

CROPS COSTS AND RETURNS 2012

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Crop Margins

Awareness of crop margins is vitally important since under the decoupled regime the Single Farm Payment (SFP) will be paid irrespective of what crop is grown. Moreover, it makes no sense to produce the crop at a loss. The bottom line is that the land must be maintained in “good agricultural and environmental condition”. Note: The margins shown here do not include the SFP.

Prices of grain and fertilisers may vary considerably from those predicted under the present volatile market conditions.

The margins given here should provide a useful guide to profits but land suitability, rotation, risk avoidance and convenience should also be considered. There is little difference in margins between spring and winter feed cereals. Bonuses for quality are important.

In the case of malting barley the availability of contracts and fulfilment of contract requirements may limit the attainment of these margins.

Stacking (consolidation) is a provision where Irish farmers can get their full Single Farm Payment without the need to farm all the land they farmed in the reference years 2000-2002. At least 50% of the allocated entitlements from the reference years must be farmed. Farmers can only stack if they dropped rented or leased land, afforested land since 2000 or lost land due to compulsory acquisition for public good (CPO). Stacking applies to all farming enterprises. As over ½ of arable land farmed is on rented ground this provision has major implications for the price of rented land for tillage. Stacking is available in 2012. In future years the stacked grower may rent additional land (if profitable) without compromising his stacked (consolidated) entitlements.

Conacre appraisal

The following table will provide a transparent exposition for growers and land owners as to what price can be paid for conacre.

1	Entitlement Value	
2	Gross Margin achievable	
3	Land problems, fertility, pH, P, K, trace elements, weeds, scutch, wild oats, other grass weeds	
4	€ available for rent + farming	(1+2)-3

Costs

Level of yield has a major influence on profitability. Decisions on input strategies must be tailored for individual fields and farms.

Timeliness and attention to detail in carrying out all operations are vital to maintaining profitability in crop production. All costs (direct and fixed) need to be kept to a minimum, consistent with good husbandry practices. Fixed costs will need closer attention. In particular, investments in machinery and land/conacre will need thorough financial appraisal before a decision is taken. Labour efficiency must be scrutinised.

"Close on 20% of Irish grain was forward traded in 2011. Accordingly, Cost per Ton is highlighted in the Cereal Crop Margins tables."

CEREAL CROP MARGINS 2012

Variable Costs excl. VAT (€/ha)

	WHEAT		FEED BARLEY		MALTING BARLEY	FEED OATS	
	Feed Winter	Milling Spring	Winter	Spring		Winter	Spring
MATERIALS	774	637	624	503	503	601	499
Seed	70	83	80	75	75	78	78
Fertilisers	430	364	336	298	298	367	290
Sprays:							
Herbicides	56	45	56	45	45	27	27
Fungicides	165	115	110	75	75	105	80
Insecticides	38	20	17	10	10	10	10
Growth Regulators	15	10	25	0	0	15	15
HIRE MACHINERY	442	404	404	385	385	404	404
Plough, Till, Sow & Roll	160	160	160	160	160	160	160
Spray	95	57	76	57	57	76	76
Fertiliser Spreading	57	57	38	38	38	38	38
Harvesting	130	130	130	130	130	130	130
MISCELLANEOUS	92	70	80	61	61	80	61
Interest (6%)	32	16	26	13	13	26	13
Transport (€ 6/Tonne)	60	54	54	48	48	54	48
TOTAL VARIABLE COSTS	1308	1111	1108	949	949	1085	964
Break-even yield (grain only)	8.7	6.9	7.9	6.8	5.6	7.8	6.9
Cost per ton @ <u>target yields</u>	131	123	123	119	119	121	121
Net Price (€/Tonne)	150	160	140	140	170	140	140
AID (SFP) = NOT included	0	0	0	0	0	0	0
Straw (€/ha)	75	65	125	90	90	90	90

Gross Margins (€/hectare)

(incl. straw)

Tonnes/hectare	WHEAT		FEED BARLEY		MALTING BARLEY	FEED OATS	
	Feed Winter	Milling Spring	Winter	Spring		Winter	Spring
6.0	-333	-86	-143	-19	161	-155	-34
7.0	-183	74	-3	121	331	-15	106
8.0	-33	234	137	261	501	125	246
9.0	117	394	277	401	671	265	386
10.0	267	554	417			405	
11.0	417						

EXPLANATORY NOTES

Fixed or Overhead Costs per Hectare

Scutch Control €17, Lime €17, Maintenance of Land and Fences, Car, Phone, ESB and regular hired labour? Total €150+-. Fixed costs and land land rental should be subtracted from gross margin.

