

# Contribution of urban community gardens to sustainable food systems: results from the JArDinS study

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## INTRODUCTION

Community gardening is gaining attention worldwide as a strategy to promote sustainable food systems. However strong evidence about the impact of community garden on food security and nutrition is still lacking.



Assessing the share of garden produce in the gardeners' food supply and the potential effect of community garden participation on the healthiness of food supply in urban areas of western countries.

## METHODS

**Population** : adults living in Montpellier (France).

**Design** : natural experiment, consisting in entering a community garden for the first time in 2018.

**Evaluation** : when entering the garden (t0) and 12 months later (t1), n=71.

**Data collection tools** : 1-month food supply diary (including purchases, donation and produce from the garden) and food purchase receipts collection.

**Data collected** :

- **Healthiness of household food supply** (fruit & vegetable purchases, MAR, MER)
- **Total expenditure household food supply** (€/day per person in the household)
- **Expenditure share** by food groups (%)
- **Share of garden produce** in the gardeners' household food supply

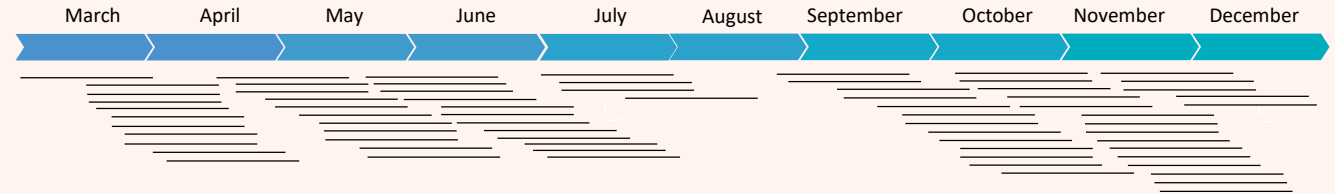
**Data analysis** : changes between t0 and t1 investigated using paired t-test.

## RESULTS

### 1 Characteristics of gardeners at t0 (n=71) :

- ❖ 44.0 (14.3) y
- ❖ 66% child-less household
- ❖ 75% females
- ❖ 78% with university degree

### 2 Months of data collection



### 3 Healthiness of food supply and food expenditure (n=71)

	t0	t1	P-value
<b>Healthiness of food supply</b>			
Fruit & Vegetables* (g/d.pers)	411.3 (232.7)	410.4 (205.3)	0.968
MAR (% adequacy/2000kcal)	76.5 (7.1)	75.9 (7.9)	0.598
MER (% excess/2000kcal)	96.8 (19.4)	95.3 (23)	0.574
<b>Household food expenditure</b>			
Total food expenditure (€/d.pers)	6.8 (3)	6.7 (3.3)	0.785
<i>Expenditure share by food groups (%)</i>			
Fruits & Vegetables	9.9 (5.1)	10.3 (5.2)	0.665
Starches	27 (11.1)	27.6 (10.9)	0.375
Meat, fish & Eggs	18.6 (9.4)	18.6 (10.4)	0.967
Dairy products	11.7 (5.1)	11.4 (4.6)	0.589
Mixed dishes*	8.6 (6.0)	8.1 (6.0)	0.536
Sweet products	10.2 (5.5)	11.2 (8)	0.321
Added fats & seasonings*	4.5 (3.2)	4.9 (2.8)	0.227
Beverages*	9.4 (6.2)	7.9 (5.8)	0.194

\* Variables were log-transformed to improve normality

→ No change between t0 and t1

### 4 Contribution of garden produce to food supplies at t1 (n=71)

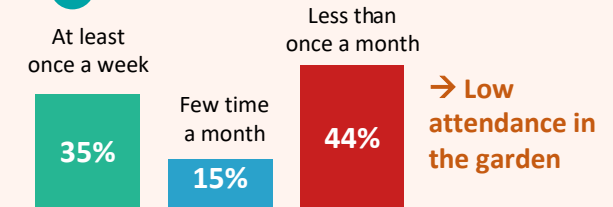
Food group	Mean quantity (g/d.pers)	% of food supplies*
Vegetables	14.9 (34)	10.6 (22.5)
Fruits	2.7 (11.4)	1.9 (7.5)
Pulses	0.3 (1.9)	1.2 (7.7)
Nuts & seeds	0.1 (0.8)	5.8 (23)
Potatoes	5 (36.1)	3.2 (14.9)

\* In the same food group

→ Low contribution of garden produce to supplies

→ 42 gardeners without any crops

### 5 Attendance in the gardens



## CONCLUSION

The results don't support the idea that community gardens is a relevant local food initiative to improve food security and healthy eating. The low participation of most interviewed gardeners might explain the lack of effect of gardening on healthiness food supply and food expenditure. Actions should be undertaken by Public authorities and garden managers to encourage the active participation of gardeners.

