

Supplementary material

Questionnaire

Form 1: Planting material

Species	Variety/Type	Week of arrival	Plant code	Supplier	Location of the supplier	Type of container	Material of the container	Number of the containers	Number of cells	Plugs final destination	Type of vehicle for delivery (truck, lorry, etc.)	Capacity / Tonnage (tons) eg. 3.5 t trucks	% load (if known)	Numner of plantlets
Ciclamino	Sierra	19	C 1	XXX	Location X	Plateau	PP	660	91	recycled	Truck	3.5		60060
Ciclamino	Verano	21	C 2	XXXr	Location X	Plateau	PP	660	91	recycled	Truck	3.5		60060
Poinsettia	Prem On	27	S 1	YYY	Location Y	Box	Carta	75	104	recycled	Truck	3.5		7800
Poinsettia	Supreme	30	S 2	YYY	Location Y	Box	Carta	335	104	recycled	Truck	3.5		34840
Poinsettia	Christmas Beauty	34	S 3	ZZZ	Location Z	Plateau	PP	416	104	recycled	Truck	3.5		43264
Geranio	Zonale	50	G 1	JJJ	Location J	Box	Carta	416	104	recycled	Truck	3.5		43264
Geranio	Zonale	2	G 2	ZZZ	Location Z	Plateau	PET	416	104	recycled	Truck	16		43264

Form 2: Transplat and cultivation

Plant code	Container diameter (cm)	Plant spacing (plants/m²)	Week of transplant	Sale week (>70%)	Substate type (code) among those indicated in the specific table	Duration of cultivation (weeks)	Duration of cultivation (months)	Duration of cultivation (years)	m²/plant	m²/year*plant
C 1	14	11	19	43	Hawita	24	4.4285714	0.3690476	0.0909	0.033550
C 2	10	32	21	43	Hawita	22	4.1428571	0.3452381	0.0313	0.010789
S 1	17	4	27	50	Hawita	23	4.2857143	0.3571429	0.2500	0.089286
S 2	15	7	30	50	Hawita	20	3.8571429	0.3214286	0.1429	0.045918
S 3	10	14	34	50	Hawita	16	3.2857143	0.2738095	0.0714	0.019558
G 1	14	12	50	18	Hawita (without perlite)	20	3.8571429	0.3214286	0.0833	0.026786
G 2	14	12	2	18	Hawita (without perlite)	16	3.2857143	0.2738095	0.0833	0.022817

Form 3: Container

Plant code	Diameter (cm)	Volume (ml)	Weight (g)	Material	Location of the supplier	Qty purchased / year	From (Date / week containel arrival)	To (date of sale or delivery of recycling)	No. of reuses in a year	Distance from recycler (km)	Peat moss	Perlite	Clay	pot cod1 q.ty kg UF plant
C 1	14	1000	34	PP	BG				0.0000		360	10		0.034
C 2	10	450	12	PP	BG				0.0000		162	4.5		0.012
S 1	17	2500	48	PP	BG				0.0000		850	37.5		0.048
S 2	15	1100	38	PP	BG				0.0000		352	22		0.038
S 3	10	450	12	PP	BG				0.0000		144	9		0.012
G 1	14	1000	34	PP	BG				0.0000		340	15		0.034
G 2	14	1000	34	PP	BG				0.0000		340	15		0.034

Form 4: Growing media

Growing media trade name	Supplier namee	Location of the supplier	n° megabox	Quantity purchased / year (kg)	No. of arrivals	Vehicle type	Capacity / Tonnage (ton)	% of load	Total qty (ton)
Hawita (without)	Hawita	Germany	176	408320	8	Semi-trailer truck		100	
Hawita	Hawita	Germany	88	204160	4	Semi-trailer truck		100	

Form 5: Irrigation*

Plant code	Fert. (yes/no)	Irrigation method.	From	To	No. irrigations	No. of fertigations.	volume (L)	Total volume	Irrigation method.	From	To	No. irrigations	No. of fertigations.	volume (L)	Total volume	Irrigation method.	From	To	No. irrigations	No. of fertigations.	volume (L)	Total volume
C 1	si	3			8	4	-		4			69	69	-								
C 2	si	3			8	4	-		4			63	63	-								
S 1	si	3			9	7	-		4			84	84	-								
S 2	si	3			9	7	-		4			72	72	-								
S 3	si	3			9	7	-		4			56	56	-								
G 1	si	3			6	4	-		4			84	84	-								
G 2	si	3			6	4	-		4			64	64	-								

Form 6: Insecticides

Plant code	Date	Quantity	Unit of measure	% active ingredient	Trade name	Water (L)	No. of application	Qty/plant
C 1-2		100	g	0.5		2000	4	0.83250083
C 1-2		100	g	0.267		1000	3	0.22227772
S 1-2-3		40	g			1500	1	0.69845409
S 1-2-3		100	mLc	0.48		2500	1	1.39690818
G 1-2		100	g	0.5		1000	2	0.57784763

Form 7: Fungicides

Plant code	Date	Quantity	Unit of measure	% active ingredient	Trade name	Water (L)	No. of application	Qty/plant
C 1-2		100	mL	0.265		1500	2	0.33416568

Form 8: Growth regulators

Plant code	Date	Quantity	Unit of measure	% active ingredient	Trade name	Water (L)	No. of application	Qty/plant
C 1-2		50	mL	0.255		1000	2	0.1061439
S 1-2		150	ml	0.412		1000	7	1.7461352
G 1-2		50	mL	0.255		2000	4	0.2947023