VAT is excluded from input costs and outputs

A. INPUT COSTS: CEREAL CROPS	€/ha
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Seed: €500 /t Blue Label

Rate: W. Wheat - 140 kg/ha; W. Barley - 160 kg/ha; W + S Oats - 155 kg/ha
S. Barley - 150 kg/ha; S. Wheat - 165 kg/ha

Fertiliser:	Total Fert. (kg/ha)			Fert. Bags (No. of 50 kg bags/ha)			€/ha
	N	P	K	CAN + S	Cmpnd*	50 % K	
W. Wheat	210	37	110	12.8	7.4	1.4	€430
W. Barley	160	37	75	9.1	7.4	-	€336
W. Oats	145	37	130	8.0	7.4	2.2	€367
S. Wheat	170	25	110	8.5	8.4	1.0	€364
S. Barley	135	25	75	5.9	8.4	-	€298
S. Oats	110	25	110	4.1	8.4	1.0	€290
CAN + S €340/t; *S. Cereals 13-6-20 €470/t; *W. Cereals 10-10-20 €490/t; 50% K €450/t							

Herbicides: W. Wheat & W. Barley €56/ha; S Wheat & S Barley €45/ha; Oats €27/ha

Fungicides:

<u>Winter Wheat:</u>	T0:Chlorothalonil (CTL)	€8	}	€165
	T1: Eyespot + B.S. + CTL Growth Stage (G.S) 31-32	€50		
	T2: Broad Spectrum (B.S.) + CTL. G.S. 37-39	€62		
	T3: B.S. (incl. triazole) Growth Stage 55-60	€45		
<u>Spring Wheat:</u>			}	€115
	T1: 1/2 rate (B.S. + Morph. + CTL) GS 30-32	€25		
	T2: B.S. + CTL. Growth Stage 37-39	€50		
	T3: B.S. (incl. triazole) Growth Stage 55-60	€40		
<u>S. Barley:</u>	T1: Red rate(Triazole + mildew); T2: Strob.+ triazole+ CTL			=€75
<u>Winter Barley:</u>	3 Fungicides gs 30/31, 32-37, 49			=€110
<u>W. Oats:</u>	B.S. + morph at T1+T2, B.S. + Strob at T3			=€105
<u>S. Oats:</u>	Reduced Rates W. Oats			=€80

Insecticides: Winter wheat: Slug Pellets (€27/ha) + Aphicide (€11/ha)
Other Cereals: Leatherjackets €11/ha + Aphicide (€5 - €10/ha)

Growth Regulators:	W. Wheat, W & S Oats	=	€15
	Spring Wheat	=	€10
	Winter Barley	=	€25
Hire Machinery:	Plough (€70), Till, Sow & Roll (€90)	=	€160
	Spraying (@ €19/ha):		
	W. Wheat: Weeds + Aphids, PGR, Fungicide x 3	=	€95
	S. Wheat: Weeds + Aphids, Fungicide x 3	=	€57
	W. Barley: Aphids + Weeds, Fungicide x 3	=	€76
	S. Barley: Weeds + Aphids, Fungicide x 2	=	€57
	W. Oats: Weeds Aphids, Fungicide x 3	=	€76
	Fertiliser Spreading (@€19/ha)	=	€38-57

Interest 6%: Seed + Fertiliser + 0.5 Sprays; Winter - 10 months; Spring - 6 months

CEREAL CROP MARGINS 2012
Variable Costs excl. VAT (€/ac)

	WHEAT		FEED BARLEY		MALTING BARLEY	FEED OATS	
	Feed Winter	Milling Spring	Winter	Spring		Winter	Spring
MATERIALS	313	258	253	203	203	243	202
Seed	28	33	32	30	30	31	31
Fertilisers	174	147	136	120	120	148	117
Sprays:							
Herbicides	23	18	23	18	18	11	11
Fungicides	67	47	45	30	30	42	32
Insecticides	15	8	7	4	4	4	4
Growth Regulators	6	4	10	0	0	6	6
HIRE MACHINERY	179	163	163	156	156	163	163
Plough, Till, Sow & Roll	65	65	65	65	65	65	65
Spray	38	23	31	23	23	31	31
Fertiliser Spreading	23	23	15	15	15	15	15
Harvesting	53	53	53	53	53	53	53
MISCELLANEOUS	37	28	32	25	25	32	25
Interest (6%)	13	7	11	5	5	11	5
Transport (€ 6/Tonne)	24	22	22	19	19	22	19
TOTAL VARIABLE COSTS	529	450	448	384	384	439	390
Break-even yield (grain only)	3.5	2.8	3.2	2.7	2.3	3.1	2.8
Cost per ton @ target yields	131	123	123	119	119	121	121
Net Price (€/Tonne)	150	160	140	140	170	140	140
AID (SFP)=NOT included	0	0	0	0	0	0	0
Straw (€/ac)	30	26	51	36	36	36	36

