

## Fan Maintenance Saves Energy and Money

Ventilation fans in modern livestock buildings, greenhouses and crop storage barns are an efficient way to exhaust moist air and provide summer cooling. But just because a fan is turning doesn't mean it's moving air efficiently. Here are some tips to improve efficiency.

Keep fan blades and shutters clean. If fans are not cleaned, the accumulated dirt increases the resistance to air flow, cutting efficiency by up to 40%. This is particularly a problem in animal buildings. The farm operator loses in two ways—less air will be delivered for the same amount of electricity and animal production will suffer from fowl air and summertime heat stress.

Perform maintenance checks and cleaning of fans at least every two months (Monthly for poultry houses.) Look for:

- Belts that are loose or misaligned
- Shutters that won't open fully due to dirt or lack of lubrication
- Fan blades with a film of dust or caked-on dirt
- Weeds and other obstructions near the fan discharge that block airflow.



Cleaning Fan Blades & Shutters:

1. Disconnect power to the fan. *This is a critical safety step.*
2. Place lock or sign on the switch so no one will accidentally turn on the fan circuit.
3. Use compressed air or a stiff brush to remove dust buildup.
4. If moisture has caused caked-on dirt, try a warm detergent solution or a plastic putty knife.
5. Be sure to wipe off the motor housing too. This helps to keep it running cool and extends its service life.
6. Check all electrical wiring for rodent damage, loose wires or other types of electrical hazards.
7. Reattach guards, screens and covers before turning the power back on.

Many of these same efficiency tips apply to fans in non-ag applications. Warehouses, machine repair shops and other facilities that use fans for supplying fresh air for summer cooling, can benefit from the same maintenance tips.