

Business tools for growers – horticultural costings

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Better Organic Business Links



Why a new tool?

- **Dancing in the dark**
- **Complexities of horticultural systems**
- **A matter of scale**
- **Lack of business skills**



Organic Producer's Conference – Nov 2014



Organic Producer's Conference – Nov 2014

- Most using spreadsheets/accounts packages
- Sales recorded according to outlets
- Most common unit for planning = m²
- Most not attributing costs to crops
- Some costs easy to allocate others not
- Labour especially problematic, e.g. volunteers
- Lots of different approaches – difficult to compare

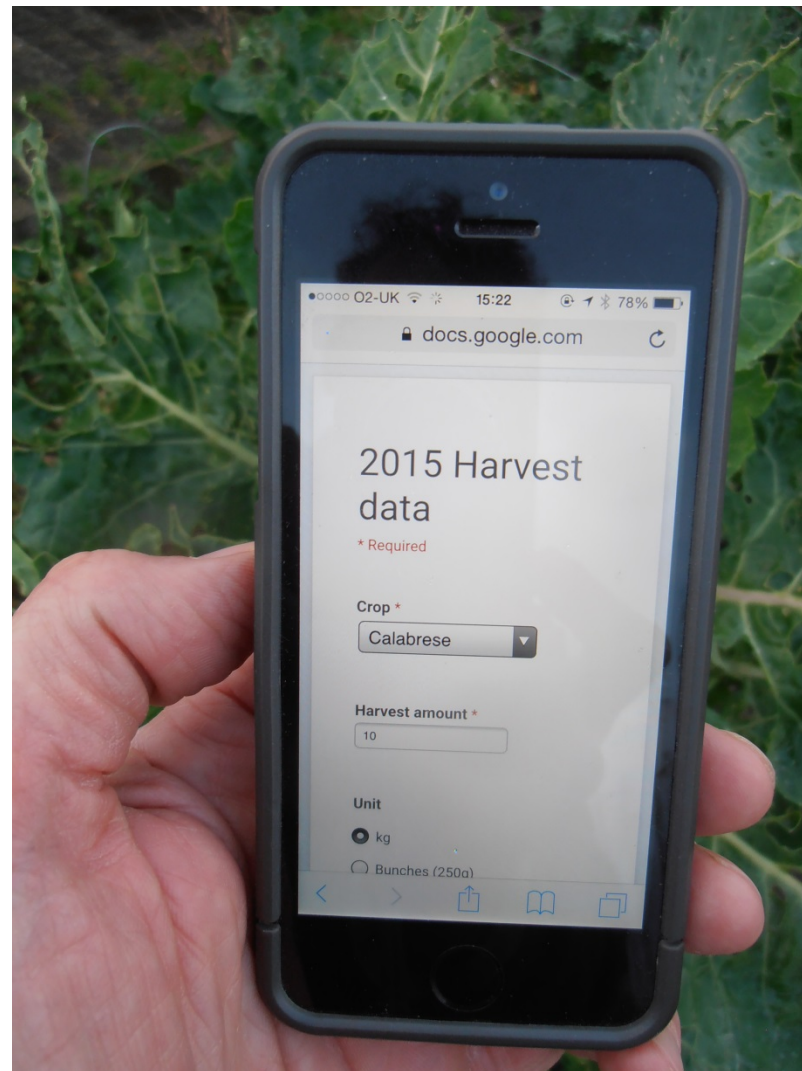
Feature of the costings tool

- Crop is main unit of enterprise – also crop groupings
- Use of m² months
- Choose level of detail you require
- Recording and allocating labour costs
- Labour costs according to hours spent working on crops
- Fertility-building integral to model



Recording information

- Crop diaries
 - ◆ e.g. Jon Goodman's online diary.
 - ◆ Old-school paper.
 - ◆ Loose-leaf binder for each crop.
 - ◆ Google doc forms
 - ◆ Daily worksheets



Recording information

Farm Name _____ Worker name _____

Date _____

	Greenhouse Hours		
	Field Growing Hours	Harvest & Packing Hours	Notes
Not Crop Specific:			
Early potatoes			
Maincrop potatoes			
All potatoes			
Brussels sprouts			

Farm Name _____ Worker name _____

Date _____

	Growing Hours							Harvest & Packing Hours		Market	Notes
	Planting/drilling	Tractor	Hand weeding	Pest control	Crop training	Irrigation	Other	Harvesting	Packing	Selling	
Not Crop Specific:											
Early potatoes											
Maincrop potatoes											
All potatoes											
Brussels sprouts											
Cabbage											

The tool – step by step. Step 1

Map out your holding and plan your rotation.