Gross Margins (€/acre)
(incl straw)

Tonnes/acre	WHEAT		FEED BARLEY		MALTING BARLEY	FEED OATS	
	Feed Winter	Milling Spring	Winter	Spring		Winter	Spring
2.4	-135	-35	-58	-8	65	-63	-14
2.8	-74	30	-1	49	134	-6	43
3.2	-13	95	55	106	203	50	100
3.6	47	159	112	162	272	107	156
4.0	108	224	169			164	
4.5	169						

2012 NON CEREAL CROP MARGINS

Variable Costs excl. VAT (€/acre)

	BEET	Potatoes Maincrop	MAIZE	PEAS	BEANS	OILSEED RAPE	
						Winter	Spring
MATERIALS	445	1034	312	192	173	258	162
Seed	57	421	81	65	45	30	30
Fertilisers	285	281	205	67	67	159	116
Sprays:							
Herbicides	71	57	26	28	28	38	12
Fungicides	12	223	0	29	29	20	0
Insecticides	20	53	0	3	3	10	3
HIRE MACHINERY	275	972	245	159	155	197	185
Plough, Till and Sow	101	304	101	65	65	65	65
Roll	0	0	0	7	7	7	7
Spray	31	161	7	23	23	31	23
Fertiliser Spreading	15	15	15	8	8	15	15
Swathing/Dessication	0	16	0	0	0	20	20
Harvesting	127	476	121	57	53	59	55
MISCELLANEOUS	173	158	157	24	20	24	14
Interest (6%)	16	36	11	5	5	9	4
Transport (€/Tonne)	158	121	146	15	15	12	10
Bird Control	0	0	0	5	0	3	0
TOTAL VARIABLE COSTS	893	2164	714	376	348	479	361
Break-even yield	22.3	10.8	15.9	1.5	1.9	1.3	1.0
Net Price (€/Tonne)	40	200	45	250	180	370	370
AID (SFP)=NOT included			0	22	22	0	0

Gross Margins (€/ac)

		BEET	Potatoes Maincrop	MAIZE	PEAS	BEANS	OILSEED RAPE	
Tonnes/acre							Winter	Spring
(Maize, beet & potatoes	0.8							-61
12	1.2		264	-168			-35	83
14	1.6		669	-77	51	-34	120	238
16	2.0	-246	1074	14	146	34	261	379
20	2.2	-84	1883	196	196	70	335	
24	2.4	78		378	246	106		
26	2.6	159		470	304	148		
28	2.8	240						

GROWER'S OWN CROP BUDGETS

Variable Costs excl. VAT (€/Acre)

		WINTER WHEAT		SPRING BARLEY		ANOTHER CROP	
		Your Figures	Teagasc Figures	Your Figures	Teagasc Figures	Your Figures	Teagasc Figures
MATERIALS (A=B+C+D+E+F+G)	A		313		203		
Seed	B		28		30		
Fertilisers	C		174		120		
Sprays:							
Herbicides	D		23		18		
Fungicides	E		67		30		
Insecticides	F		15		4		
Growth Regulators	G		6		0		
HIRE MACHINERY (H=I+J+K+L)	H		179		156		
Plough, Till and Sow	I		65		65		
Spray	J		38		23		
Fertiliser Spreading	K		23		15		
Harvesting	L		53		53		
MISCELLANEOUS (M=N+O)	M		37		25		
Interest (6%)	N		13		5		
Transport (€6/Tonne)	O		24		19		
TOTAL VARIABLE COSTS (P=A+H+M)	P		529		384		
Tonnes to cover variable costs (Q=P/R)	Q		3.5		2.7		
Net Price (€/Tonne)	R		150		140		
Aid (€/Acre)	S		0		0		
Straw (€/Acre)	T		30		36		
Projected yield	U		4		3.2		
Gross Margins (€/Acre) (V = (R*U)+S+T-P)	V		108		106		
Gross Margins (€/Acre)							

An excel version of this calculator is available (free) from www.teagasc.ie/crops

