Animal &
Grassland Research
& Innovation
Programme







BEEF PRODUCTION SYSTEM GUIDELINES

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Bord Bia
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INTRODUCTION
BEEF PRODUCTION SYSTEM GUIDELINES

Beef farming in Ireland is characterised by many different beef production systems where cattle are sold off farms for further finishing on another farm or else are sold direct to slaughter.

Our national suckler herd supplies a significant proportion of the cattle slaughtered each year but with an expanding national dairy herd there is an increasing supply of calves of dairy origin that are being finished as beef. Both early and late maturing beef sires are used on suckler and dairy cows which also influences their age at slaughter and their carcass weights. In recent years, a considerable proportion of male beef animals are being finished as bulls at varying ages and weights. These systems are very different to the traditional steer finishing systems practiced on many farms.

No one beef production system is the optimum system for finishing beef cattle with each having its own merits and risks. For any beef system to be profitable and sustainable in the long term there are a number guidelines and targets that beef farmers need to be aware of and should work towards achieving. It is also important that beef farmers focus on the areas within their chosen beef system that they can improve on over time instead of moving from one beef system to another as a reaction to short term changes in the market. At the Beef Industry Roundtable Discussions chaired by the Minister for Agriculture, Food and the Marine one of the key actions agreed was that Teagasc and Bord Bia would produce a set of guidelines for beef farmers to follow when targeting a particular beef system. These guidelines were to include best practice around the management to achieve target daily gains, an estimate of the inputs required and the outputs achievable, an awareness of the different market requirements that the beef would be sold into and the risks involved, if any, associated with each system.

This publication outlines 14 of the most common beef systems on Irish farms at present. It includes both suckler and dairy calf to beef systems. As the production of the suckler calf up until it is weaned from the cow is quite similar this stage of the production cycle is not covered under each system, with an assumed common weaning weight for male and female calves of 320kg and 290kg liveweight, respectively. Similarly, the first 10 to 12 weeks rearing phase of the dairy calf is not included with an assumed common weaned calf weight of 90-100kg liveweight. Both these phases of production (for the suckler calf and the dairy bred calf) are extremely important and can have a significant influence on the subsequent lifetime performance of an animal. For suckler farmers selling their calves shortly after they are weaned, the profitability of their system is hugely influenced by the weight and quality of the calf that they sell due to the very high costs of keeping the suckler cow for a year and where the majority of their output is the value of the calf each cow rears. The cost of keeping the suckler cow will depend to large extent on the length of the grazing season which is heavily influenced by land type and weather. Where the winter housing period is extended these costs are considerably higher when compared to drier farms with longer grazing seas

All of the performance data and estimates of inputs and outputs outlined for each system is based on data generated from Teagasc research in Grange Research Centre and Johnstown Castle. It also includes data verified in Teagasc research demonstration herds such as the Derrypatrick herd in Grange.

Almost 90% of Irish beef production is exported. Exports exceed 500,000 tonnes annually, making Ireland the largest net exporter of beef in the EU and fourth largest in the world. Nowadays, over 95% of Irish beef exports are focused on the higher value consumer markets of the UK and continental Europe. The vast majority of these exports are in the form of boneless primal cuts. After deboning, beef cuts from an individual carcase are supplied to several different customers, according to market demand. Irish beef is supplied to over 85 EU supermarket chains, as well as major manufacturing and foodservice customers, who have specific requirements with regard to the type of beef that they buy. With this in mind, production systems need to supply prime beef which meets the demands of our most important markets.

The industry has developed a Quality Payment Scheme (QPS) which delivers a bonus payment on top of the quoted base price to producers who deliver steers, heifers and young bulls that meet the specifications laid out in table 1 below. It is important to realise that not all the production systems outlined will qualify for the QPS because animals may not meet the age, conformation, fat score or quality assurance criteria laid down at the time of slaughter. It is also the case where not all processors will pay a QPS on Under 16 month bulls so producers should consult with their processor. It is advisable if producing animals outside of target market specifications, producers should be in communication with their processors.

These system guidelines have been developed by Teagasc cattle specialists and beef researchers in association with Bord Bia beef market analysts.

IRISH PRIME BEEF CARCASE TARGET MARKET SPECIFICATION GUIDELINES

	STEER	HEIFER	YOUNG BULL
	MUST BE QUALITY ASSURED		
Age:	U30m	U30m	U16m
Fat Score:	2+to 4=	2+to 4=	2+to 4=
Conformation:	O=or better	O=or better	O=or better
Farm residencies:	Max. 4	Max. 4	Max. 4
Days on last QA farm:	70 days +	70 days +	70 days +

UNDER 16 MONTH BULL BEEF (SUCKLER)

1. SYSTEM DESCRIPTION (HIGH CONCENTRATE)

- Production of young bulls from the suckler herd which are slaughtered before they reach 16 months of age.
- These young bulls are acceptable to customers in the UK market.
- They demonstrate high levels of feed conversion efficiency as part of a high output system.

2. TYPICAL LIVEWEIGHTS AT DIFFERENT STAGES OF PRODUCTION

STAGE OF PRODUCTION	LIVEWEIGHT (KG)	AVERAGE DAILY GAIN (KG/DAY)
Weaning (Start Weight)	320	1.33
Housing	350	1.20
Slaughter	700	1.50
Carcase Weight (kg)	380-420	

3. MANAGEMENT GUIDELINES

- Calves selected for this system should have performed well pre weaning achieving 1.25kg/day or better from birth.
- Animals will need to achieve a lifetime gain of around 1.35kg/day from birth to slaughter.
- Animals should be from genetically superior sires that demonstrate high growth potential, good conformation and are easy fleshing to achieve an adequate fat cover by slaughter.
- On suckler farms finishing their own bulls the system is best suited where the herd is achieving a compact calving over a 10-12 week period.
- Calves are introduced to 2-3 kg of concentrates at grass between weaning and housing. Concentrates are built up to average 5kg/day after housing and then on to *ad-lib* meals for the final 120 day finishing period.
- A good herd health programme is required for this intensive system as animals cannot afford any setbacks or store period if they are to achieve the targets set out.
- As animals will be housed for 8-9 months in this system good housing facilities will be required with adequate lying space, clean drinking water and good ventilation.

4. INPUTS REQUIRED

Concentrates	1.39t DM or 1.6t fresh weight.
Silage	0.56t DM or 2.8 t fresh weight.
Stocking Rate	8.4 animals/ha at 170kg organic N per ha

UNDER 16 MONTH BULL BEEF (SUCKLER)

5. ECONOMICS

		€
a. Weaned Calf Purchase Value	320 kg	
b. Carcase Value	400 kg	
c. Sales – Purchases (B –A)		
Variable Costs per Head*		
Grass	-	
Concentrates	1.6 tonnes	
Silage	2.8 tonnes	€84
Veterinary	-	€35
Transport & Levies	-	€40
d. Total Variable Costs		
Gross Margin per Head (C – D) **		

* Variable costs per head do not include interest or mortality costs.
** Subtract estimated fixed costs per head to calculate net margin per head.

6. MARKET CONSIDERATIONS

- In order to meet the desired customer specification young bulls must be less than 16 months of age at slaughter.
- Young bulls should achieve a minimum fat class of "2+". If a carcase is not sufficiently finished, the beef cuts look less appealing and eating quality is reduced. Poorly fleshed young bulls are more likely to produce dark-cutting beef.
- Strongest demand is for animals of up to approximately 400 kg carcase weight, which will produce steak cuts of the preferred size for most customers.
- Care should be taken in loading and transporting young bulls. To prevent stress, animals should be kept in their peer groups and slaughtered without delay.

