
Regular Facility Maintenance is Easy – and Profitable!!

The success of a swine operation has a number of contributing factors that all require “repairs” from time to time. However, maintenance of the infrastructure is sometimes low on the priority list. This can have a significant negative effect on the operation as a whole.

Facility infrastructure is a large capital investment. Regular facility maintenance can contribute to the longevity of the infrastructure and have a positive effect on production. The better the environment provided, the easier the pigs can do their job. The consequences of poor maintenance can be a barn fire that destroys the operation, a damaged flex-auger that wastes feed and labour each day, or a poor indoor environment that sacrifices feed efficiency and increases energy costs.

Regular facility maintenance is easy when made part of the regular routine. Let’s look at the basic steps:

Inspection and Documentation: Problems need to be identified and documented. Make a checklist of daily items and use it when checking on the animals each day. Check other items in conjunction with some other regular task – like washing down a room. Include a review of each pig room, common hallways, mechanical rooms, feed rooms and outside.

Prioritize and Schedule Repairs: Repair safety issues immediately. Divide non-safety issues into those that can be repaired with pigs in the room, and those that cannot. Further divide issues into those items that you can repair yourself, and those requiring a specialist (electrician, engineer, contractor). Schedule time for each item, and make appointments with any required specialists. Be realistic with the schedule – taking care of a few small items each day for a week is easier than trying to do them all in one day.

Make the Repairs: Repairs can include anything from cleaning, to adjustments, to replacements. Complete all repairs in a safe and workmanlike manner – “band-aid” solutions don’t last and waste time and money in the future. Hire qualified specialists when required, and have the work area ready for their arrival.

What to Look For and How Often

Penning, gates, feeders and water nipples can clog, malfunction or be damaged by the pigs overnight, and should be checked daily. Weeds can grow up around the perimeter of the facility quickly in the spring, while snow can block driveways to feed bins and shipping doors – these items should be checked at least weekly. Dust and dirt build-up on air inlets, exhaust fans, heating appliances and electrical equipment may accumulate over a period of weeks or months, while adjustments to your heating and ventilation controllers may only be required once or twice a year.

Though the infrastructure works as a complete system, an inspection of each individual element is a practical approach for a maintenance program. Identify each element and create inspection checklists. The following list includes the basic items in most swine facilities:

- **Penning, Feeders, Water Systems, Augers, Feed Storage:** Keep these items clean and serviceable. Damaged penning can injure animals or allow unwanted mixing of groups. Protect water systems from freezing. Protect feed stores from moisture and rodents;
- **Ventilation and Heating Systems:** Keep all systems clean to minimize deterioration and maximize efficiency. Have a specialist periodically service heaters and fans, and test and adjust inlets, fans, sensors and controllers to maximize efficiency of the equipment and quality of the indoor environment;
- **Insulation, Vapour Barriers and Cladding:** Insulation restricts heat flow out of the barn (during winter) and into the barn (during summer) and prevents condensation. Vapour barriers keep moisture from damaging insulation and the structure. Cladding protects both of these items from birds, rodents and physical damage. Make repairs as soon as possible to reduce long term damage and energy use;
- **Doors and Windows** can work against heating and ventilation systems due to unwanted air infiltration. Inspect weather stripping and door hardware regularly. If replacing older doors, upgrade to an insulated model to reduce heat transfer to the outdoors;
- **Electrical Systems:** Failure of electrical systems is one of the major causes of barn fires. Inspect for rodent damage, corrosion, dust and dirt build up regularly to prevent overheating or short circuits. Some insurance

companies offer thermographic inspections (during operation/peak load) to identify hot spots. Have a qualified electrician make any repairs;

- **Structural Systems:** This is what holds everything up, and includes foundations, slatted or solid floors, concrete sandwich walls, stud or post and beam walls, and roof trusses and cladding. The enemies of the structure are moisture, manure and physical damage. Investigate wood elements for rot, chewing or wear from machinery. Check steel items for signs of corrosion from moisture or manure gases. Manure acids and gases can cause concrete to deteriorate and possibly crack or flake off. Any deterioration of structural systems should be considered a safety issue. Have a professional engineer complete an inspection and provide you with recommendations for repair strategies;
- **Outdoors:** Ensure that downspouts and the ground surrounding your facility slope away from all buildings to limit water infiltration. Maintain all driveways to feed bins and loading doors. Keep snow plowed to ensure access for the fire department. Ensure weeds and debris are removed from the perimeter of buildings. Repair any cracks or gaps in the building to protect against rodents and have a pest control program. Ensure exhaust hoods and inlets are free of debris and dirt to ensure efficient operation.

A routine maintenance program will identify and correct issues before they become big problems. Some issues are safety issues and need to be addressed immediately. Others affect the function of the facility and can affect profitability. Regular facility maintenance is easy – and profitable! Adopt a program for your operation and start reaping the benefits.

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