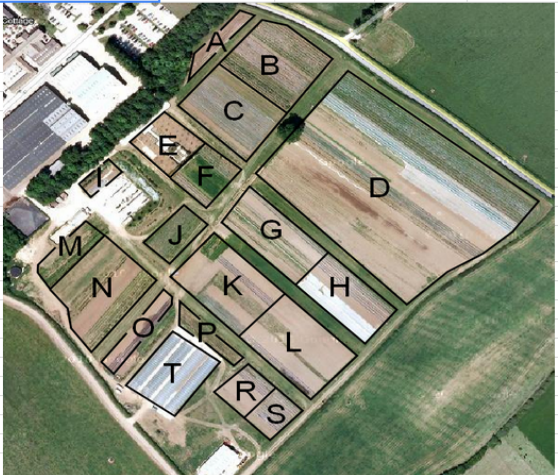
Diary Project - Google Sheets

https://docs.google.com/spreadsheets/d/14WTc9LhCNlWXgGGmYAbGo2os1KOHpb6_MrE6jclZzMc/edit#gid=

Diary Project

File Edit View Insert Format Data Tools Add-ons Help

View only



Plot Name	Plot Name on Jez's Plan (see below)	Approximate Length (m)	Approximate Width (m)	Approx Area (square metres)	Crops/Notes
A	A	80	10	800	Annual veg
B	A	75	65	4875	Soft Fruit
C	A	75	55	4125	Annual veg
D	B	185	130	24050	Annual veg in 5-family rotation
E	C			0	Chelsea Garden – not managed comm
F		40	45	1800	Some perennial vegetables, mostly unc
G	E	85	45	3825	Annual veg in intensive rotation betwee
H	E	80	45	3600	Annual veg in intensive rotation betwee
I	F	35	15	525	'Cookery School Garden' – perennial fru
J	G	56	48	2688	Some perennial veg, lots of room for an
K	H	80	56	4480	Annual veg in intensive rotation betwee
L	H	80	56	4480	Annual veg in intensive rotation betwee
M	I	65	20	1300	Annual veg (flexi ground)
N	J	75	55	4125	Strawberries and other soft fruit
O	M	85	24	2040	Strawberries and other soft fruit
P	K	70	10	700	Annual veg (flexi ground)
Q	L	60	36	2160	Polytunnels for annual veg (9m x 4 tun
R	N	30	40	1200	Perennial herbs and annual herbs and
S	N	30	40	1200	
			Approx. Total Area	67973	which equals 6.8 hectares or 16.8 acre

Calculations of scale for satellite map, using figures from old plan

Plot (on old plan)	Length (m) according to plan above	Length (m) on satellite map	Ratio
Bed B length (shed side)	185	0.073	2534.246575
Bed B length (road side)	185	0.081	2283.950617
Tunnel Length	60	0.025	2400
Bed E (Road Side)	170	0.069	2463.768116
Bed E (Shed Side)	170	0.066	2575.757576

Diary Field Plan Colour Key Crop Yields Prop Tunnel Weather Jez Sowing Schedule Jez Cropping Pl

The tool – step by step. Step 1

Map out your holding and plan your rotation.

Step 1: Map out your holding and plan your rotation. Map your holding and your crop areas

Standard figures for use in calculations	
Units used	Square metres
Total cropping area (field)	0
Total cropping area (protected)	0

Plot Identifier	Area
Plot 1	
Plot 2	
Plot 3	
Plot 4	
Plot 5	
Plot 6	
Plot 7	
Plot 8	
Plot 9	
Plot 10	
Total area	0

Tunnel bed Identifier	Area
Tunnel 1 bed 1	
Tunnel 1 bed 2	
Tunnel 1 bed 3	
Tunnel 1 bed 4	
Tunnel 2 bed 1	
Tunnel 2 bed 2	
Tunnel 2 bed 3	
Tunnel 2 bed 4	
Tunnel 3 bed 1	
Tunnel 3 bed 2	
Total area	0

Step 2

List all the crops you grow

Cropping areas																		
	Total		Fertility-building crops/green manures											Potatoes				
Crop			Grass/clov	Vetch	Persian clo	Buckwhea	F5	F6	F7	F8	F9	F10	All fertilit	Early pota	Maincrop			
Plot identifier																		
Area (m2) - field	0												0.00					
Ground time (months) - field	0												0.00					
Area (m2) - protected cropping	0																	
Ground time (months) - protected	0																	
Number of transplants (home-raised)	0												0.00					

- Crops grouped into families or purpose
- Time spent in the ground important

**Record overheads –
directly allocated to
crops according to
space and time**

Total labour costs

Step 3

	Overheads	per year
Labour	Labour cost - whole holding £	
	Wage costs regular labour	
	Wage costs casual labour	
	<i>Benefits in kind</i>	
	Total labour costs	£0.00
Land	Land -rent	
	Land- mortgage	
	Other land expenses	
	Protected cropping	
	Repairs and maintenance	
Buildings		
	Building rent (if separate)	
	Maintenance (buildings & site)	
	Equipment and tools	
	Maintenance (equipment & machinery)	
	Contractors charges (e.g. cultivation)	
Transport		
	Vehicles	
	Farm & motor insurance	
	Haulage costs	