7. GENERAL CONSIDERATIONS

- The high concentrate regime will deliver an average daily gain over the housing period of at least 1.5kg/day. Approximately 150kg of straw will be required during the *ad-lib* concentrate phase and can be used successfully if silage is not available.
- It is advisable for producers engaging in under-16 month bull production to discuss in advance with their intended meat plant. In some processing plants, under-16 month young bulls are paid for on the QPS (Quality Payment System) and are eligible for the in-spec QA bonus once they meet the related criteria.
- Excellent feeding management and achieving sufficient fat cover are key components in achieving performance and profitability in this system.
- Some producers may aim to sell animals that are fit for slaughter at even younger ages.
- Young bulls can be aggressive and need careful handling to minimise any health and safety risk.

UNDER 16 MONTH BULL BEEF (SUCKLER)

1. SYSTEM DESCRIPTION

- Production of young bulls from the suckler herd which are slaughtered before they reach 16 months of age.
- These young bulls are acceptable to customers in the UK market.
- They demonstrate high levels of feed conversion efficiency as part of a high output system.

2. TYPICAL LIVEWEIGHTS AT DIFFERENT STAGES OF PRODUCTION

STAGE OF PRODUCTION	LIVEWEIGHT (KG)	AVERAGE DAILY GAIN (KG/DAY)
Weaning (Start Weight)	320	1.33
Housing	350	1.20
Slaughter	650	1.30
Carcase Weight (kg)	370-400	

3. MANAGEMENT GUIDELINES

- Calves selected for this system should have performed well pre weaning achieving 1.25kg/day or better from birth.
- Animals will need to achieve a lifetime gain of around 1.25kg/day from birth to slaughter.
- Animals should be from genetically superior sires that demonstrate high growth potential, good conformation and are easy fleshing to achieve an adequate fat cover by slaughter.
- On suckler farms finishing their own bulls the system is best suited where the herd is achieving a compact calving over a 10-12 week period.
- Calves are introduced to 2-3 kg of concentrates at grass between weaning and housing. Concentrates are built up to average 5kg/day after housing for the 230 day finishing period.
- The system also requires high DMD silage of 72%DMD or better for the indoor feeding period. On average animals will consume approximately 20kg of silage daily on this system.
- A good herd health programme is required for this intensive system as animals cannot afford any setbacks or store period if they are to achieve the targets set out.
- As animals will be housed for 8-9 months in this system good housing facilities will be required with adequate lying space, clean drinking water and good ventilation.

4. INPUTS REQUIRED

Concentrates	1.1t DM or 1.27t fresh weight.
Silage	0.9t DM or 4.5 t fresh weight.
Stocking Rate	8.4 animals/ha at 170kg organic N per ha

UNDER 16 MONTH BULL BEEF (SUCKLER)

5. ECONOMICS

		€
a. Weaned Calf Purchase Value	320 kg	
b. Carcase Value	365 kg	
c. Sales – Purchases (B –A)		
Variable Costs per Head*		
Grass	-	
Concentrates	1.27 tonnes	
Silage	4.5 tonnes	€135
Veterinary	-	€35
Transport & Levies	-	€40
d. Total Variable Costs		
Gross Margin per Head (C – D) **		

* Variable costs per head do not include interest or mortality costs.
** Subtract estimated fixed costs per head to calculate net margin per head.

6. MARKET CONSIDERATIONS

- In order to meet the desired customer specification young bulls must be less than 16 months of age at slaughter.
- Young bulls should achieve a minimum fat class of "2+". If a carcase is not sufficiently finished, the beef cuts look less appealing and eating quality is reduced. Poorly fleshed young bulls are more likely to produce dark-cutting beef.
- Strongest demand is for animals of up to approximately 400 kg carcase weight, which will produce steak cuts of the preferred size for most customers.
- Care should be taken in loading and transporting young bulls. To prevent stress, animals should be kept in their peer groups and slaughtered without delay.

7. GENERAL CONSIDERATIONS

- An alternative finishing strategy is also possible where animals initially go through a growing phase after housing for approximately 4 months on 3-5 kg of concentrates/day before being built up on *ad-lib* concentrates for the final 100 days. This may be a viable option when concentrate prices are low or where you are unable to make high DMD silage consistently.
- The high concentrate regime will deliver an average daily gain over the housing period of at least 1.5kg/day. Concentrates consumed will increase to 1.5- 1.6t/head and silage consumption will drop to 2.5t/head. Approximately 150kg of straw will be required during the *ad-lib* concentrate phase.
- It is advisable for producers engaging in under-16 month bull production to discuss it in advance with their intended meat plant. In some processing plants, under-16 month young bulls are paid for on the QPS (Quality Payment System) and are eligible for the in-spec QA bonus once they meet the related criteria.
- Excellent feeding management and achieving sufficient fat cover are key components in achieving performance and profitability in this system.
- Some producers may aim to sell animals that are fit for slaughter at even younger ages.

UNDER 16 MONTH BULL BEEF
(DAIRY CALF TO BEEF)

1. SYSTEM DESCRIPTION

Production of young bulls from spring born Holstein-Friesian calves which are slaughtered under 16 months of age. Calves graze for one season and are then finished on high levels of *ad-lib* concentrate feeding.

2. TYPICAL LIVEWEIGHTS AT DIFFERENT STAGES OF PRODUCTION

STAGE OF PRODUCTION	LIVEWEIGHT (KG)	AVERAGE DAILY GAIN (KG/DAY)
Weaned Calf Weight	100	0.70
Housing (1st winter)	250	0.85
Slaughter	520	1.30
Carcase Weight (kg)	260-280	

3. MANAGEMENT GUIDELINES

- This system suits earlier born Holstein Friesian bull calves that are at least 100kg liveweight when weaned at 10 weeks of age.
- Later spring born bulls are not suited to this system as they are too light at housing and need an extended winter finishing period.
- Excellent grassland management while calves are grazing is necessary if the housing weight of 250 kg is to be achieved. A proper parasite control programme needs to be in place throughout the grazing season.
- Calves will need to be supplemented with up to 2 kg of meal per head per day while at grass if the targets are to be consistently met.
- Calves not reaching at least 220 kg liveweight at housing should be finished in an alternative beef finishing system.
- At housing, weanlings are built up over a three week period to *ad-lib* concentrates and fed 1.0 kg of roughage dry matter per head per day (either straw or silage). Bulls will consume 1.8 tonnes of concentrate per head during the finishing period.
- Good housing facilities are required with adequate lying space, clean drinking water and good ventilation.

4. INPUTS REQUIRED

Concentrates	1.9t DM or 2.2t fresh weight
Grazed Grass	0.4t DM
Silage	0.25t DM or 1.25t fresh weight
Stocking Rate	4.7 animals/ha at 170kg organic N per ha

UNDER 16 MONTH BULL BEEF (DAIRY CALF TO BEEF)

5. ECONOMICS

		€
a. Weaned Calf Purchase Value	90 kg	
b. Carcase Value	270 kg	
c. Sales – Purchases (B –A)		
Variable Costs per Head*		
Grass	0.4 tonnes DM	€16
Concentrates	2.2 tonnes	
Silage	1.25 tonnes	€38
Veterinary	-	€35
Transport & Levies	-	€40
d. Total Variable Costs		
Gross Margin per Head (C – D) **		

* Variable costs per head do not include interest or mortality costs.
** Subtract estimated fixed costs per head to calculate net margin per head.

