CROPS
COSTS AND RETURNS
2010

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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 2010. In future years the stacked grower may rent additional land (if profitable) without compromising his stacked (consolidated) entitlements. Further details on consolidation are due shortly when CAP Health Check details are finalised.

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, WO, other grassweeds	
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.

CEREAL CROP MARGINS 2010

Variable Costs excl. VAT (€/hectare)

	WHEAT		FEED BARLEY		MALTING BARLEY	FEED OATS	
	Feed Winter	Milling Spring	Winter	Spring		Winter	Spring
MATERIALS	**596**	**436**	**527**	**339**	**339**	**471**	**397**
Seed	56	66	62	60	60	62	62
Fertilizers	275	192	258	155	155	229	155
Sprays:							
Herbicides	56	40	56	40	40	27	27
Fungicides	157	112	100	67	67	122	122
Insecticides	38	20	22	17	17	17	17
Growth Regulators	14	6	29	0	0	14	14
HIRE MACHINERY	**424**	**406**	**388**	**370**	**370**	**388**	**388**
Plough, Till and Sow	150	150	150	150	150	150	150
Spray	90	72	72	54	54	72	72
Fertilizer Spreading	54	54	36	36	36	36	36
Harvesting	130	130	130	130	130	130	130
MISCELLANEOUS	**73**	**54**	**65**	**45**	**46**	**56**	**46**
Interest (6%)	23	10	21	8	8	19	9
Transport (€5/tonne)	50	44	44	37	37	37	37
TOTAL VARIABLE COSTS	**1093**	**896**	**980**	**754**	**755**	**915**	**831**
Tonnes to Cover Variable Costs	9.5	7.2	9.3	7.2	5.6	8.7	7.9
Net Price (€/tonne)	115	125	105	105	135	105	105
AID (SFP)=NOT included	0	0	0	0	0	0	0
Straw (€/ha)	75	65	125	90	90	90	90

Gross Margins (€/Hectare)

	WHEAT		FEED BARLEY		MALTING BARLEY	FEED OATS	
Tonnes/Hectare	Feed Winter	Milling Spring	Winter	Spring		Winter	Spring
6.0	-328	-81	-225	-34	145	-195	-111
7.0	-213	44	-120	71	280	-90	-6
8.0	-98	169	-15	176	415	15	99
9.0	17	294	90	281	550	120	204
10.0	132	419	195			225	
11.0	247						

EXPLANATORY NOTES - CEREAL CROPS

Fixed or Overhead Costs per Hectare
Scutch Control €17, Lime €17, Maintenance of Land and Fences, Car, Phone, ESB and regular hired labour?
Total €140+. Fixed costs have to be subtracted from gross margin to give income.

VAT is excluded from input costs and outputs

Input Costs: **Cereals**

Seed: €400/t Blue Label

Rate: W.Wheat – 140 kg/ha; W. Barley & Oats – 155 kg/ha;
S. Barley – 150 kg/ha; S.Wheat – 165 kg/ha

Fertilizer:

W. Cereals, 340 kg/ha 0-10-20 @ €350/t	=€119
W. Wheat 710kg/ha CAN (27% N) @ €220/t	=€156
W. Barley 630 kg/ha CAN	=€139
W.Oats – 500 kg/ha CAN	=€110
S. Cereals 370 kg/ha 14-7-14 or 18-6-12 @ €300/t	=€111
Topdress S. Wheat – 370 kg/ha CAN	=€81
S. Oats and S. Barley – 200 kg/ha CAN	=€44

Herbicides: W.Wheat & W.Barley €56; S.Wheat & S.Barley €40; Oats €27

Fungicides:

Winter Wheat: T0: Bravo	= €10	
T1: Eyespot + B.S. + Bravo Growth Stage 31-32	= €55	
T2:.Broad Spectrum + Bravo. Growth Stage 37-39	= €44	€157/ha
T3: B.S. including triazole, Growth Stage 55-60	= €48	
Spring Wheat:		
T1: ½ rate (B.S. + Mildewcide.), Growth Stage 30-32	=€24	
T2: Broad Spectrum + Bravo. Growth Stage 37-39	=€46	€112/ha
T3: B.S. including triazole, Growth Stage 55-60	=€42	
S. Barley: T1: red. rate (Triazole + mildew); T2: Strob+triazo+Bravo	= €67	
Winter Barley: 3 Fungicides	= €100	
Oats: cyproconazole+ Mildewcide at T1 + T2, Strob T3 gs37-55	= €122	

