class	Cfa												C: Warm temperate Climate; f: fully humid; a: hot summer

Climatic conditions and vegetation period in the hypothetical urban garden as calculated by LocClim (FAO, 2005).

Diet composition based on consumption data (Leclercq et al., 2009).



Daily productivity of lettuce cultivars (Valentina, Arcadia, Belgore, Cesco, Cliona) grown under same climatic conditions (Cfa) as the hypothetical urban garden. Error bars represent ± standard errors, different letters indicate significant differences at P ≤ 0.05.

Family requirements (g d ⁻¹)	Productivity (g plant ⁻¹ d ⁻¹)	Plant number (n)	Planting density (plants m ⁻²)	Garden surface (m ²)	Plant cycle (dd)	Transplanting interval (dd)
112.7	3.9	29.1	9.5	3.1	110	3.8

Family lettuce (Cv Valentina) requirements and dedicated garden surface, plant number and interval between transplanting.

The family should have 29 lettuce plants, grown in 3 m² of garden and transplanting a new plant every 4 days!

Conclusions



Thanks to its partnerships with universities and no-profit bodies involved in urban agriculture, HORTIVAR is likely to become a unique tool for guiding the urban farmer. In the enclosed manuscript, some possible applications of HORTIVAR for guiding the urban gardener on the daily choices are presented, although these examples only address few of the possible applications. Software improvements (including elaboration tools, friendly user interface and promotion of database enrichment) may allow to widen applicability and further spread its use among rural and urban farmers.

Literature Cited

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 Leclercq, C., Arcella, D., Piccinelli, R., Setto, S., Le Donne, C. and Turrini, A. 2009. The Italian national food consumption survey (INRAN-SCAI) 2005-2006: main results in terms of food consumption. *Publ. Health Nutr.* 12:2504-2532.
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