6. MARKET CONSIDERATIONS

- In order to meet the desired customer specification, young bulls must be less than 16 months of age at slaughter.
- Young bulls should achieve a minimum fat class of "2+". If a carcase is not sufficiently finished, the beef cuts look less appealing and eating quality is reduced. Poorly fleshed young bulls are more likely to produce dark-cutting beef.
- Strongest demand is for animals of conformation "O=" or better and with carcase weights of 270 kg upwards.
- Care should be taken in loading and transporting young bulls. To prevent stress, animals should be kept in their peer groups and slaughtered without delay.

7. GENERAL CONSIDERATIONS

- This system requires very little grass or silage . It therefore is not a stand-alone beef system on a beef farm. This is a high cost system and the gross margins achieved per head are very sensitive to calf purchase price, concentrate price and beef selling price.
- Without good daily gains at grass the carcass weight of 270 kg at less than 16 months will be hard to achieve. Lighter carcasses with inadequate fat covers are more difficult to market.
- With a high number of bulls finished per hectare fixed costs in the finishing period can be high (especially housing costs), eroding much of the gross margin achieved.
- An alternative to this system is the autumn born Holstein-Friesian under 16 month bull beef system. With an older calf going to grass there is a higher proportion of grass in the animal's lifetime diet and the finishing period is shorter hence reducing the costs.
- As with any bull finishing system, producers need to discuss their plans with their processor to ensure there is a market for their product.
- Young bulls can be aggressive and require careful handling and management.

18 - 20 MONTH SUCKLER BULL BEEF

1. SYSTEM DESCRIPTION

- Production of bulls from the suckler herd which are slaughtered between 18 and 20 months of age.
- The system allows for a period at grass in the second grazing season before an intensive finishing period.
- Bulls on this system are not eligible for the Quality Payment Scheme (QPS).
- Producers need to discuss with their processor that they intend to produce 18 to 20 month bulls as market options may be limited with bulls over 16 months and there is the potential of heavy carcases.

2. TYPICAL LIVEWEIGHTS AT DIFFERENT STAGES OF PRODUCTION

STAGE OF PRODUCTION	LIVEWEIGHT (KG)	AVERAGE DAILY GAIN (KG/DAY)
Weaning (Start Weight)	320	1.33
Turnout	400	0.60
Housing (mid-summer)	535	1.35
Slaughter Weight	700	1.65
Carcase Weight (kg)	390-420	

3. MANAGEMENT GUIDELINES

- Calves selected for this system should have performed well pre weaning achieving 1.25kg/day or better from birth.
- Animals will need to achieve a lifetime gain of around 1.20kg/day from birth to slaughter.
- On suckler farms finishing their own bulls the system is best suited where the herd is achieving a compact calving over a 10-12 week period.
- As weanlings, the bulls are over wintered on 1-2kg concentrate plus good quality silage (72%DMD) for their 1st winter with a targeted gain of 0.6kg/day.
- Yearling bulls are turned out in early spring and grazed for 100 days with a targeted gain of 1.35kg/day while at grass.
- Bulls are rehoused and fed on *ad-lib* concentrates for 80-100 days gaining 1.65kg/day achieving a finishing weight of 700kg.
- A good herd health programme is required for this intensive system.
- As animals will be rehoused during the summer months in this system good housing facilities will be required with adequate lying space, clean drinking water and good ventilation.

4. INPUTS REQUIRED

Concentrates	1.3t DM or 1.5t fresh weight
Grazed Grass	1.0t DM
Silage	1.1t DM or 5.5t fresh weight
Stocking Rate	4.9 animals/ha at 170kg organic N per ha

18 - 20 MONTH SUCKLER BULL BEEF

5. ECONOMICS

		€
a. Weaned Calf Purchase Value	320 kg	
b. Carcase Value	400 kg	
c. Sales – Purchases (B –A)		
Variable Costs per Head*		
Grass	1.0 tDM	€40
Concentrates	1.5 tonnes	
Silage	5.5 tonnes	€165
Veterinary	-	€35
Transport & Levies	-	€40
d. Total Variable Costs		
Gross Margin per Head (C – D) **		

* Variable costs per head do not include interest or mortality costs.
** Subtract estimated fixed costs per head to calculate net margin per head.

6. MARKET CONSIDERATIONS

- As outlined, producers undertaking this system should do so in consultation with a meat plant, and with a clear understanding of the desired carcase specifications.
- Young bulls should achieve a minimum fat class of "2+". If a carcase is not sufficiently finished, the beef cuts look less appealing and eating quality is reduced. Poorly fleshed young bulls are more likely to produce dark-cutting beef.
- Strongest demand is for animals of up to approximately 400 kg carcase weight, which will produce steak cuts of the preferred size for most customers.
- Care should be taken in loading and transporting young bulls. To prevent stress, animals should be kept in their peer groups and slaughtered without delay.

7. GENERAL CONSIDERATIONS

- Turning yearling bulls out to grass for a second grazing system requires secure fencing and good management. Bulls may not perform as well at grass in spring if the weather remains unsettled.
- Bulls will be rehoused in mid- summer, so feed needs to be kept fresh and sheds need to be kept cool to maintain intakes.
- Animals in this system can easily exceed optimal carcase weights of 400-420kg. So close monitoring of finishing weights is advised.
- This system will leave animals ready for slaughter in the autumn period where traditionally slaughter numbers increase. This may reduce the finishing price available.
- All producers are advised to discuss their intention to finish older bulls in advance with their processor as marketing of these animals may be difficult.
- Even though animals are grazed in their 2nd season this is still a high input system.
- Bulls can be aggressive and pose a health and safety risk when handling indoors and at grass.

18 - 20 MONTH BULL BEEF
(DAIRY CALF TO BEEF)

1. SYSTEM DESCRIPTION

- Production of young bulls from spring born Holstein-Friesian calves which are slaughtered at 19 months of age.
- The system includes a period of low cost weight gain at grass in the second grazing season before intensive indoor finishing.
- Bulls on this system are not eligible for the Quality Payment Scheme (QPS).
- Producers need to discuss with their processors that they intend to produce over 16 month bulls as market options may be limited.

2. TYPICAL LIVEWEIGHTS AT DIFFERENT STAGES OF PRODUCTION

STAGE OF PRODUCTION	LIVEWEIGHT (KG)	AVERAGE DAILY GAIN (KG/DAY)
Weaned Calf Weight	100	0.70
Housing (1st winter)	230	0.70
Turnout	330	0.85
Housing (mid-summer)	430	1.25
Slaughter	600	1.65
Carcase Weight (kg)	300-330	

3. MANAGEMENT GUIDELINES

- This system suits earlier born Holstein Friesian bull calves that are at least 100 kg liveweight when weaned at 10 weeks of age.
- Excellent grassland management while calves are grazing is necessary if the housing weight of 230 kg is to be achieved. A proper parasite control programme needs to be in place throughout the grazing season. Meal feeding to calves at grass is confined to a small amount at turnout and in the autumn (1 kg per day).
- Weanlings are fed on high quality silage (72DMD +) over the winter and 1.5 to 2.0 kg meal per day. Where lower quality silage is fed, higher meal feeding levels will be required to achieve the 0.85 kg per day daily gain necessary.
- Yearlings are turned out to grass early (end February / early March) for 80 – 90 days grazing. Excellent grassland management with bulls is necessary to meet the 430 kg housing weight.
- Bulls are housed in late May / early June and fed on *ad-lib* concentrates for 80 to 100 days.
- Good housing facilities are required with adequate lying space, clean drinking water and good ventilation.
- A good herd health programme is required for this intensive system.
- As animals will be rehoused during the summer months in this system good housing facilities will be required with adequate lying space, clean drinking water and good ventilation.

