

PRODUCTIVE AND AGRONOMIC BEHAVIOUR OF NEW CVS AND LINES OF SEED PROPAGATED ARTICHOKE

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INTRODUCTION

The artichoke crop in Spain is mainly propagated by vegetative process, using cuttings, stumps or stalks, being the cv **Blanca de Tudela** with green heads the most important. In the South of Comunidad Valencia and Murcia is also produced for export, from October to May, to France the cv **Violeta de Provence** with purple heads. The vegetative propagation presents physiological, pathological and financial drawbacks, for that reason this work analyses the crop possibility by new seed cvs of artichoke.



MATERIALS AND METHODS

It was studied the agronomic behaviour of 20 cvs/lines seed propagated, thirteen with green heads and eight with purple heads, using as controls **Blanca de Tudela** and **Violeta de Pronvence**, both asexually propagated cultivars. The whole plant material was transplanted in open-field conditions in Paiporta (Valencia, Spain).

A completely randomised design with 3 replications of 6 plants was performed.

Besides that, all plants were sprayed three consecutive times with 30 mg L⁻¹ of GA₃, and a foliar fertiliser was added at 0,1%(v/v) GA₃ solution.

June	July	August	September	October
8	21	6	21	6
Sowing	Planting	Acid Gibberellic applications		

RESULTS AND DISCUSSION

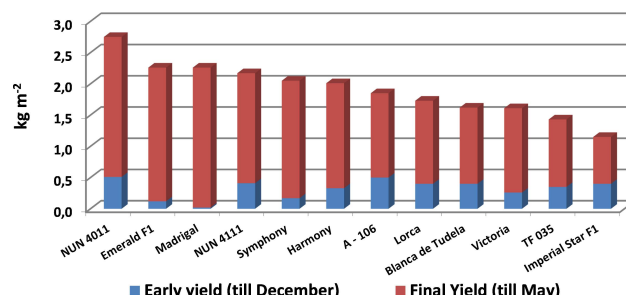
The highest early total yield was achieved by **NUN 4011** followed by **A-106** and **Blanca de Tudela**. On purple cultivars the biggest early total yield was obtained by **NUN 4146**, **Violeta de Provence** and **Opal**. The greatest final total yield was reached by the green head cvs/lines **NUN 4011**, **Madrigal** and **Emeral F1** and among purple colour head cvs/lines **Opal**, **NUN 4146** and **Red Day**. There were found s.s.d. regarding asexually propagated cultivars, which produced less final total yield.



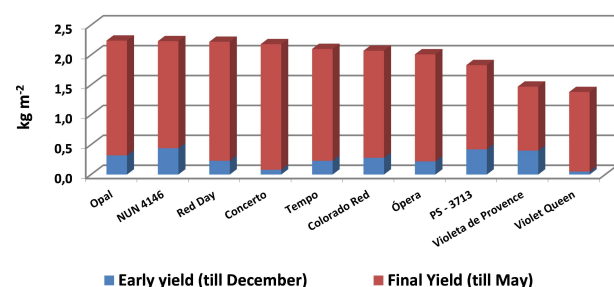
Productive data

	Cultivar	Final Total Yield (kg m ⁻²)	Early Total Yield (kg m ⁻²)	Commercial total yield (kg m ⁻²)	Non-Commercial total yield (kg m ⁻²)
Green Artichoke heads	NUN 4011	2,75 A	0,51 A	2,17 A	0,58 D
	Madrigal	2,26 AB	0,02 G	1,60 AB	0,66 CD
	Emerald F1	2,26 AB	0,12 DEFG	1,27 BCDE	0,99 ABCD
	NUN 4111	2,17 ABC	0,41 AB	1,42 BCD	0,75 BCD
	Symphony	2,05 ABCDE	0,17 CDEFG	1,45 BC	0,60 D
	Harmony	2,01 BCDE	0,33 ABCD	1,19 BCDE	0,82 BCD
	A - 106	1,85 BCDEF	0,50 A	1,04 BCDE	0,81 BCD
	Lorca	1,73 BCDEF	0,40 AB	0,98 BCDE	0,76 BCD
	Blanca de Tudela	1,62 BCDEF	0,40 ABC	0,88 CDE	0,74 BCD
	Victoria	1,61 BCDEF	0,26 BCDEF	1,01 BCDE	0,61 D
	TF 035	1,43 DEF	0,35 ABC	0,82 CDEF	0,62 D
	Imperial Star F1	1,15 F	0,40 AB	0,69 EF	0,47 D
Purple Artichoke heads	Opal	2,24 AB	0,32 ABCD	1,64 AB	0,60 D
	NUN 4146	2,23 AB	0,44 AB	1,08 BCDE	1,15 ABC
	Red Day	2,22 AB	0,23 BCDEFG	0,56 CDE	1,36 A
	Concerto	2,18 ABC	0,08 EFG	1,58 AB	0,60 D
	Tempo	2,10 ABCD	0,23 BCDEFG	1,43 BCD	0,67 CD
	Colorado Red	2,07 ABCDE	0,28 ABCDE	0,66 EF	1,41 A
	Ópera	2,01 BCDE	0,22 BCDEFG	1,44 BC	0,57 D
	PS - 3713	1,83 BCDEF	0,42 AB	1,32 BCDE	0,51 D
	Violeta de Provence	1,47 CDEF	0,40 AB	0,76 DEF	0,72 BCD
	Violet Queen	1,38 EF	0,05 FG	0,14 F	1,24 AB
	Significance level (F-value)	p<0,01	p<0,01	p<0,01	p<0,01

Early and final yield green artichoke heads



Early and final yield purple artichoke heads



They stand out the line **NUN 4011**, with light presence of prickles during the warmest period and cv **Opal**, both with a low level of non- marketable yield and good quality of artichoke heads.