Share Farming Crop Budget

Variable Costs excl. VAT (€/acre)		Crop Budget (€/ac)	=	Landowner Share (€/ac)	+	Share-farmer Share (€/ac)
MATERIALS (A=B+C+D+E+F+G)	A					
Seed	B					
Fertilisers	C					
Sprays:						
Herbicides	D					
Fungicides	E					
Insecticides	F					
Growth Regulators	G					
MACHINERY COSTS (H=I+J+K+L)	H					
Plough, Till and Sow	I					
Spray	J					
Fertiliser Spreading	K					
Harvesting	L					
MISCELLANEOUS COSTS (M=N+O)	M					
Interest	N					
Transport	O					
TOTAL VARIABLE COSTS (P=A+H+M)	P					
Tonnes to cover variable costs (Q=P/R)	Q					
Net Price (€/tonne)	R					
AID (€/acre)	S					
REPS €/acre)	T					
Straw (€/acre)	U					
Projected yield	V					
Gross Margins (€/acre) (W = (R*V)+S+T+U-P)	W		=		+	

NON CEREAL CROP MARGINS 2012

Variable Costs excl. VAT (€/hectare)

	BEET	Potatoes Maincrop	MAIZE	PEAS	Beans	OILSEED RAPE	
						Winter	Spring
MATERIALS	1100	2555	772	476	427	637	399
Seed	140	1040	200	160	112	75	75
Fertilisers	705	695	507	167	167	392	286
Sprays:							
Herbicides	175	140	65	70	70	95	30
Fungicides	30	550	0	72	72	50	0
Insecticides	50	130	0	7	7	25	8
HIRE MACHINERY	679	2402	606	394	384	487	458
Plough, Till and Sow	250	750	250	160	160	160	160
Roll	0	0	0	18	18	18	18
Spray	76	399	18	57	57	76	57
Fertiliser Spreading	38	38	38	19	19	38	38
Swathing/Dessication	0	40	0	0	0	50	50
Harvesting(grading into store incl)	315	1175	300	140	130	145	135
MISCELLANEOUS	429	389	387	60	49	59	34
Interest (6%)	39	89	27	12	13	22	10
Transport (€/Tonne)	390	300	360	36	36	30	24
Bird Control	0	0	0	12	0	6	0
TOTAL VARIABLE COSTS	2208	5347	1765	929	860	1183	891
Break-even yield	55.2	26.7	39.2	3.7	4.8	3.2	2.4
Net Price (€/Tonne)	40	200	45	250	180	370	370
AID (SFP)=NOT included	0	0	0	55.57	55.57	0	0

Gross Margins (€ /ha)

Tonnes/hectare		BEET	Potatoes Maincrop	MAIZE	PEAS	BEANS	OILSEED RAPE	
							Winter	Spring
(Maize, beet & potatoes)	2.0							-151
30	3.5		653	-415			112	404
35	4.0		1653	-190	126	-84	297	589
40	4.5	-608	2653	35	251	6	482	774
50	5.0	-208	4653	485	376	96	667	
60	5.5	193		935	501	186		
65	6.5	393		1160	751	366		
70	7.0	593						

N.B. Value of beet tops is not included in margin. These could have a grazing value of at least €60/ha. Costings for potatoes include production (not irrigated) and grading into store only. Ware price assumed is €200/t in store in October/Nov. Value added by further grading and washing is up to growers

EXPLANATORY NOTES - NON CEREALS

B. INPUT COSTS: NON CEREAL CROPS					€/ha
	Fertilisers/ha				
Beet:	1,235 kg Beet cmpnd @	€480 /t	=	€593	} €705
	330 kg CAN + S @	€340 /t	=	€112	
Maize:	620 kg 0-7-30 @	€450 /t	=	€279	} €507
	670 kg CAN		=	€228	
Beans/Peas:	370 kg 0-7-30				€167
Winter OSR:	370 kg 10-10-20 @	€490 /t	=	€181	} €392
	250 kg Urea @	€440 /t	=	€110	
	280 kg ASN @	€360 /t	=	€101	
Spring OSR:	370 kg 13-6-20 @	€470 /t	=	€174	} €286
	330 kg CAN+S @	€340 /t	=	€112	

Interest 6%: Beet, Maize, WOSR & Potatoes = 7 Months; Beans = 6 Months; SOSR & Peas = 5 Months

FORAGE CROPS 2012 Variable Costs excl. VAT (€/hectare)

	F. BEET	SWEDES	KALE	RAPE	STUBBLE TURNIPS	MAIZE
MATERIALS	1100	511	487	302	235	772
Seed	140	80	102	30	78	200
Fertilisers	705	266	385	272	157	507
Sprays:						
Herbicides	175	105	0	0	0	65
Fungicides	30	35	0	0	0	0
Insecticides	50	25	0	0	0	0
HIRE MACHINERY	679	229	158	158	143	606
Seedbed Prep + sow	250	175	140	140	125	250
Spray	76	36	0	0	0	18
Fertiliser Spreading	38	18	18	18	18	38
Harvesting+COVERING	315	0	0	0	0	300
TOTAL VARIABLE COSTS	1779	740	645	460	378	1378
GREEN YIELD (Tonnes/hectare)						
Leaves(+roots)	124	74	37	42	25	55
DRY MATTER (Tonnes/hectare)						
UTILISED	13.0	5.2	5.5	3.5	2.5	12.5
COST (€/Tonne util DM)	137	142	117	131	151	110

Covering maize with plastic mulch will cost an extra €300/ha but will improve quality and may increase yield.