4. INPUTS REQUIRED

Concentrates	1.31t DM or 1.5t fresh weight
Grazed Grass	1.5t DM
Silage	0.6t DM or 3.0t fresh weight
Stocking Rate	3.4 animals/ha at 170kg organic N per ha

18 - 20 MONTH BULL BEEF (DAIRY CALF TO BEEF)

5. ECONOMICS

		€
a. Weaned Calf Purchase Value	100 kg	
b. Carcase Value	320 kg	
c. Sales – Purchases (B –A)		
Variable Costs per Head*		
Grass	1.5t DM	€60
Concentrates	1.5 tonnes	
Silage	3.0 tonnes	€90
Veterinary	-	€35
Transport & Levies	-	€40
d. Total Variable Costs		
Gross Margin per Head (C – D) **		

* Variable costs per head do not include interest or mortality costs.
** Subtract estimated fixed costs per head to calculate net margin per head.

6. MARKET CONSIDERATIONS

- As outlined, producers undertaking this system should do so in consultation with a meat plant, and with a clear understanding of the desired carcase specifications.
- Young bulls should achieve a minimum fat class of "2+". If a carcase is not sufficiently finished, the beef cuts look less appealing and eating quality is reduced. Poorly fleshed young bulls are more likely to produce dark-cutting beef.
- Strongest demand being for animals of conformation "O=" or better.
- Care should be taken in loading and transporting young bulls. To prevent stress, animals should be kept in their peer groups and slaughtered without delay.

7. GENERAL CONSIDERATIONS

- These bulls will be classified as over age and will not qualify for the QPS. All producers are advised to discuss their intention to finish older bulls in advance with their processor as marketing these animals may be difficult when cattle supplies are high.
- This is a high cost system and the gross margins achieved per head are very sensitive to calf purchase price, concentrate price and beef selling price.
- Later spring born bulls are not suited to this system as they will be too light when housed for the final finishing period requiring a much longer *ad-lib* concentrate feeding stage.
- Managing bulls at grass for the second grazing season requires excellent management skills.

  In poor weather conditions the length of the second grazing season will be reduced considerably resulting in a significant increase in feed costs.
- This system has animals finishing in the autumn period when traditionally numbers of beef animals for slaughter are at their highest. This may reduce the finishing price available.
- Bulls can be aggressive animals and need careful handling and management. If yearling bulls are to be grazed, fields should to be properly fenced.

19 MONTH EARLY MATURING HEIFER BEEF (DAIRY CALF TO BEEF)

1. SYSTEM DESCRIPTION

- Spring born Angus or Hereford heifers bred from dairy cows and finished off grass at 19 months of age.
- Typically born in the second half of the calving season and slaughtered from September to November.
- Heifers on this system are eligible for the Quality Payment Scheme (QPS) provided they are quality assured and fall within the correct conformation and fat classes on the grid.

2. TYPICAL LIVEWEIGHTS AT DIFFERENT STAGES OF PRODUCTION

STAGE OF PRODUCTION	LIVEWEIGHT (KG)	AVERAGE DAILY GAIN (KG/DAY)
Weaned Calf Weight	90	0.70
Housing (1st winter)	200	0.70
Turnout	260	0.50
Slaughter	460	0.90
Carcase Weight (kg)	230 - 250	

3. MANAGEMENT GUIDELINES

- To achieve a lifetime daily gain of 0.72 kg the calf rearing stage is critically important to ensure the heifer is well grown and healthy when weaned off milk.
- Weanling heifers for this system are on average 200 kg at housing in the autumn. This requires excellent grassland management, a proper parasite control programme and a small amount of meal feeding at turnout and in the autumn (1.0 kg per day).
- Weanlings are introduced to 1.0 - 2.0 kg of concentrates and good quality silage (72%DMD or better) over the first winter. The target is to achieve a modest weight gain of around 0.5kg/day or 60 kg over the first winter.
- Yearling heifers are turned out in early spring to achieve 200 kg over a 220 day grazing season. 3.0 kg of concentrate is fed per day for a seven week period before slaughter.
- Grazing management in the second season at grass must be excellent and will require a rotational grazing system ensuring an adequate supply of leafy grass is available at all times.

4. INPUTS REQUIRED

Concentrates	0.4t DM or 0.45t fresh weight
Grazed Grass	2.3t DM
Silage	0.6t DM or 3.0t fresh weight
Stocking Rate	3.2 animals/ha at 170kg organic N per ha

19 MONTH EARLY MATURING HEIFER BEEF (DAIRY CALF TO BEEF)

5. ECONOMICS

		€
a. Weaned Calf Purchase Value	90 kg	
b. Carcase Value	235 kg	
c. Sales – Purchases (B –A)		
Variable Costs per Head*		
Grass	2.3t DM	€92
Concentrates	0.45 tonnes	
Silage	3.0 tonnes	€90
Veterinary	-	€30
Transport & Levies	-	€40
d. Total Variable Costs		
Gross Margin per Head (C – D) **		

* Variable costs per head do not include interest or mortality costs.
** Subtract estimated fixed costs per head to calculate net margin per head.

6. MARKET CONSIDERATIONS

- Finished heifers usually attract the highest QPS base-price at slaughter because they tend to meet the desired specifications for most customers, in terms of age, carcase weight, conformation etc.
- In addition to the export meat plants, the Irish butcher / wholesale trade often represents a strong market for heifers.
- When finishing heifers, producers should keep a keen eye on fat cover. The ideal carcass fat class for most customers is from a "3" to a "4-".
- Strongest demand being for animals of conformation "O=" or better.
- Excess fat makes the beef less visually appealing and results in a loss in meat yield and higher labour costs on account of trimming.
- A number of processing companies operate breed-specific schemes which reward producers with a price premium on Angus and Hereford sired animals which meet the qualifying criteria.
- It is advisable to pre-book Angus and Hereford cattle in advance to maximise the premiums payable.

7. GENERAL CONSIDERATIONS

- Heifers on this system are highly desirable as they will be slaughtered at a young age, a light carcase weight and are suitable for a number of beef producer schemes that currently offer price bonuses at certain times of the year.
- It is important that heifers on this regime achieve the target carcase weight of 235 kg as lighter carcasses may be more difficult to market.
- Early maturing calves can often attract a premium price in the market and beef farmers purchasing these types of calves need to calculate carefully what they can afford to pay.
- Potentially heifers are being marketed in autumn when supplies of finished cattle are at their highest which may impact on the finished beef price.

20 MONTH HEIFER BEEF (SUCKLER BRED)

1. SYSTEM DESCRIPTION

- On this system continental heifers are slaughtered at 20 months of age before the second winter.
- Heifers can be housed for a 6-8 week period in the autumn prior to slaughter or if there is sufficient grass available they can be supplemented at grass.
- Heifers on this system are eligible for the Quality Payment Scheme (QPS) provided they are quality assured and meet the conformation and fat class requirements.

