

## WINTERIZING FARM EQUIPMENT

Ownership and operational costs of modern farm equipment are major expenses on Cache Valley farms. Today's tractors, combines, and farm implements are both impressive and pricey. It is remarkable to see what they can do when working well. Breakdowns, however, can be quite costly and frustrating. I have great respect for mechanics who can keep machines properly adjusted and efficiently running.

Since much of the field work is now finished, many local farmers have already stored much of their equipment for winter. I still see lots of equipment, however, that is sitting outside with no protection of any kind. I am convinced that machine sheds are economically sound investments, but sometimes it is difficult to get all the equipment under a roof. Even a heavy tarp that is properly placed over farm equipment is better than nothing. A USU fact sheet provides the following suggestions for winterizing farm equipment.

All equipment should be thoroughly cleaned with a high-pressure washer to remove dirt and trash residue. Accumulated trash and dirt can create fire hazards, electrical malfunctions, corrosion and rust of equipment, which may result in breakdowns next season. Important areas to clean on all self-propelled machines are the engine compartment, heat exchangers/radiator fans and the area under the control centers.

Once equipment is clean, farmers should thoroughly service and lubricate the machine. Also check for worn belts, loose bolts, broken parts, oil leaks and the condition of all hoses. Off-season is the time to make those necessary repairs and adjustments to avoid downtime during the next busy season. Oftentimes, implement dealers offer service specials during the off-seasons, which can mean real savings. Wise operators will work with mechanics and implement dealers to take advantage of such opportunities.

This also is a good time to apply touch-up paint to scratched or corroded areas. Properly maintained equipment that looks good will command a higher trade-in value when the decision is made to replace it. Many operators follow a good cleanup with a wax job to help protect the equipment from corrosion and oxidation.

After cleaning the outside of the cooling system, check the coolant level amount of anti-freeze protection and its condition. Dependent upon your service interval, it may be necessary to drain the system, flush the radiator and refill with proper coolant and service the coolant filter as required.

Owners should also regularly service their engines and replace both oil and fuel filters. Harmful acids can also accumulate in the equipment's oil pan, particularly during light-load applications, causing engine damage. Farmers should pay particular attention to the condition of their crankcase oil during winter operation. Keep in mind, lightly loaded engines during cold weather face one of the most severe engine tests. The engine never really reaches its proper internal operating temperature even though the coolant temperature may be normal.

Contaminants can also cause extensive damage to hydraulic systems. Dealerships recommend that producers analyze the hydraulic fluid in all equipment regularly and replace it as recommended. Downtime can be avoided by timely action now by checking for small leaks.

During the busy spring season, electrical problems are often the most time-consuming to trace and repair. Winter is a good time to check for loose connections, frayed or broken wires and to repair broken gauges, lights and switches.

Although modern batteries do not have to be removed from equipment, except in extremely cold regions, cleaning the battery, its posts and cable connections is advised. On an idle machine, the battery ground cable should be disconnected from the battery to avoid corrosive buildup and possible battery discharge.

Before storing the unit, all ground-working tools and mold boards should be cleaned and coated with a lubricant to guard against rust. Don't forget to check the shanks on field cultivators. Worn shank bushings or pins should be replaced. Don't go into the next season with bent or worn shanks that can leave skips in the fields.

Finally, equipment tires should be cleaned and inspected for possible cuts. Check tire pressures before storing equipment and inflate them as necessary.