Form 9: Fertilizers

Plant code	Product name	Supplier	N	P	K	Qty	Unit (g or mL/L)	Water (L)	No. applications	Qty (g)	N/plant	P/plant	K/plant
C 1		Everris	0.13	0.07	0.24	0.5	G		69.0000	0.000000			
C 2		Everris	0.13	0.07	0.24	0.5	g		63.0000	0.000000			
S 1		Everris	0.18	0.11	0.18	2	g		84.0000	0.000000			
S 2		Everris	0.18	0.11	0.18	2	g		72.0000	0.000000			
S 3		Everris	0.18	0.11	0.18	2	g		56.0000	0.000000			
G 1		Everris	0.13	0.07	0.24	1.5	g		84.0000	0.000000			
G 2		Everris	0.13	0.07	0.24	1.5	g		64.0000	0.000000			

Form 10: Heating

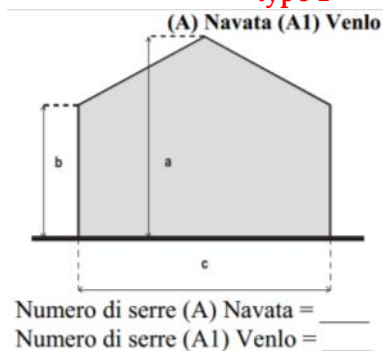
Energy source	Consumption / year	plant code	No. of plants	heat generator	means of transmission	Further details
Natural gas						
Diesel fuel						
Electric energy						
Biomass power						
Alternative sources						

* Irrigation Method Code

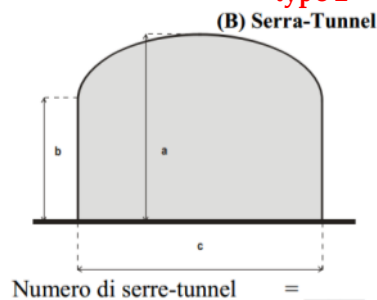
Irrigation Methods	Type code
Drip irrigation (spaghetti irrigation/.....)	1
Sprinkling (irrigation boom/...)	2
By hand with shower	3
Ebb and Flow	4
Gutter irrigation	5
Capillary mat	6
Other (specify)	7

Form 11: Greenhouse

type 1

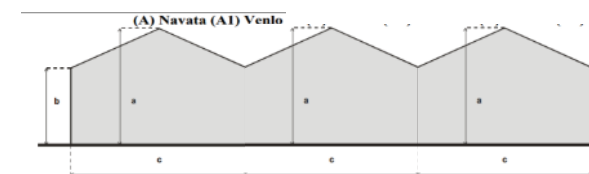


type 2

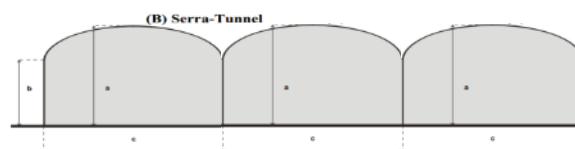


a- Height at the ridge	m	a- Height at the ridge	m
b- Height to the gutter	m	b- Height to the gutter	m
c- Length	m	c- Length	m
Overall length	m	Overall length	m

type 3



type 4



a- Height at the ridge	m	a- Height at the ridge	m
b- Height to the gutter	m	b- Height to the gutter	m
c- Length	m	c- Length	m
Overall length	m	Overall length	m

FOR ALL THE GREENHOUSE TYPE

Side walls (for each type of greenhouse)

Type	Surface (m ²)	Inner / outer thickness (mm)	Amount used (kg)	Expected life (years)
Glass:				
Float (trasparent)				
Non flat (translucent)				
Hortoplus (low emissivity)				
Camera				
Screened / tempered				
Rigid plastic sheet:				
PRFV wavy				
PMMA alveolar				
PMMA wavy				
PVC alveolar				
PVC ondulato				
Plastic Film:				
PE				
PE double layer				
EVA				
EVA double layer				
PVC				
PVC double layer				
Other.....				

Materials for glass holder or plastic holder (for each type of greenhouse)

Type	Amount used (kg)	Expected life (years)
Galvanized steel		
Aluminum		
Plastic		
Other...		

Roof covering material (for each type of greenhouse)

Type	Surface (m ²)	Inner / outer thickness (mm)	Amount used (kg)	Expected life (years)
Glass:				
Float (transparent)				
Non flat (translucent)				
Hortoplus (low emissivity)				
Camera				
Screened / tempered				
Rigid plastic sheet:				
PRFV wavy				
PMMA alveolar				
PMMA wavy				
PVC alveolar				
PVC ondulato				
Plastic Film:				
PE				
PE double layer				
EVA				
EVA double layer				
PVC				
PVC double layer				
Other.....				

Irrigation system materials (for each type of greenhouse)

Type	Amount used (kg)	Expected life (years)
Ebb and Flow		
Aluminum		
PE		
LDPE		
Other...		
Drip irrigation (spaghetti irrigation/.....)		
Aluminum		
PE		
LDPE		
Other...		
Sprinkling (irrigation boom/...)		
Aluminum		
PE		
LDPE		
Other...		
By hand with shower		
Aluminum		
PE		
LDPE		
Other...		
Gutter irrigation		
Aluminum		
PE		
LDPE		
Other...		
Capillary mat		
Aluminum		
PE		
LDPE		
Other...		
Other (specify)		
Aluminum		
PE		
LDPE		
Other...		