2. TYPICAL LIVEWEIGHTS AT DIFFERENT STAGES OF PRODUCTION

STAGE OF PRODUCTION	LIVEWEIGHT (KG)	AVERAGE DAILY GAIN (KG/DAY)
Weaning (Start Weight)	290	1.20
Turnout	370	0.60
Housing (2nd winter)	510	0.90
Slaughter Weight	565	0.95
Carcase Weight (kg)	290-320	

3. MANAGEMENT GUIDELINES

- Heifers selected for this system will have performed well pre weaning achieving 1.20kg/day from birth.
- Animals will need to achieve a lifetime gain of around 0.85kg/day from birth to slaughter.
- On suckler farms finishing their own heifers the system is best suited where the herd is achieving a compact calving over a 10-12 week period.
- Heifers are given 1.0 -1.5kg of concentrates and good quality silage over their first winter to achieve a weight gain of 0.5-0.6kg/day.
- The system also requires high DMD silage of 72%DMD or better for the indoor feeding period.
- Heifers are turned out at 370kg in the spring and grazed for just over 5 months achieving 140kg of liveweight gain. This requires good grassland management.
- Heifers can be housed in mid-September and fed on silage and concentrates or they may remain at grass and fed concentrates at grass until slaughter.

4. INPUTS REQUIRED

Concentrates	0.5t DM or 0.58t fresh weight
Grazed Grass	1.5t DM
Silage	0.9t DM or 4.5 t fresh weight
Stocking Rate	3.9 animals/ha at 170kg organic N per ha

20 MONTH HEIFER BEEF (SUCKLER BRED)

5. ECONOMICS

		€
a. Weaned Calf Purchase Value	320 kg	
b. Carcase Value	310 kg	
c. Sales – Purchases (B –A)		
Variable Costs per Head*		
Grass	1.5 tDM	€60
Concentrates	0.58 tonnes	
Silage	4.5 tonnes	€135
Veterinary	-	€25
Transport & Levies	-	€40
d. Total Variable Costs		
Gross Margin per Head (C – D) **		

* Variable costs per head do not include interest or mortality costs.
** Subtract estimated fixed costs per head to calculate net margin per head.

6. MARKET CONSIDERATIONS

- Finished heifers usually attract the highest QPS base-price at slaughter because they tend to meet the desired specifications for most customers, in terms of age, carcase weight, conformation etc.
- In addition to the export meat plants, the Irish butcher / wholesale trade often represents a strong market for heifers.
- When finishing heifers, producers should keep a keen eye on fat cover. The ideal carcass fat class for most customers is from a “3” to a “4-”.
- Excess fat makes the beef less visually appealing and results in a loss in meat yield and higher labour costs on account of trimming.

7. GENERAL CONSIDERATIONS

- Heifers on this system are highly desirable as they will be slaughtered at a young age, good carcase weight and are typically R and U grade.
- It is important that heifers on this regime achieve the targeted weight gain of 80kg over the first winter.
- Good grassland management and early turnout in spring is critical to achieving good weight gain at grass.
- This system allows extra cows to be carried in a suckler system because of the earlier age of slaughter of the heifers.
- Heifers are potentially being marketed in the autumn when supplies of finished cattle are at their highest which may impact on the finished cattle price.

20 MONTH STEER BEEF (SUCKLER BRED)

1. SYSTEM DESCRIPTION

- Production of continental steers from the suckler herd which are slaughtered at 20 months of age before a second winter period.
- Steers go through a modest store period over the first winter gaining around 0.6kg/day before being turned out to grass in early spring. Steers are then rehoused in September for an indoor feeding period of 6-8 weeks before being slaughtered in November.
- Alternatively steers could be fed concentrate at grass for the final 6-8 weeks and slaughtered directly off grass.
- Steers on this system are eligible for the Quality Payment Scheme (QPS) provided they are quality assured and fall within the correct conformation and fat classes on the grid.

2. TYPICAL LIVEWEIGHTS AT DIFFERENT STAGES OF PRODUCTION

STAGE OF PRODUCTION	LIVEWEIGHT (KG)	AVERAGE DAILY GAIN (KG/DAY)
Weaning (Start Weight)	320	1.33
Turnout	400	0.60
Housing (2nd winter)	540	0.90
Slaughter Weight	590	0.95
Carcase Weight (kg)	310-330	

3. MANAGEMENT GUIDELINES

- Weanlings for this system are on average 320kg at weaning in the autumn.
- Animals will need to achieve a lifetime gain of just over 0.9kg/day from birth to slaughter to achieve the targets specified.
- Weanlings are introduced to 1-2 kg of concentrates and good quality silage (72%DMD or better) over the first winter. The target is to achieve a modest weight gain of around 0.6kg/day or 80 kg over the first winter.
- Steers are turned out in early spring to achieve a 200 day grazing season and a gain of around 185kg over there second season at grass. This requires good grazing management.
- From housing to slaughter the steers will be on a diet of high quality silage and an average of 5kg/day of concentrate.
- In an integrated suckler to beef system a compact calving pattern would be desirable.

4. INPUTS REQUIRED

Concentrates	0.5t DM or 0.58 t fresh weight
Grass	2.2t DM
Silage	1.1t DM or 5.5t fresh weight
Stocking Rate	3.9 animals/ha at 170kg organic N per ha

20 MONTH STEER BEEF (SUCKLER BRED)

5. ECONOMICS

		€
a. Weaned Calf Purchase Value	320 kg	
b. Carcase Value	320 kg	
c. Sales – Purchases (B –A)		
Variable Costs per Head*		
Grass	2.2 tDM	€88
Concentrates	0.58 tonnes	
Silage	5.5 tonnes	€165
Veterinary	-	€35
Transport & Levies	-	€40
d. Total Variable Costs		
Gross Margin per Head (C – D) **		

* Variable costs per head do not include interest or mortality costs.
** Subtract estimated fixed costs per head to calculate net margin per head.

6. MARKET CONSIDERATIONS

- Steer beef is seen as being of equivalent quality to heifer beef across many of our markets.
- Steer and heifer beef are the ideal preference for the major UK customers, and similarly across continental Europe these are a point of differentiation, or selling point, against young bull beef, which is widely available and competitively priced.

7. GENERAL CONSIDERATIONS

- The system depends on high quality grass silage being available of at least 70%+ DMD. If silage quality falls below this, higher concentrate levels will be required at both the weanling and finishing phases.
- Steers will be marketed in the Autumn where finished cattle supplies are high, therefore potentially impacting on the potential finishing price the market returns.
- Steers are being finished at a relatively young age so it is important that continental bred steers have adequate fat cover.
- This system allows extra cows to be carried in a suckler system because of the earlier age of slaughter of the steers.
- Steers that fall short of the above targets could be marketed as forward stores before the second winter.

23 MONTH EARLY MATURING STEER BEEF (DAIRY CALF TO BEEF)

1. SYSTEM DESCRIPTION

- Spring born Angus or Hereford steers bred from dairy cows and finished at 23 months.
- Typically born in the second half of the calving season and slaughtered from February to April.
- Steers on this system are eligible for the Quality Payment Scheme (QPS) provided they are quality assured and fall within the correct conformation and fat classes on the grid.

