

Method of Changing Diet has No Effect on Pig Performance

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Table 2 Effect of Method of Changing Diet on Average Daily Gain and Feed Intake

	Abrupt change	Phased change	Free choice
<i>Wean to 7 weeks</i>			
Average daily gain (g/d)	340	349	338
Feed intake (g/d)	416	422	405
<i>7 to 10 weeks</i>			
Average daily gain (g/d)	710	695	676
Feed intake (g/d)	1159	1106	1097
<i>10 weeks to finish</i>			
Average daily gain (g/d)	848	848	823
Feed intake (g/d)	2107	2169	2110

IPPC Requirements for Intensive Agriculture

Does your unit already exceed or is likely to exceed the following threshold levels?

- 40,000 places for poultry;
- 2,000 places for production pigs over 30kg;
- 750 places for sows.

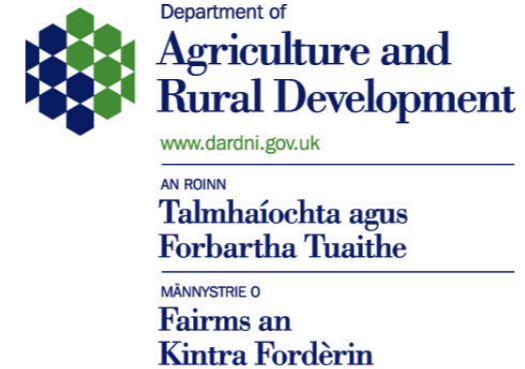
If the answer is yes, please read on as IPPC (Integrated Pollution Prevention and Control) will apply to your unit.

If you were operating a unit above the IPPC thresholds mentioned above prior to October 1999 and have not made a substantial change, you will need to apply to the Environmental Heritage Service (EHS) for an IPPC permit during the period November 2006 – January 2007.

Also, if you want to start up a new unit over the threshold number of livestock places, want to expand an existing installation so that you go over the threshold or want to make a substantial change you will need to obtain an IPPC permit before doing so.

The Pollution Prevention and Control Regulations (the PPC Regulations) aim to minimise the environmental impact of intensive pig and poultry units by focusing on issues such as waste minimisation and noise generation. The regulations also cover areas such as raw material inputs, housing design, the collection/storage/utilisation of manures and slurries, odour control and efficiency of water use.

Standard Farming Installation Rules have been developed in discussion with representatives from the farming industry. These rules encompass BAT (Best Available Techniques) for the intensive pig and poultry sectors, and were designed to help ensure that environmental pollution from these farms is minimised. For a copy of these rules and guidance documents for other aspects of IPPC for intensive pig and poultry farms, please contact the Industrial Pollution and Radiochemical Inspectorate (Tel: 028 9025 4709), or access the EHS web-site (www.ehsni.gov.uk/environment/industriaIPollution/ippc_farmregs.shtm).



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Trichinella

What is it and why do you need to know about it? The basics!

Trichinella is a parasite which infects carnivorous animals including rats, badgers, foxes and pigs, forming cysts within the muscle of infected animals. Humans can therefore become infected by eating raw or undercooked pork. The European Commission introduced new legislation this year to make it compulsory for all pigs slaughtered for food to be tested for Trichinella – a time consuming and costly exercise necessary to provide consumer confidence in pigmeat.

The Food Standards Agency (FSA) is currently preparing a case to put to the European Commission to allow UK slaughter pigs not to be tested. This is supported by the 100% negative results from a large number of pigs already tested in the UK.

However, not only do we have to supply evidence that Trichinella is not present in our pigs, but also that it is not present in our local wildlife. To this end the FSA-NI, with co-operation from DARD and AFBI, will be carrying out a survey for the presence of Trichinella in foxes and badgers in Northern Ireland. Help from you in identifying carcasses of foxes or

badgers for this study would be extremely useful.

If you would like any further information on Trichinella, the legislation or the wildlife study please contact your pig adviser or
Dr Kirsten Dunbar,
FSA NI,
10A-C Clarendon Road,
Belfast BT1 3BG,
kirsten.dunbar@foodstandards.gsi.gov.uk,
tel: 028 90 417717

If you are aware of a fox or badger carcass which could be used in the survey please ring Terri Keith, FSA NI, on 02890 417734



Adult female Trichinella.