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

Growth Regulators:

W. Wheat , W. & S. Oats; 2.2 L/ha 750g/L CCC	= €14/ha
Spring Wheat 1.0 L/ha	= €6
Winter Barley	= €29

Hire Machinery:

Plough (€70), Till + Sow (€80)	= €150/ha
Spraying	= €18/ha
W. Wheat: Weeds + Aphids, PGR, Fungicide x 3	= €90
S. Wheat: Weeds + Aphids, Fungicide x 3	= €72
W. Barley:Aphids+ Weeds, Fungicide x 3	= €72
S. Barley: Weeds + Aphids, Fungicide x 2	= €54
W.Oats: Weeds Aphids, Fungicide x 3	= €72
Fertilizer Spreading @ €18/ha	=€36-54

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

CEREAL CROP MARGINS 2010

Variable Costs excl. VAT (€/Acre)

	WHEAT		FEED BARLEY		MALTING BARLEY	FEED OATS	
	Feed Winter	Milling Spring	Winter	Spring		Winter	Spring
MATERIALS	241	176	213	137	137	191	161
Seed	23	27	25	24	24	25	25
Fertilizers	111	78	104	63	63	93	63
Sprays:							
Herbicides	23	16	23	16	16	11	11
Fungicides	64	45	40	27	27	49	49
Insecticides	15	8	9	7	7	7	7
Growth Regulators	6	2	12	0	0	6	6
HIRE MACHINERY	172	164	157	150	150	157	157
Plough, Till and Sow	61	61	61	61	61	61	61
Spray	36	29	29	22	22	29	29
Fertilizer Spreading	22	22	15	15	15	15	15
Harvesting	53	53	53	53	53	53	53
MISCELLANEOUS	**30**	**22**	**26**	**18**	**19**	**23**	**19**
Interest (6%)	9	4	8	3	4	8	4
Transport (€5/tonne)	20	18	18	15	15	15	15
TOTAL VARIABLE COSTS	442	363	397	305	306	370	336
Tonnes to Cover Variable Costs	3.8	2.9	3.8	2.9	2.3	3.5	3.2
Net Price (€/tonne)	115	125	105	105	135	105	105
AID (SFP)=NOT included	0	0	0	0	0	0	0
Straw (€/ac)	30	26	51	36	36	36	36

Gross Margins (€/acre)

	WHEAT		FEED BARLEY		MALTING BARLEY	FEED OATS	
Tonnes/acre	Feed Winter	Milling Spring	Winter	Spring		Winter	Spring
2.4	-133	-33	-91	-14	59	-79	-45
2.8	-86	18	-49	29	113	-36	-2
3.2	-40	68	-6	71	168	6	40
3.6	7	119	36	114	223	49	83
4.0	53	170	79			91	
4.5	100						

NON-CEREAL CROP MARGINS 2010

Variable Costs excl. VAT (€/acre)

	BEET	Potatoes Maincrop	PEAS BATCH	BEANS		OILSEED RAPE	
				Winter	Spring	Winter	Spring
MATERIALS	328	998	195	155	149	208	119
Seed	52	405	61	40	40	30	28
Fertilizers	166	316	53	53	53	111	75
Sprays:							
Herbicides	73	45	51	24	24	38	12
Fungicides	14	182	28	34	28	20	0
Insecticides	23	51	3	3	3	8	3
HIRE MACHINERY	256	842	154	142	142	187	154
Plough, Till and Sow	85	291	61	61	61	61	61
Roll	0	0	7	0	0	7	7
Spray	29	131	22	22	22	29	22
Fertilizer Spreading	15	15	7	7	7	15	7
Swathing	0	0	0	0	0	23	0
Harvesting	127	405	57	53	53	53	57
MISCELLANEOUS	**111**	**111**	**19**	**20**	**15**	**18**	**9**
Interest (6%)	10	30	4	4	4	6	3
Transport (€5/tonne)	101	81	10	12	11	9	6
Bird Control	0	0	5	4	0	3	0
TOTAL VARIABLE COSTS	695	1950	368	317	306	413	281
Output to Cover Variable Costs Tonnes/acre	18.3	8.9	1.5	2.3	2.2	1.5	1
Net Price (€/tonne)	38	220	250	140	140	270	270
AID (SFP)=NOT included			22	22	22	0	0