2. TYPICAL LIVEWEIGHTS AT DIFFERENT STAGES OF PRODUCTION

STAGE OF PRODUCTION	LIVEWEIGHT (KG)	AVERAGE DAILY GAIN (KG/DAY)
Weaned Calf Weight	90	0.70
Housing (1st winter)	230	0.85
Turnout	310	0.60
Housing (2nd winter)	510	0.85
Slaughter	610	0.95
Carcase Weight (kg)	310 - 330	

3. MANAGEMENT GUIDELINES

- To achieve a lifetime daily gain of 0.81 kg the calf rearing stage is critically important to ensure the bull calf is well grown and healthy when weaned off milk.
- Weanling steers for this system are on average 230 kg at housing in the autumn. This requires excellent grassland management, a proper parasite control programme and a small amount of meal feeding at turnout and in the autumn (1.0 kg per day).
- Weanlings are introduced to 1.0 - 2.0 kg of concentrates and good quality silage (72%DMD or better) over the first winter. The target is to achieve a modest weight gain of around 0.6kg/day or 80 kg over the first winter.
- Yearling steers are turned out in early spring to achieve 200 kg over a 220 day grazing season. To achieve this, grazing management in the second season at grass must be excellent and will require a rotational grazing system ensuring an adequate supply of leafy grass is available at all times.
- 100 kg of liveweight has to be put on in the final finishing period. To achieve this high quality silage and 5 kg of concentrate are fed. Lower quality silage will require extra meal feeding.

4. INPUTS REQUIRED

Concentrates	0.7t DM or 0.80t fresh weight
Grazed Grass	2.2t DM
Silage	1.2t DM or 6.0t fresh weight
Stocking Rate	2.4 animals/ha at 170kg organic N per ha

23 MONTH EARLY MATURING STEER BEEF (DAIRY CALF TO BEEF)

5. ECONOMICS

		€
a. Weaned Calf Purchase Value	90 kg	
b. Carcase Value	320 kg	
c. Sales – Purchases (B –A)		
Variable Costs per Head*		
Grass	2.2t DM	€88
Concentrates	0.80 tonnes	
Silage	6.0 tonnes	€180
Veterinary	-	€35
Transport & Levies	-	€40
d. Total Variable Costs		
Gross Margin per Head (C – D) **		

* Variable costs per head do not include interest or mortality costs.
** Subtract estimated fixed costs per head to calculate net margin per head.

6. MARKET CONSIDERATIONS

- Steer beef is seen as being of equivalent quality to heifer beef across many of our markets.
- Steer and heifer beef are the ideal preference for the major UK customers, and similarly across continental Europe these are a point of differentiation, or selling point, against young bull beef, which is widely available and competitively priced.
- Strongest demand being for animals of conformation “O=” or better.
- A number of processing companies operate breed-specific schemes which reward producers with a price premium on Angus and Hereford sired animals which meet the qualifying criteria.
- It is advisable to pre-book Angus and Hereford cattle in advance to maximise the premiums payable.

7. GENERAL CONSIDERATIONS

- Steers on this system are highly desirable as they will be slaughtered at a young age, a light carcase weight and are suitable for a number of beef producer schemes that currently offer price bonuses at certain times of the year.
- Early maturing calves can often attract a premium price in the market and beef farmers purchasing these types of calves need to calculate carefully what they can afford to pay.
- Grazing management in the first and second grazing season needs to be excellent as does the quality of silage fed to weanlings and finishing steers. Otherwise the concentrate feeding levels need to increase reducing the margins achievable.

24 MONTH HEIFER BEEF (SUCKLER)

1. SYSTEM DESCRIPTION

- On this system continental heifers are slaughtered at 24 months of age.
- Heifers are housed for their second winter at 530 kg and will be put on a diet of good quality silage (72%+DMD) and 4.0 to 4.5kg of concentrates to finish.
- Heifers on this system are eligible for the Quality Payment Scheme (QPS) provided they are quality assured, and fall within the correct conformation and fat classes on the grid.

2. TYPICAL LIVEWEIGHTS AT DIFFERENT STAGES OF PRODUCTION

STAGE OF PRODUCTION	LIVEWEIGHT (KG)	AVERAGE DAILY GAIN (KG/DAY)
Weaning (Start Weight)	290	1.20
Turnout	370	0.60
Housing (2nd winter)	530	0.80
Slaughter Weight	625	0.85
Carcase Weight (kg)	320-340	

3. MANAGEMENT GUIDELINES

- Heifers selected for this system will have performed well pre weaning achieving 1.20kg/day from birth.
- Animals will need to achieve a lifetime gain of around 0.80kg/day from birth to slaughter.
- On suckler farms finishing their own heifers the system is best suited where the herd is achieving a compact calving over a 10-12 week period.
- Heifers are given 1.0 to 1.5kg of concentrates and good quality silage over their 1st winter to achieve a weight gain of 0.5-0.6kg/day.
- The system also requires high DMD silage of 72%DMD or better for the indoor finishing period.

4. INPUTS REQUIRED

Concentrates	0.6t DM or 0.7t fresh weight
Grazed Grass	1.9t DM
Silage	1.5t DM or 7.5t fresh weight
Stocking Rate	2.7 animals/ha at 170kg organic N per ha

24 MONTH HEIFER BEEF (SUCKLER)

5. ECONOMICS

		€
a. Weaned Calf Purchase Value	290 kg	
b. Carcase Value	340 kg	
c. Sales – Purchases (B –A)		
Variable Costs per Head*		
Grass	1.9 tDM	€76
Concentrates	0.7 tonnes	
Silage	7.5 tonnes	€225
Veterinary	-	€30
Transport & Levies	-	€35
d. Total Variable Costs		
Gross Margin per Head (C – D) **		

* Variable costs per head do not include interest or mortality costs.
** Subtract estimated fixed costs per head to calculate net margin per head.

6. MARKET CONSIDERATIONS

- Finished heifers usually attract the highest QPS base-price at slaughter because they tend to meet the desired specifications for most customers, in terms of age, carcase weight, conformation etc.
- In addition to the export meat plants, the Irish butcher / wholesale trade often represents a strong market for heifers.
- When finishing heifers, producers should keep a keen eye on fat cover. The ideal carcass fat class for most customers is from a “3” to a “4-”.
- Excess fat makes the beef less visually appealing and results in a loss in meat yield.
- Strongest demand is for animals of 270kg carcase weight upwards.

7. GENERAL CONSIDERATIONS

- Heifers on this system are highly desirable as they will be slaughtered at a young age, have an optimal carcase weight for a number of markets and are typically R and U grade.
- It is important that heifers on this regime achieve the targeted weight gain of 80kg over the first winter.
- Good grassland management and early turnout in spring is critical to achieving good weight gain at grass.
- Good quality silage is a key part in this system to minimise the level of concentrates fed during the finishing period.
- Heifers on this system are being marketed in the spring months out of the shed when demand is generally good.
- It is important to ensure heifers are monitored so that they do not become over fat.

24 MONTH STEER BEEF (SUCKLER)

1. SYSTEM DESCRIPTION

- Production of spring born continental steers from the suckler herd which are slaughtered at 24 months of age.
- Steers go through a modest store period over the first winter gaining around 0.6kg/day before being turned out to grass for their second grazing year. After housing for the second winter steers are placed on a diet of grass silage and concentrates up to finish.
- Steers on this system are eligible for the Quality Payment Scheme (QPS) provided they are quality assured and fall within the correct conformation and fat classes on the grid.