Summary of Nitrates and Phosphorus Regulations

Required storage capacity must be in place by 31 December 2008 at the latest. Organic manure closed spreading period applies from the date at which required storage capacity is in place. All other measures become effective from the 1 January 2007.

Key Measures

Closed Spreading Periods	<ul style="list-style-type: none"> Chemical Nitrogen fertiliser must not be applied between 15 September to 31 January. Organic manures, excluding farmyard manure and dirty water, must not be applied between 15 October to 31 January. 																
Land Application Restrictions	<ul style="list-style-type: none"> All fertilisers, chemical and organic, shall not be applied on: <ul style="list-style-type: none"> waterlogged soils; flooded land or land liable to flood; frozen ground; snow covered ground; if heavy rain is forecast; steep slopes where other significant risks of water pollution exist. Chemical fertilisers shall not be applied within 1.5m of any waterway. Organic manures including dirty water shall not be applied within: <ul style="list-style-type: none"> 20m of lakes; 50m of a borehole, spring or well; 250m of a borehole used for a public water supply; 15m of exposed cavernous or karstified limestone features; 10m of a waterway other than lakes. This distance may be reduced to 3m where organic manures are spread by bandspreaders, trailing shoe, trailing hose or soil injection or where adjoining area is less than 1 hectare in size or not more than 50m in width. Application rates: <ul style="list-style-type: none"> No more than 50m³/ha (4500 gal/ac) or 50 tonnes/ha (20 t/ac) of organic manures to be applied at one time with a minimum of three weeks between applications; No more than 50m³/ha (4500 gal/ac) of dirty water to be applied at one time with a minimum of two weeks between applications. Slurry can only be spread by inverted splashplate, bandspreaders, trailing shoe, trailing hose or soil injection. Dirty water to be spread by same methods as slurry and by irrigation. Sludgigators must not be used. 																
Chemical Nitrogen (N) Fertiliser Crop Requirement	<table border="1"> <thead> <tr> <th colspan="4">Maximum kg N/ha on grassland</th> </tr> <tr> <th>Year</th> <th>2007</th> <th>2009</th> <th>2010</th> </tr> </thead> <tbody> <tr> <td>Dairy farms*</td> <td>289 (8 ¾ bags/ac)**</td> <td>281(8 ½ bags/ac)</td> <td>272(8 ¼ bags /ac)</td> </tr> <tr> <td>Other farms</td> <td>239 (7 ½ bags /ac)</td> <td>231 (7 bags/ac)</td> <td>222 (6 ¾ bags/ac)</td> </tr> </tbody> </table> <p>(N from organic manures other than livestock must be subtracted) *More than 50% of N in livestock manure comes from dairy cattle ** Refers to a 50kg bag of a 27% N type product</p> <p>For non-grassland crops, the crop requirement as determined by RB209, must not be exceeded.</p>	Maximum kg N/ha on grassland				Year	2007	2009	2010	Dairy farms*	289 (8 ¾ bags/ac)**	281(8 ½ bags/ac)	272(8 ¼ bags /ac)	Other farms	239 (7 ½ bags /ac)	231 (7 bags/ac)	222 (6 ¾ bags/ac)
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Chemical Phosphorus Fertiliser	<ul style="list-style-type: none"> Can only apply chemical Phosphorus fertiliser if soil analysis shows a requirement as per RB209.
Nitrogen Livestock Manure Limits	<ul style="list-style-type: none"> 170kgN/ha/year farm limit. A derogation for a higher limit is being sought for cattle farms.
Livestock Manure Storage Requirements	<ul style="list-style-type: none"> 26 weeks for pig and poultry enterprises. 22 weeks for other enterprises. Provided certain criteria are met there are allowances for out-wintering, animals in bedded accommodation, separated cattle slurry, renting additional tanks and exporting slurry to approved outlets. Storage must be maintained to prevent seepage or run-off. New or substantially enlarged or reconstructed stores must comply with Silage, Slurry and Agricultural Fuel Oil (SSAFO) (Northern Ireland) Regulations, 2003. Farmyard manure and poultry litter can be stored in fields where the next application is to take place but for no longer than 180 days. It must not be stored in the same location of the field year after year. Poultry litter must be covered with an impermeable membrane within 24 hours of placement in the field. The storage of poultry litter to be reviewed 31 December 2008. Heaps must not be stored within: <ul style="list-style-type: none"> 50m of lakes; 20m of a waterway; 50m of a borehole, spring or well; 250m of a borehole used for a public water supply; 50m of exposed cavernous or karstified limestone features. Provide storage for dirty water during periods when conditions for land application are unsuitable.
Land Management	<ul style="list-style-type: none"> Crop and soil management to minimise soil erosion and nutrient run off.
Record Keeping	<ul style="list-style-type: none"> Agricultural area, field size and location. Cropping regimes and areas, Soil Nitrogen Supply (SNS) index for crops other than grassland. Livestock numbers, type, species and time kept. Fertiliser details including imports and exports. Evidence of a Phosphorus requirement if chemical Phosphorus fertiliser sown. Storage capacity and associated evidence to support allowances to reduce capacity. Evidence of right to graze common land. <p>Note that many of the records already exist on farms, for example, IACS, herd and flock records and fertiliser receipts.</p>