Gross Margins €/acre

		BEET	Potatoes Maincrop	PEAS BATCH	BEANS		OILSEED RAPE	
					Winter	Spring	Winter	Spring
Tonnes/acre								
(S.Beet & Potatoes)	0.8							-63
12	1.2		721					47
14	1.6	-157	1166	-59	68	-57	24	156
16	2.0	-20	1611	-160	11	0	133	265
20	2.2	74	2501	211	17	28	188	320
24	2.4	227		261	46	56	243	374
26	2.6	304		0	74	85	297	
28	2.8	381		0	102	113		

CEREAL CROP BUDGETS
Variable Costs excl. VAT (€/Acre)

		WINTER WHEAT		SPING BARLEY		ANOTHER CROP	
		Actual	Budget	Actual	Budget	Actual	Budget
MATERIALS (**A**=B+C+D+E+F+G)	**A**	**0**	241	**0**	**137**	**0**	**0**
Seed	**B**		23		24		
Fertilizers	**C**		111		63		
Sprays:							
Herbicides	**D**		23		16		
Fungicides	**E**		64		27		
Insecticides	**F**		15		7		
Growth Regulators	**G**		6		0		
HIRE MACHINERY (**H**=I+J+K+L)	**H**	**0**	172	**0**	**150**	**0**	**0**
Plough, Till and Sow	**I**		61		61		
Spray	**J**		36		22		
Fertilizer Spreading	**K**		22		15		
Harvesting	**L**		53		53		
MISCELLANEOUS (**M**=N+O)	**M**	**0**	30	**0**	**18**	**0**	**0**
Interest (6%)	**N**		9		3		
Transport (€5/tonne)	**O**		20		15		
TOTAL VARIABLE COSTS (**P**=A+H+M)	**P**	0	442	0	305	0	0
Tonnes to cover variable costs (**Q**=P/R)	**Q**		3.8		2.9		
Net Price (€/tonne)	**R**		115		105		
AID (€/acre)	**S**		0		0		
Straw (€/acre)	**T**		30		36		
Projected yield	U						
Gross Margins (€/acre) (V = (R*U)+S+T-P)	V						
Gross Margins (€/acre)							

Share Farming Crop Budget

Variable Costs excl. VAT (€/acre)		Crop Budget (€/ac)		Land-owner Share		Share-farmer Share
MATERIALS (**A**=B+C+D+E+F+G)	**A**		=		+	
Seed	**B**					
Fertilizers	**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**					
Fertilizer 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 MARGINS 2010

Variable Costs excl. VAT (€/hectare)

	BEET	Potatoes Maincrop	PEAS BATCH	BEANS Winter	BEANS Spring	OILSEED RAPE Winter	OILSEED RAPE Spring
MATERIALS	**811**	**2465**	**483**	**382**	**367**	**513**	**293**
Seed	128	1000	150	100	100	75	70
Fertilizers	410	780	130	130	130	274	185
Sprays:							
Herbicides	180	110	126	60	60	95	30
Fungicides	35	450	70	85	70	50	0
Insecticides	58	125	7	7	7	19	8
HIRE MACHINERY	633	2080	380	352	352	463	380
Plough, Till and Sow	210	720	150	150	150	150	150
Roll	0	0	18	0	0	18	18
Spray	72	324	54	54	54	72	54
Fertilizer Spreading	36	36	18	18	18	36	18
Swathing	0	0	0	0	0	57	0
Harvesting	315	1000	140	130	130	130	140
MISCELLANEOUS	274	274	47	49	37	44	22
Interest (6%)	24	74	10	9	9	15	7
Transport (€5/tonne)	250	200	25	30	28	23	15
Bird Control	0		12	10	0	6	0
TOTAL VARIABLE COSTS	1718	4819	910	783	756	1020	695
Output to cover variable costs							
Tonnes/acre	45.2	21.9	3.6	5.6	5.4	3.8	2.6
Net Price (€/tonne)	38	220	250	140	140	270	270
AID (SFP)=NOT included	0	0	55.57	55.57	55.57	0	0