2. TYPICAL LIVEWEIGHTS AT DIFFERENT STAGES OF PRODUCTION

STAGE OF PRODUCTION	LIVEWEIGHT (KG)	AVERAGE DAILY GAIN (KG/DAY)
Weaning (Start Weight)	320	1.33
Turnout	400	0.60
Housing (2nd winter)	585	0.90
Slaughter Weight	700	0.95
Carcase Weight (kg)	360-400	

3. MANAGEMENT GUIDELINES

- Continental weanlings for this system are on average 320kg at weaning in the autumn.
- Animals will need to achieve a lifetime gain of around 0.90kg/day from birth to slaughter to achieve the targets specified.
- Weanlings are introduced to 1.0 - 2.0 kg of concentrates and good quality silage (72%DMD or better) over the first winter. The target is to achieve a modest weight gain of around 0.60kg/day or 80 kg over the 1st winter.
- Steers are turned out in early spring to achieve a 200 day grazing season and a total weight gain of around 185kg over their second season at grass.
- From housing to slaughter the steers will be on a diet of high quality silage and an average of 5kg/day of concentrate. They will be slaughtered at 700kg liveweight or 395kg carcase.
- Good grazing management will be required to ensure animals achieve good weight gain over their second grazing system.
- In an integrated suckler to beef system a compact calving pattern would be desirable.

4. INPUTS REQUIRED

Concentrates	0.75t DM or 0.87t fresh weight
Grass	2.2t DM
Silage	1.6t DM or 8t fresh weight
Stocking Rate	2.7 animals/ha at 170kg organic N per ha

24 MONTH STEER BEEF (SUCKLER)

5. ECONOMICS

		€
a. Weaned Calf Purchase Value	320 kg	
b. Carcase Value	395 kg	
c. Sales – Purchases (B –A)		
Variable Costs per Head*		
Grass	2.2 tDM	€88
Concentrates	0.87 tonnes	
Silage	8 tonnes	€240
Veterinary	-	€39
Transport & Levies	-	€40
d. Total Variable Costs		
Gross Margin per Head (C – D) **		

* Variable costs per head do not include interest or mortality costs.
** Subtract estimated fixed costs per head to calculate net margin per head.

6. MARKET CONSIDERATIONS

- Steer beef is seen as being of equivalent quality to heifer beef across many of our markets.
- Steer and heifer beef are the ideal preference for the major UK customers, and similarly across continental Europe these are a point of differentiation, or selling point, against young bull beef, which is widely available and competitively priced.
- Strongest demand is for animals of up to approximately 400 kg carcase weight, which will produce steak cuts of the preferred size for most customers.

7. GENERAL CONSIDERATIONS

- The system depends on high quality grass silage being available of at least 70%+ DMD. If silage quality falls below this, higher concentrate levels will be required at both the weanling and finishing phase.
- Good weight gains over the first winter (80kg) are essential to maintain the targets outlined otherwise the finishing period may be prolonged.
- Where silage quality is not adequate producers may opt to feed concentrates *ad-lib* for the final 80-100 days. This will increase the amount of concentrates used and feed costs.
- It is important to slaughter animals as they become fit so that they are not allowed to become over fat.
- Animals are marketed in the spring months when generally demand for steers is good.

24 MONTH FRIESIAN STEER BEEF (DAIRY CALF TO BEEF)

1. SYSTEM DESCRIPTION

- Production of steers from the Holstein-Friesian bull calves which are slaughtered at 24 months of age out of the shed in the spring.
- Steers go through a modest store period over the first winter gaining around 0.6kg/day before being turned out to grass for their second grazing year. After housing for the second winter steers are placed on a diet of grass silage and concentrates up to finish.
- Steers on this system are eligible for the Quality Payment Scheme (QPS) provided they are quality assured and fall within the correct conformation and fat classes on the grid.

2. TYPICAL LIVEWEIGHTS AT DIFFERENT STAGES OF PRODUCTION

STAGE OF PRODUCTION	LIVEWEIGHT (KG)	AVERAGE DAILY GAIN (KG/DAY)
Weaned Calf Weight	90	0.70
Housing (1st winter)	230	0.70
Turnout	310	0.60
Housing (2nd winter)	490	0.90
Slaughter	620	1.05
Carcase Weight (kg)	310-330	

3. MANAGEMENT GUIDELINES

- Weanlings for this system are on average 230 kg at housing in the autumn. This system requires excellent grassland management, a proper parasite control programme and a small amount of meal feeding at turnout and in the autumn (1.0 kg per day).
- Weanlings are introduced to 1.0 - 2.0 kg of concentrates and good quality silage (72%DMD or better) over the first winter. The target is to achieve a modest weight gain of around 0.6kg/day or 80 kg over the first winter.
- Yearling steers are turned out in early spring to achieve a 200 day grazing season and a total weight gain of around 180 kg over there second season at grass. This level of performance from grass alone requires good grassland management.
- From housing to slaughter the steers will be on high quality silage and an average of 5.0 - 6.0kg/day of concentrate. They will be slaughtered at 620kg liveweight or a 320 kg carcase.
- Good grazing management will be required to ensure animals achieve good weight gain over their second grazing system.

4. INPUTS REQUIRED

Concentrates	0.87t DM or 1.0t fresh weight
Grass	2.2t DM
Silage	1.2t DM or 6t fresh weight
Stocking Rate	2.2 animals/ha at 170kg organic N per ha

24 MONTH FRIESIAN STEER BEEF (DAIRY CALF TO BEEF)

5. ECONOMICS

		€
a. Weaned Calf Purchase Value	90 kg	
b. Carcase Value	320 kg	
c. Sales – Purchases (B –A)		
Variable Costs per Head*		
Grass	2.2 tDM	€88
Concentrates	1.0 tonnes	
Silage	6 tonnes	€180
Veterinary	-	€39
Transport & Levies	-	€40
d. Total Variable Costs		
Gross Margin per Head (C – D) **		

* Variable costs per head do not include interest or mortality costs.
** Subtract estimated fixed costs per head to calculate net margin per head.

6. MARKET CONSIDERATIONS

- Steer beef is seen as being of equivalent quality to heifer beef across many of our markets.
- Steer and heifer beef are the ideal preference for the major UK customers, and similarly across continental Europe these are a point of differentiation, or selling point, against young bull beef, which is widely available and competitively priced.
- Strongest demand is for animals of up to approximately 400 kg carcase weight, which will produce steak cuts of the preferred size for most customers.

7. GENERAL CONSIDERATIONS

- The system depends on high quality grass silage being available of at least 70%+ DMD. If silage quality falls below this, higher concentrate levels will be required at both the weanling and finishing phase.
- Good weight gains over the first winter (80kg) are essential to maintain the targets outlined otherwise the finishing period may be prolonged.
- Where silage quality is not adequate producers may opt to feed concentrates *ad-lib* for the final 80-100 days. This will increase the amount of concentrates used and feed costs.
- It is important to slaughter animals as they become fit so that they are not allowed to become over fat.
- Animals are marketed in the spring months when generally demand for steers is good.

