SPECIAL REPORT #1

The Least Expensive Way To Seal Your Poultry House

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As the poultry industry continues to be challenged by high propane and electrical costs, the industry will continue to look for inexpensive ways to tighten up the buildings so that air will not leak out of the sidewalls or attic areas, especially during the winter months. While new technologies will continue to be introduced sometimes the most effective methods for conserving energy are the simplest. This report highlights several ways that the individual farmer can improve his energy savings without having to spend a lot money.

1. Use a closed cell can foam product to seal up all of the small cracks

Almost any poultry house that has been constructed in the late 1990's or earlier are prone to have air leaks throughout the house including the vent, fan and access door areas. In poultry houses that were built in the late 1980's, there are also many cracks and seams in the wall panel areas themselves, especially if the houses were built with pine or wood boards. Over time, most if not all of the insulation which was used back then has either been eaten away by bugs or is no longer effective. It is in these areas that a bead of foam could make a significant difference in energy savings.

Like a giant chunk of Swiss cheese, many poultry houses have air leaks throughout the building and the challenge will always be that when one joint or crack is filled, then air will seek out another crack in which to find its way into the house. While it is very time consuming and it may seem like a lot of work, the ability to go through the poultry house and just fill in small cracks will have a HUGE difference in the ability of the building to not only hold temperature, but also increase the static pressure. Of course, the biggest holes are the most obvious and some of those can not be fixed with just can sealant (see Point #3), but it is much less expensive for a farmer to try to fix this problem himself as opposed to bringing in an outside service.

REMEMBER – A 2" CRACK IN A DOOR WILL EQUAL A DROP IN STATIC PRESSURE OF .02 -.03

PROCEDURE FOR FOAMING CRACKS & JOINTS

- Use only black closed cell polyurethane sealant. Do not use white open cell foam because that it expands too much and the birds will peck at it. Also, open cell foam will not stop water and moisture.
- Only put a small bead into the crack. This will fill the seam and you will not need to use as much foam.
- Make sure the surfaces are clean and dust free. Use a leaf blower if necessary in order to clean the shelf or joint of debris.

2.Use an inexpensive radiant barrier in order to reflect heat back into the building

A radiant barrier is unlike insulation which only slows down or resists heat transfer. A radiant barrier reflects heat. Heat always goes cold by natural law, but the challenge is how to keep it in in the winter and how to keep it out in the summer. But how does a radiant barrier keep a poultry house warmer in the winter??? Just like wrapping a baked potato in aluminum foil, which keeps a potato warmer longer by holding the heat in, covering your curtain opening with a radiant barrier will help in reducing that heat loss. This is especially important when you realize that a poultry curtain is really a " wind break " and that it has no reflective barrier capabilities. The combination of can foaming the cracks and leaks in the poultry house along with covering the openings with a radiant barrier will add significant energy savings to any poultry house during the winter months.

PROCEDURE FOR INSTALLING A RADIANT BARRIER

- Seal curtain opening by placing the radiant barrier between the curtain and the bird-screen. Be sure to leave a gap at the top for emergency protection.
- Roll the curtain up to protect the barrier from weather conditions.
- After a winter of saving gas, roll it up and store for the next winter.

3. Have an experienced sealant company fill in the large cracks

While can sealant can provide an important area of energy savings, there are sections of the poultry house which just can not be fixed without using either conventional building materials or soy sealants. Areas that include the ridgecaps, gable ends and footer joints are all difficult to fix without having a spray sealant service come in to fill them with a high volume of material.h In general terms, a maintenance program can be performed which could run anywhere from $1000 all the way up to $3,000 per house to treat the area of deterioration, but often this money is well spent as it can provide that much in energy saving during one severe winter.