Gross Margins (€/hectare)

Tonnes/hectare		BEET	Potatoes Maincrop	PEAS BATCH	BEANS Winter	BEANS Spring	OILSEED RAPE Winter	OILSEED RAPE Spring
(Beet, potatoes)	2.0							-155
30	3.0		1781					115
35	4.0	-388	2881	146	-167	-140	60	385
40	5.0	-198	3981	396	-27	0	330	655
50	5.5	182	6181	521	43	70	465	790
60	6.0	562		646	113	140	600	925
65	6.5	752		771	183	210	735	
70	7.0	942		896	253	280		

N.B. Value of beet tops is not included in margin. These could have a grazing value of at least €60/ha. **C**ostings for potatoes include production (not irrigated) and grading into store only. Ware price assumed is €220/t in store in October/Nov. Value added by further grading and washing is up to growers.

EXPLANATORY NOTES - NON CEREALS

	Fertilizers/Hectare	€ Total
Beet	1235kg beet compound @ €310/t =€382 + 125kg CAN @ €220/t =€28	410
Beans/Peas	370kg 0-7-30 @ €350/t	130
Winter Oilseed Rape	370kg 10-10-20 @ €350/t = €130 + 250kg Urea @ €320/t =€80 + 280kg ASN @ €230/t €64	274
Spring Oilseed Rape	370kg 18-6-12 = €111 330kg CAN+S(€225) = €74	185

Interest 6%: Beet; WOSR & Potatoes = 7 months; Beans = 6 months; SOSR & Peas = 5 months

FORAGE CROPS 2010
Variable Costs excl. VAT (€/hectare)

	FODDER BEET	SWEDES	KALE	RAPE	STUBBLE TURNIP	MAIZE
MATERIALS	**811**	**455**	**352**	**230**	**193**	**633**
Seed	128	80	102	30	78	200
Fertilisers	410	215	250	200	115	370
Sprays:						
Herbicides	180	100	0	0	0	63
Fungicides	35	35	0	0	0	0
Insecticides	58	25	0	0	0	0
HIRE MACHINERY	**633**	**229**	**158**	**158**	**142**	**539**
Seedbed Prep + sow	210	175	140	140	125	185
Spray	72	36	0	0	0	18
Fertiliser Spreading	36	18	18	18	18	36
Harvesting+COVERING	315	0	0	0	0	300
TOTAL VARIABLE COSTS	**1444**	**684**	**510**	**388**	**336**	**1172**
GREEN YIELD (Tonnes/hectare)						
Leaves(+roots)	124	74	37	42	25	55
DRY MATTER (Tonnes/hectare)						
UTILISED	13.0	5.2	4.0	3.5	2.5	12.5
COST (€/Tonne DM)	111	132	128	111	134	94

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

Comment on Forage Crop Costs

Grazed Grass is likely to continue to be the cheapest fodder at about €40/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 €105/tonne DM utilised. Grass silage costs vary considerably depending on yields. Second and third-cut silage are more expensive forms of fodder (circa €120/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 close to €94 and wholecrop wheat is €110. Fodder beet roots are estimated to cost €111/tonne DM utilised.

Production from Brassicas such as swedes, kale and stubble turnips will not match the main fodder crops and have a reasonable cost at around €130 per tonne of DM utilised. Rape costs an estimated €111/t DM utilised.

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 €300/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

Teagasc has recently launched a new format for farmers to co-operate in business called Share Farming. 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 legal entities 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/DAFF 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.
Further information on organic farming can be obtained from the Teagasc organic specialist advisers.