Step 4

List investment costs and period of time to spread them over

Investment costs -protected cropping	Costs	Area	Years to spread cost	Cost per year	Cost/m2/y
Total protected area (from STEP 1)		0			
Cost of tunnels		0		#DIV/0!	#DIV/0!
Cost of glasshouses		0		#DIV/0!	#DIV/0!
Irrigation fittings		0		#DIV/0!	#DIV/0!
Tunnel covers		0		#DIV/0!	#DIV/0!
Mypex		0		#DIV/0!	#DIV/0!
Other protected cropping costs		0		#DIV/0!	#DIV/0!
Total cost	£0.00			#DIV/0!	#DIV/0!
Investments - field	Costs	Area	Years to spread cost	Cost per year	Cost/unit/
Total field area (from STEP 1)		0			
Investment 1		0		#DIV/0!	#DIV/0!
Investment 2		0		#DIV/0!	#DIV/0!
Investment 3		0		#DIV/0!	#DIV/0!
Investment 4		0		#DIV/0!	#DIV/0!
Investment 5		0		#DIV/0!	#DIV/0!
Investment 6		0		#DIV/0!	#DIV/0!
Total cost	£0.00			#DIV/0!	#DIV/0!

Step 5

Record all direct costs that are not crop specific

Direct costs - field	
Soil preparation	
Seeds	
Supplementary fertilisers	
Manures and green waste composts etc	
Other	
Total direct costs - field	£0.00
Direct costs - propagation	
Growing costs - greenhouse	
Growing media	

Step 6

Record any costs that are directly related to the individual crop

Some costs can be spread over many crops e.g. fleece

Direct costs	
Seeds	£0.00
Transplant costs (if bought in)	£0.00
Propagation costs (greenhouse)	£0.00
Growing media	£0.00
Supplementary fertilisers	£0.00
Manures and green waste composts etc	£0.00
Cost of crop covers if used	£0.00
Plant protection product	£0.00
Crop specific support e.g. canes, netting, mulches	£0.00
Other costs	£0.00
Total direct costs	£0.00

Step 7

Crop by crop labour data

Non-specific crop labour divided according to time spent in ground and area grown

Crop group	Total	Cost
Crop		
Plot identifier		
Area (m2) - field		
Labour hours (crop growing)		
Planting/drilling	0	
Tractor work	0	
Hand weeding	0	
Pest control	0	
Crop training	0	
Irrigation	0	
Other	0	
Total labour hours (crop growing)	0	
Labour hours (harvest/packing)		
Harvesting	0	
Packing	0	
Total harvesting/packing hours	0	
Labour hours (selling)	0	
Total crop-specific hours	0	#DIV/0!
Total non crop-specific hours (field)	0	#DIV/0!
Total non-crop specific hours (greenhouse/tunnel)	0	#DIV/0!
Total fertility-building hours	0	#DIV/0!
Total hours	0	
Labour cost - whole holding £	£0.00	#DIV/0!
Allocated proportion of non-crop labour(field) £	#DIV/0!	
Allocated proportion of non-crop labour (protected)	#DIV/0!	
Allocated labour cost - proportionate to labour input	#DIV/0!	

Step 8

Gathering sales data

Sales		Units of measure	Total for outlet
Outlet		Kg, g, bunch, each etc.	
	Plot identifier		
	Area (m2) - field		
CSA	Units sold		
	Sales (£)		£0.00
	Average unit price		
Farmers Market	Units sold		
	Sales (£)		£0.00
	Average unit price		
Wholesale	Units sold		
	Sales (£)		£0.00
	Average unit price		
Farmshop	Units sold		
	Sales (£)		£0.00
	Average unit price		
Total sales	£		£0.00

Summary sheet

	A	B	C	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM
1	Costs summary sheet: Do not try to enter anything into this sheet as it will														
2				Brassicas											
3		Total		Cabbage	Calabrese	Kale	Pak Choi	PSB	Swede	Turnips	B9	B10	All brassicas	Garlic	Le
4															
5	Plot identifier	0		0	0	0	0	0	0	0	0	0	0	0	0
6	Area (m2) - field	0		0	0	0	0	0	0	0	0	0	0	0	0
47	Cost summary per m2														
48		Total		Brassicas											
49	Plot identifier	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	Area (m2) - field	0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	Direct costs - propagation	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
52	Direct costs - non-labour - field	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
53	Direct costs - non-labour - protected	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
54															
55	Labour (crop growing)														
56	Planting/drilling	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
57	Tractor work	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
58	Hand weeding	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
59	Pest control	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
60	Crop training	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
61	Irrigation	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
62	Other	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
63	Total labour cost - crop growing	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
64															
65	Labour cost (harvest/packing)														
66	Harvesting	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
67	Packing	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
68	Total harvesting/packing hours	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
69															
70	Labour hours (selling)	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
71															
72	Labour costs	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
73	Share of non-crop specific growing costs	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
74	Share of fertility-building costs	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
75	Share of non-crop specific greenhouse labour	#DIV/0!		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Next steps

- Use it and refine it
- Feed into benchmarking
- Group discussion?