Why Santrev chose in-direct heaters

By LUKE TREVANION, Managing Director, Santrev

For every development Santrev is part of we try to explore opportunities to build the highest performing and most efficient system available.

This is more critical than ever in the modern poultry farming world as modern farms are generally valued on a 'capitalised rate' basis.

Using a 'cap rate' basically means that the more efficient you can design and operate the farm, the higher the farm value will be.

Some growers might also see it as our moral and commercial responsibility to build farms as efficiently as possible to minimise the carbon footprint and green house emissions which in time may become more than just a moral call, it may well be mandatory to meet certain global best practice standards.

In recent years, we have seen new poultry building move to using LED lights and high efficiency direct drive fans amongst other innovations but up until now the heaters we use have been virtually unchanged for 20 years.

The industry did dabble in radiant tube heaters for a few years around 10 years ago but many of those systems have since been removed and the conventional and generally reliable gas blower type heaters (like the Hired Hand Super Saver heater) were put back in.

As all growers now know, we are farmers of litter as much as birds these days striving for RSPCA compliance and as such everything we do should be done in an effort to preserve litter quality as best as possible.

An alarming fact I heard last year made me sit up and really notice, that is, in winter we can put up to one litre of water into our sheds for every one litre of gas used to heat the shed.

During winter batches, we can use up to 5,000 litres of gas per shed per batch and under that rationale we could be putting 5,000 litres of water into our sheds or two litres per square meter if we full shed brood or four litres of water per square metre if we half shed brood.

That was staggering to me but when I looked at other grow outs around the world, I realised this was not the norm, European and south African industries use a dry heating system where they burn coal, wood chip and hay in external boilers that heat water provided in-direct heating into sheds.

As a result, their litter is perfect and the air quality is also better as they also don't have the consequence of pumping carbon monoxide and methane into the sheds as we do via gas blowers.

All that in mind, in-direct heater definitely tick the high performance box and offer an improved environment for the birds which we expect will translate into improved results and FCR.

So if these systems work so well why aren't they here already I thought? We have modelled the use of boiler and hot water heating several times over the past six years in Australia and the fact is that these systems are expensive at approximately $120,000 per shed and our LPG is actually cheaper than that is Europe and we use less of it to heat our sheds.

As a result the payback period for this type of heating has always been between eight and 10 years. Most growers target a payback period of between three and five years for innovation or upgrades. So, up until now we have had limited choice regarding viable alternatives for gas blowers.

That brings me to the new Skov in-direct heater we have chosen to use at our upcoming Santrev farm in Victoria.

This is a new heater in Australia that has only just received the regulatory compliance needed to be sold in Australia but it has been sold in New Zealand for the past 12 months and is part of the Inghams New Zealand compulsory dry heating requirement for all NZ shedding. Both Inghams and Tegal insist on in-direct gas heating on all new projects.

To explain the economics of our decision, the in-direct heaters will use approximately one quarter less gas than a conventional gas blower system. Therefore, with conventional system using approximately $16,000 per shed per year we will save around $4,000 per shed per year.

The in-direct heating system will cost slightly more with the installed price expected to be around $20,000 more expensive than a conventional system but that is a five year payback period and within the payback period of most growers three to five year target payback period.

For a new farm this is an easy decision, as a $4,000 saving on expenses will increase the value of the farm on a 10% capitalised rate by $40,000.

Luke Trevanion, Managing Director, Santrev.

That's right, a farm with efficient in-direct heaters will be valued at aproximately $40,000 more per shed than a farm with conventional inefficient heating.

Other benefits of in-direct or dry heating systems apart from gas savings include;

1. Improved performance due to air quality equating to increased growing fee.
2. Improved performance due to improved litter quality.
3. Direct saving of labour to rotary how litter.
4. Elimination of draught through gas blower brooder flaps when they are not being used.
5. Reduction of carbon footprint.

Santrev will continue to search for ways to better improve the systems in Australia and we remain committed to trialling these systems on our own farms as well as recommending them for our clients.

We would like to thank Luigi at Farmmark for presenting this option for us and hard his work to get these heaters approved in Australia.