

# IOTA

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## IOTA Monthly Updates: March 2011

### New approaches to reducing the reliance on purchased feed by organic poultry producers

Tony Little

It has been a busy few months at the Centre one way or another. The results of our 2010 **annual producer survey** are out; **Glastir** is being reviewed in the light of poor uptake on the 2010 SAF; we have published a review of the literature on the **biodiversity impacts of organic farming**; and our knowledge transfer programme is starting to focus on **animal health and welfare issues**, partly in response to feedback that some farmers needed help with health planning and partly due to a request from WAG to look at specific problems as part of our programme.

I won't go into more detail on any of these issues here, but you can find out more about all these things on our [website](#) or contact me for further information.

I want use the remainder of my column inches to tell you about some work that Steve Merritt from the Welsh Poultry centre (and fellow IOTA member/ director) and I have been doing, looking at new approaches to reducing the reliance on purchased feed by organic poultry producers. We know from [the research](#) that the range can make a significant contribution to the diet of birds, and we have been looking at the potential of cover crops to enhance that contribution. The idea is not new - game bird keepers have been doing this for a great many years - but the practice has not been adopted by poultry producers to any great degree.

Using funds from the Farming Connect Organic Development Programme, we set up a small demonstration project at the Welsh Poultry Centre in Carmarthenshire and at Esgair Forest near Machynlleth. We sowed small areas (0.1 Ha) of cover crops on the range in July, by making 2 passes with a rotivator and broadcasting the seed. The seed mixture, kindly donated by Kings Seeds, included seed bearing plants (quinoa, white millet, fodder radish, triticale and kale) and insects attractants (white clover, red clover, birdsfoot trefoil, vetches and phacelia). We established three small flocks of table birds (Sasso Breed) on the two sites, each with a different feeding regime as described in Table 1 (see below). All 66 birds were brooded together at the Welsh Poultry Centre starting in mid September. At the age of

about 4 weeks, 20 were taken up to Esgair to be grown on. They were all slaughtered at the same time in mid December. Slaughter weights and costs were recorded and gross margins were calculated for each flock (Table 2, see below).

In terms of gross margins (GM) the ad lib fed flock at the Welsh Poultry Centre performed best (£6.27/ bird), followed by the WPC flock with access to cover crops (£4.87/ bird) followed by the Esgair flock at £3.38.

At Esgair Forest, the biggest contributor to the low GM was the high predation rate, with nearly 50% of flock being taken. Reducing the predation rate to 25%, for example, would increase the margin to £4.30.

However, our biggest problem overall was the weather. You may recall that in late November/early December we were in the grip of a particularly long and brutal cold snap which coincided with the last two weeks of the birds' life, the very time during which most of the meat is put on. Since the birds spent most their time indoors they didn't get much from the cover crop and this resulted in a low average slaughter weight and therefore a lower output.

So, there were a few problems but we didn't really expect to get it all right first time (nice though that would have been!). However, it was a very useful learning experience and we hope to develop the work this year, making a few adjustments:

- Reducing the seed rate; the crop was far too dense and the birds didn't penetrate very far into it.
- Sowing a larger number of smaller patches dotted around the range instead of a single strip. This will promote ranging and improve access to the crop.
- Sowing the crops earlier, so the birds use it all through the summer. The risk of bad weather restricting access to range will be much lower and the birds will derive more benefit from the insects that are attracted on to the range.
- Introducing the birds to the cover crop as early as possible in their lives so they become accustomed to it earlier and use it more during the growing phase.

We'll let you know how we get on. In the meantime if you have any clients who you think might be interested in this work, please let us know.

*For more information contact Tony (01970 621632, [jill@aber.ac.uk](mailto:jill@aber.ac.uk)) or Steve (01267 253570, [steve@welshpoultrycentre.co.uk](mailto:steve@welshpoultrycentre.co.uk))*

*Tony Little and Stephen Merritt are Accredited Members of IOTA, based in Wales.*

*(Tables below)*

## Tables

**Table 1: Characteristics of the flocks**

Location	No. of birds	Feeding regime
Esgair Forest	20	Unrestricted access to purchased feed. Access to cover crops on the range
Welsh Poultry Centre	20	Restricted access to purchased feed (80% of usual ration) and access to cover crops on the range
Welsh Poultry Centre	26	Ad lib access to purchased feed. No access to cover crops on the range

**Table 2: Gross Margin calculations**

	Esgair	WPC ( Covercrop)	WPC (No Covercrop)
<b>Output</b>			
<b>Flock size (Original)</b>	20	20	26
<b>Flock size (surviving)</b>	11	19	26
Dead Weight (Flock)	25.96	32.00	59.62
Average dead weight (Kg/ Bird)	2.36	1.68	2.29
Price (£5.00/ kg)	129.80	160.00	298.10
Less Cost of Chicks @ 75p/chick	-15.00	-15.00	-19.50
<b>Total Output</b>	114.80	145.00	278.60
Feed 1kg starter/bird @ 350/t	7.00	7.00	9.10
Finisher feed @ £280/t	45.00	10.64	72.80
Cover crop establish	10.00	10.00	0.00
Heat @ 0.15/bird	3.00	3.00	3.90
Straw & sawdust/bird @0.1/bird	1.10	1.90	2.60
Slaughtering and dressing costs, @ £1/bird	11.00	19.00	26.00
Miscellaneous @ 5p per bird	0.55	0.95	1.30
<b>Total Variable Costs</b>	77.65	52.49	115.70
<b>Gross Margin/ Flock</b>	<b>37.15</b>	<b>92.51</b>	<b>162.90</b>
<b>Gross Margin per Bird</b>	<b>3.38</b>	<b>4.87</b>	<b>6.27</b>