Records to be ready by 30 June each year for period 1 January to 31 December of previous year. Records to be retained for inspection from previous five calendar years. Full detail of all measures found in the Guidance Document and at www.dardni.gov.uk and www.ehsni.gov.uk

Method of Changing Diet has No Effect on Pig Performance

Background

On most commercial pig units at least four changes of diet occur from weaning to slaughter. While it is necessary to change the diet throughout the pig's lifetime, after each change pigs may experience a growth-check. A general management practice is to abruptly change from one diet to the next. A recent study at the Agri-Food and Biosciences Institute, Hillsborough, investigated the effect of changing diet in an abrupt, phased or free-choice manner on the performance of pigs from weaning to finish.

Research

The study was jointly funded by the Pig Production Development Committee and the Department of Agriculture and Rural Development for Northern Ireland and involved a total of 480 pigs (Large White x Landrace), housed in pens of 20 at weaning. Pigs were assigned to one of three treatments - abrupt, phased or free choice change in diet.

The diets fed were as follows:

- Diet 1 - up to 3kg of Starter 1
- Diet 2 - up to 6kg of Starter 2
- Diet 3 - Grower up to 11 weeks of age
- Diet 4 - Finisher to slaughter at 152 days

The specification of the diets is shown in Table 1.

Table 1 Diet Specification

Diet	Crude Protein (%)	Digestible Energy (MJ/kg)
Starter 1	22.4	16.1
Starter 2	19.7	15.3
Grower	20	14.2
Finisher	18	13.5

For the abrupt treatment pigs were changed immediately from one diet to the next. For the phased treatment, the

new diet was introduced gradually, five days prior to the change over, in increasing proportions mixed with the previous diet (20/80, 40/60, 60/40, 80/20, 100/0 new: previous diet). For the choice feeding treatment, feeders were divided and the new and previous diet offered at the same time. Average daily gain, daily feed intake and feed conversion ratio were determined from weaning to 7 and 10 weeks of age and from 10 weeks of age until finish at 152 days.

Results

Pigs on all treatments experienced a growth check at weaning and, to a lesser extent, at each change of diet. The method of changing the diet had no significant effect on average daily gain or feed intake at any stage of production (Table 2), although pigs offered feed in a choice manner tended to have lower performance. Feed efficiency from 10 weeks of age until finish was significantly improved when diets were changed in an abrupt manner.

Conclusions

- There was no difference in average daily gain or feed intake as a result of method of diet change.
- The abrupt method did not result in reduced performance therefore abruptly changing the diet does not have a detrimental effect throughout the lifetime of the pig.
- Abruptly changing the diet improves feed conversion ratio in the finishing stage which may be due to a reduction in feed wastage

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