26 MONTH EARLY MATURING STEER BEEF (DAIRY CALF TO BEEF)

1. SYSTEM DESCRIPTION

- Spring born Angus or Hereford steers bred from dairy cows and finished at 26 months of age off grass in their third grazing season.
- Typically born in the second half of the calving season and slaughtered from May to July.
- Steers on this system are eligible for the Quality Payment Scheme (QPS) provided they are quality assured and fall within the correct conformation and fat classes on the grid.

2. TYPICAL LIVEWEIGHTS AT DIFFERENT STAGES OF PRODUCTION

STAGE OF PRODUCTION	LIVEWEIGHT (KG)	AVERAGE DAILY GAIN (KG/DAY)
Weaned Calf Weight	90	0.70
Housing (1st winter)	210	0.75
Turnout	280	0.50
Housing (2nd winter)	450	0.75
Turnout	490	0.45
Slaughter	610	1.15
Carcase Weight (kg)	300-320	

3. MANAGEMENT GUIDELINES

- This system of steer beef is based on feeding very little concentrates, high quality silage and excellent grassland management.
- A proper parasite control programme at grass especially in the first year is important.
- Weanlings are introduced to 1 kg of concentrates and good quality silage (72%DMD or better) over the first winter.
- No meals are fed at grass in the second grazing season.
- In the second winter steers are fed little or no concentrates to gain 0.40 to 0.45 kg per day on high quality silage.
- At turnout for the third grazing season, steers weigh 490 kg and put on 120 kg over the next 3 to 4 months. This requires excellent grassland management and 4.0 kg concentrate per day for the last 40 days pre-slaughter.

4. INPUTS REQUIRED

Concentrates	0.4t DM or 0.45t fresh weight
Grazed Grass	3.7t DM
Silage	1.4t DM or 7.0t fresh weight
Stocking Rate	1.95 animals/ha at 170kg organic N per ha

26 MONTH EARLY MATURING STEER BEEF (DAIRY CALF TO BEEF)

5. ECONOMICS

		€
a. Weaned Calf Purchase Value	90 kg	
b. Carcase Value	320 kg	
c. Sales – Purchases (B –A)		
Variable Costs per Head*		
Grass	3.7t DM	€148
Concentrates	0.45 tonnes	
Silage	7.0 tonnes	€210
Veterinary	-	€40
Transport & Levies	-	€40
d. Total Variable Costs		
Gross Margin per Head (C – D) **		

* Variable costs per head do not include interest or mortality costs.
** Subtract estimated fixed costs per head to calculate net margin per head.

6. MARKET CONSIDERATIONS

- Steer beef is seen as being of equivalent quality to heifer beef across many of our markets.
- Steer and heifer beef are the ideal preference for the major UK customers, and similarly across continental Europe these are a point of differentiation, or selling point, against young bull beef, which is widely available and competitively priced.
- Strongest demand being for steers of conformation “O=” or better and up to approximately 400 kg carcase weight, which will produce steak cuts of the preferred size for most customers.

7. GENERAL CONSIDERATIONS

- Steers on this system are highly desirable as they will be light in carcase weight and are suitable for a number of beef producer schemes that currently offer price bonuses at certain times of the year.
- Care needs to be taken that they do not become over fat in the second grazing season and are slaughtered before this happens.
- Early maturing calves can often attract a premium price in the market and beef farmers purchasing these types of calves need to calculate carefully what they can afford to pay.
- Grazing management in the first, second and third grazing season needs to be excellent as does the quality of silage fed to weanlings and finishing steers. Otherwise the concentrate feeding levels need to increase reducing the margins achievable.

28 MONTH STEER BEEF (SUCKLER)

1. SYSTEM DESCRIPTION

- Production of steers from the suckler herd which are slaughtered at typically 28-30 months.
- The system is a low input grass/forage based system with a modest level of concentrates over the winter periods.
- Animals are stored over both winters with a third 100-120 day season at grass.
- Steers are eligible for the Quality Payment Scheme (QPS) provided they are slaughtered before they reach 30 months of age, are quality assured and have the correct fat and conformation classes.

2. TYPICAL LIVEWEIGHTS AT DIFFERENT STAGES OF PRODUCTION

STAGE OF PRODUCTION	LIVEWEIGHT (KG)	AVERAGE DAILY GAIN (KG/DAY)
Weaning (Start Weight)	320	1.33
Turnout	380	0.45
Housing (2nd winter)	575	0.90
Turnout (3rd season)	630	0.40
Slaughter Weight	760	1.1
Carcase Weight (kg)	380-420	

3. MANAGEMENT GUIDELINES

- Calves selected for this system should have performed well pre weaning achieving 1.25kg/day or better from birth.
- Animals will need to achieve a lifetime gain of around 0.83kg/day from birth to slaughter.
- Weanlings are housed and wintered on silage and 1.0 kg of concentrate to achieve a modest gain of about 0.45kg/day.
- Yearlings are turned out and grazed for the season and with some compensatory growth the steers gain 195kg.
- At housing for the second winter the steers weigh 575kg and they can be over wintered on grass silage and 1.0 kg of concentrate gaining 55kg.
- At turnout for the third grazing season the steers weigh 630 kg. They are then grazed for 3-4 months before slaughter in mid-summer.
- Some animals may become over fat so regular assessment of fat cover is important so that animals can be slaughtered as they become fit.

4. INPUTS REQUIRED

Grass	4t DM
Concentrates	0.2t DM or 0.23t fresh weight
Silage	2.1t DM or 10.5t fresh weight
Stocking Rate	2.0 animals/ha at 170kg organic N per ha

28 MONTH STEER BEEF (SUCKLER)

5. ECONOMICS

		€
a. Weaned Calf Purchase Value	320 kg	
b. Carcase Value	420 kg	
c. Sales – Purchases (B –A)		
Variable Costs per Head*		
Grass	4.0t DM	€160
Concentrates	0.23 tonnes	
Silage	10.5 tonnes	€315
Veterinary	-	€45
Transport & Levies	-	€40
d. Total Variable Costs		
Gross Margin per Head (C – D) **		

* Variable costs per head do not include interest or mortality costs.
** Subtract estimated fixed costs per head to calculate net margin per head.

6. MARKET CONSIDERATIONS

- Steer beef is seen as being of equivalent quality to heifer beef across many of our markets.
- Steer and heifer beef are the ideal preference for the major UK customers, and similarly across continental Europe these are a point of differentiation, or selling point, against young bull beef, which is widely available and competitively priced.
- Strongest demand is for steers of up to approximately 400 kg carcase weight, which will produce steak cuts of the preferred size for most customers.
- Since this system is likely to result in some steers achieving heavier carcase weights, it is advisable for producers to discuss this in advance with their intended meat processor.

7. GENERAL CONSIDERATIONS

- This is an extensive, low concentrate input system.
- If silage quality is good enough (70%+ DMD) steers could be overwintered for their second winter without concentrate and the concentrates could be fed at grass in the final 6-8 weeks pre-slaughter.
- In a suckler to beef system this system will reduce the number of cows that can be carried per hectare. It will increase the number of animal groups on the farm and extra housing facilities will be required.
- Animals that are turned out for a third grazing season will have a high rate of compensatory growth and may do considerably better than 1.1kg per day while at grass.
- Animals may be marketed at a time when cattle supplies are normally tight.
- It is important that animals are not allowed to get too heavy or go over 30 months before slaughter.

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An Roinn Talmhaíochta, Bia agus Mara

Bord Bia
Irish Food Board