COMMENT ON FORAGE CROP COSTS

Grazed Grass is likely to continue to be the cheapest fodder at about €50/tonne DM utilised. It has the advantage of producing very good yields in most locations and of course is extremely convenient to produce and utilise.

Grass Silage: First cut grass silage can be produced at reasonable costs - approximately €130/tonne DM utilised. Grass silage costs vary considerably depending on yields. Second and third cut silage are more expensive forms of fodder (circa €145/t) where machinery has to be hired. Moreover, the variability in yield and quality of second and third cut silage has forced many farmers to consider alternatives such as maize, whole crop wheat and fodder beet.

Non Grass Silage: The cost per tonne dry matter utilised for maize is approximately €110 and whole crop wheat is €118. Fodder Beet is estimated to cost €137/tonne DM utilised.

Production from Brassicas such as swedes, rape and stubble turnips will not match the main fodder crops and have a reasonable cost at around €140 - €150 per tonne of DM utilised. Recent trial work on Kale has recorded high utilisable yields reducing its cost per tonne DM to €117.

Maize produces a high yield of quality feed at lower costs than second or third cut grass silage giving improved animal performance. It is convenient as sowing and harvesting are done by contractor. Feeding can be done with existing grass silage facilities. Moreover, there are no rotational constraints and it utilises slurry very efficiently.

The convenience of growing, storing and feeding as well as animal performance are important considerations when deciding which fodder crop to grow.

The opportunity cost of land needs to be taken into account when making comparisons of fodder and bought in feed. Thus a rental charge of €350/ha may be applied for a full year in the case of grazed grass but somewhat less in the case of grass silage and brassicas.

Share Farming

Share Farming is now in its third year and working successfully on farm. Share Farming is an agreement between two individuals (or two businesses) to jointly manage a farming operation. This legal agreement allows both the grower and the landowner to farm as separate businesses but share in the risks and rewards of growing crops. As both individuals remain separate business entities, they can continue to claim the Single Farm Payment, REPS, etc. in their own name as normal.

Key points:

- Share Farming is fully compliant with EU/DAFM schemes (incl. REPS)
- The agreement is not land rental or a Partnership Agreement
- The output generated from the land are to reward the
 - Landowner for the land, labour and inputs supplied
 - Share farmer for labour, expertise and inputs supplied
- Both parties are separate business entities and must not open or operate joint accounts to run the farming operation

All tillage growers and landowners who are currently involved in land rental should familiarise themselves with this agreement and assess whether it is a viable option for the future.

A template of a Share Farm Agreement is available (www.teagasc.ie) and sets out how an example agreement can operate. Contact your local advisor for more details

Organic Tillage

Organic tillage has been a profitable enterprise over the last number of years. A stockless tillage system can be practised; however a mixed stock and tillage organic system is most sustainable due to the availability of slurry and farmyard manure. There is a strong demand for organic cereals both for livestock and human consumption. The demand for organic cereals is expected to continue for the foreseeable future.

The Organic Farming Scheme is a support payment that may be claimed by Organic farmers. In the five year scheme farmers will receive €212 per hectare per year up to 55ha during the two year in-conversion period. Crops sown over 12 months after initial conversion date are deemed to have in-conversion status. In-conversion crops can be worth almost as much as full symbol crops. Full symbol growers will receive €106 per ha per year. Direct payments for organic production are paid yearly, based on a five year plan. Growers can partially convert a holding and continue to farm the remaining conventionally subject to certain restrictions.

Non REPS growers in stockless rotations can receive additional payments of €240 per hectare for the two years in conversion to build fertility. Additional capital grants for buildings, machinery and equipment at a 40% rate are also available.

Output is lower than conventional unit but prices for grain are higher. Generally winter crops yield higher. For margins see the attached budget. Organic Oats in 2011 made €320 - €350 per ton, and rolled and dried grain traded for up to €340 per ton ex farm. Generally yields range from 4 to 7.5 tons per ha in 2011

Further information on organic farming can be obtained from the Teagasc organic specialist advisers Elaine Leavy 0879853285 and Dan Clavin 0879368506.