

RENEWABLES

◀The farm grows 414,000 birds on a seven-week cycle and produces three million birds a year.

Day old chicks are raised to 42 days on a 49-day cycle.

Mr Dicks adds: "We produce enough electricity for our own use, which has been a major investment. But the heat is a big thing for us."

"Our electricity bills were about £4,000 to £5,000 a month and gas and oil cost about £140,000 to £150,000 a year. Heat and fuel is the major thing for this industry."

"It is challenging but we are a big farm so economics of scale is a big factor."

Contract

Faccenda, which processes two million birds a week, provides the chicks and takes them away at 42 days.

"We have a contract where we have to have everything from there so we are slightly shielded from the fluctuation in feed costs," says Mr Dicks.

"When we started out we grew for some smaller independent processors. We started off with one shed and 6,000 birds in it in 1990. We now have nine sheds with 45,750 in each shed."

The sheds were built on former arable land.

"The woodchip comes from English Wood Fuel just five miles away which is very useful," says



There are now nine poultry sheds on-farm, each of which house 45,750 birds. PICTURES: Tim Scrivener

Mr Dicks. "They have depots all over the country. We deal with one supplier as we need consistency of supply. We get two loads of 45 tonnes a week."

"The boiler very much looks after itself. The biggest job is filling the hopper up once-a-day, but that only takes 20 minutes."

The shed was purpose built, with half of it housing the boiler and the other half storing the fuel.

"We could leave it alone quite happily. If there is a problem it would tell us," he says.

"We are chicken growers and we don't want to spend our lives looking after a boiler. We want to spend time looking after the chickens."

Efficiency

Obtaining wood chips from multiple sources can mean the quality per batch can differ; an issue which some biomass boiler fuel feed systems can struggle with.

However, the fully automated Herz BioFire is able to burn chip with moisture contents up to 40 per cent and a robust agitator with additional drive motor for the feed auger ensure reliable fuel delivery to the boiler.

"We wanted a boiler which would cope with different levels of moisture," says Mr Dicks.

"We did not want to be restricted on the type of fuel."

"Once burnt, the woodchip produces an ash which in the future we hope to sell to local farmers for fertiliser."



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ALUN DICKS

"The boiler is amazingly efficient for what it produces."

The 995kW machine's output will be kept under 1MW as the RHI would change if it was made any bigger.

"We have two back-up boilers because lives depend on it," says Mr Dicks.

"They are on-hand to boost the hot water."



Woodchip comes from a supplier which is five miles from the farm.



The farm has two back-up boilers on-hand to boost hot water.

Timber on-farm - a valuable resource?

Will Frost, operations manager at wood fuel supplier Forest Fuels, gives his view.

■ Get independent expert advice. Saleable amounts of larger, straighter material can go to higher-value markets

■ Smaller hardwood timber is most valuable as firewood logs - do not chip it. Softwood will work as chip just as well

■ Be realistic - timber will be sold and transported by the full lorry load: 20-25 tonnes.

Creating a full load from small woodland areas or individual trees is difficult

■ Be legal. Most tree felling requires a felling licence from the Forestry Commission

Supplying your own boiler:

■ Be realistic about the amount of timber you have. How much will you actually grow annually? This is the amount you can sustainably cut each year

■ Consider 'closed loop' fuel supply - your supplier takes the softwood timber you have, and delivers your finished woodchip. This is self-supply without the hassle or risk, avoiding woodland management and harvesting being dictated by the needs of the boiler

■ Take advice from impartial specialists, and ensure you get a full overview of the heat project rather than looking at pieces in isolation

Tips for installing biomass boilers

Kieran Crowe, of Strutt and Parker's resources and energy department, gives his six top tips:

1 Establish credible fuel suppliers: It is important to ensure your fuel source is safeguarded. Supply can be affected by a number of factors including the weather, so it is important to ensure you have access to a number of reliable suppliers which are in close proximity

2 Dedicated space: A biomass boiler requires its own dedicated space which is weatherproof and easily accessible. The space where the boiler is housed should not be used for any other purpose

3 Chimney, a practical concern: A biomass boiler may have a large, tall chimney which is a practical concern. In order to accommodate the chimney the boiler needs to be installed in a location which is not obstructed by other buildings or trees. Planning permission will also need to be obtained for it

4 Choose the right contractor: Do not base the selection of your contractor solely on price. Undertake some thorough research looking at track records and references. Selecting a contractor which is close by is also important should there be any issues with the boiler. Ask for warranty certificates and ensure the end date is clear

5 Achieving RHI: If you are applying for the RHI ensure your contractor has priced for the production of the technical aspects of the application. The application needs to be ready to be issued to Ofgem as soon as the system is commissioned. Familiarise yourself with the application process and how to make claims for the lifetime of the system. Treat this as a critical part of the installation

6 Underground pipes: If you require underground pipes, ensure a high specification of thermal performance and bury the pipes to a depth of one-metre (3ft 2in). Heat losses must be managed



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