

Slowly But Surely

The change toward more eco-friendly oils is coming – and mower companies are preparing for it

BY FRANK H. ANDORKA JR., MANAGING EDITOR



It's not exactly a revolution. It's more like a building movement that may eventually engulf the industry. Eventually, eco-friendly oils will be standard on most mowing equipment, experts say.

Joe Wilson, senior engineer for John Deere, says he wouldn't describe the movement as robust, but he does believe it exists.

"The decision to produce these products has been spurred in part by municipal legislation and competition for contract bids where such oils are required," Wilson says. "There's clearly a movement in that direction."

"It's common sense," says Shawn Daly, product manager for Jacobsen. "Biodegradable oils cause less damage on the greens if they leak, and they're easier to clean up. Superintendents understand the advantages they offer."

Still, experts say there hasn't been a significant increase in requests for the oils despite

their advantages. Biodegradable oils often cost more for end-users. In addition, not all equipment is designed to handle the oils.

In the end, the decision about whether to switch to biofriendly oils will depend on how important it is to superintendents to have these eco-friendly allies in their arsenals.

Why make the change

The first and foremost reason to make the change is that bio oils do less damage than traditional petroleum-based products after a leak. The issue is particularly important for greens, Daly says.

"Greens are the most important asset a golf course has," Daly says. "Mineral-based hydraulic fluid leaks on greens can be devastating. They leave scars that can last for months."

Jody Hinkle, marketing communications manager for The Toro Co.'s golf and grounds division, says the inquiries her company receives about using bio oils usually center on the fairways because superintendents have the option of walk-mowing greens, which eliminates the risk of having pressurized oils in the equipment at all.

"The concern about larger burns and the destruction of grass is one reason courses consider moving to biodegradable oils," Hinkle says. "Local regulations governing contamination of soil and ground water that can result from oil leaks are another."

Daly says the ease of cleanup is the most compelling reason to make the change over to biodegradable oils.

"In certain areas of the country, petroleum-based products are considered toxic waste," Daly says. "That can make the cleanup expensive, and the damage to the grass can be enormous. Biodegradable oils don't pose those challenges."

"Ask any local oil-change center about the hoops they have to jump through to dispose of the oil," Daly adds. "Superintendents don't want to have to deal with that kind of hassle."

Hinkle says the disposal costs for both are similar. "Frequently, the bio oils are mixed with standard oils for disposal, so there's no savings."

Daly says the latest information he's seen places the costs of recycling biodegradable oils at between 10 cents and 30 cents per gallon, and motor oil costs 50 cents to \$1 per gallon to dispose. He adds that prices vary throughout the United States by market.

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Eco-friendly Oils

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The case against change

Hinkle says the two barriers to bio oils' success are price and accelerated deterioration of it.

"Bio oils have to be changed much more frequently than standard oils," Hinkle says. "The cost to use a bio oils is roughly three to five times more expensive than standard oils."

Hinkle says most Toro equipment can be converted to handle biodegradable oils, but the company hasn't seen a sharp rise in interest for this type of equipment.

"We're shipping a couple dozen pieces of equipment or less from the factory with these oils to meet customer requests," Hinkle says. "There are some

field conversions as well, but they're not in any great volume."

Daly admits that bio oils are slightly more expensive, but that superintendents are getting more interested in them. "There's a safety issue there for superintendents, and they're becoming more comfortable with the biodegradable products every day."

Jacobsen's mindset is that biodegradable oils will be their preferred oil in the future, Daly says.

Wilson says if superintendents want to change the type of oils they are using in Deere machines, they should flush the machines completely. Then the machines should be drained, refilled with bio oil and run until reaching normal operating temperatures. Then the oil

can be drained and replaced with fresh bio oil.

Some machines do not drain completely. If flushing is not done, some mixing of the mineral oil and bio oil will occur. The resulting mixture will be less biodegradable than the unmixed fluid.

Wilson says that care should be exercised when selecting a bio oil as brands are not created equal.

The challenges superintendents face with using eco-friendly oils will eventually be overcome, and the movement will continue to swell, Jacobsen's Daly predicts.

"It's an overall mindset — a strong commitment to the environment — that will eventually make this a permanent fixture in our industry," Daly says. "And that day may be coming soon." ■

Bio-products

Check out these organic and biological products for turf management:

New turf protectors

Becker Underwood's BioGain and Canteen work in tandem to treat newly seeded or established turf, according to the company. BioGain is designed for use in spray application programs to reduce stress and stimulate root growth through enhanced water and nutrient uptake and to correct iron deficiencies in turf. Canteen, a performance-enhanced spreader and soil penetrant, delivers pesticides and fertilizers to the root zone. For more information, contact 800-232-5907 or www.beckerunderwood.com.

Foliar nutrition program

Milliken Turf Products says its Emerald Isle CPR-True Foliar Nutrition Program is successful in defending against basal rot anthracnose. The CPR-True Foliar Nutrition Program provides small, efficient amounts of foliar-absorbed nutrition along with a generous amount of high-quality seaplant extract. For more information, contact 800-845-8502 or www.milliken.com.

Organic fertilizer

Earthworks offers Replenish 5-4-5 Natural Organic Fertilizer, a "formulated" granular organic. The Replenish line also includes an ammonium sulfate-based organic, 10-2-5; a potas-

sium sulfate product, 5-1-10; and a straight and inexpensive compost topdressing, 3-4-3. These are formulated natural organics, incorporating rich egg-layer compost, sugars, rock minerals and humic acids to allow for better microbial stimulation and soil conditioning. For more information, contact 800-732-8873 or www.soilfirst.com.

Organic fertilizer

Milorganite's organic fertilizer is versatile and can be used anywhere a superintendent or groundskeeper deems necessary. Milorganite is ideal for a variety of applications: greens; fairways and roughs; tee boxes; trees; planting beds; and flowering shrubs. For more information, contact 414-221-6810 or www.milorganite.com.

Nutrients

Floratine offers a variety of foliar auxiliary nutrients designed to address the photosynthetic & chlorophyll requirements of turfgrasses. The products include Astron, Per "4" Max, ProteSyn, Knife - Fortified iron supplement, Renaissance and others. For more information, contact 901-853-2898 or www.floratine.com.

Bio-fertilizer

Nutramax offers MACRO-SORB foliar, a biofertilizer based on amino acids. It allows for greater absorption and transport of nutrients through the leaves into the plant. The action of L- amino acids and substances with phyto-

hormonal effect in MACRO-SORB foliar helps to regulate the opening of the stomata, increase water potential and other factors. For more information, contact 800-925-5187 or www.nutramaxlabs.com.

Organic fertilizer

Nature Safe Natural and Organic Fertilizers are formulated by **Griffin Industries**, a producer of animal proteins for the feed industry. The organic feed compounds needed by animals are also required by plants for their growth, protection, reproduction and survival. Nature Safe has taken the same approach used to maximize animal nutrition to create products that emphasize soil and plant health. For more information, contact www.naturesafe.com.

Microbial-based products

Novozymes Biologicals offers microbial-based products, including EcoGuard biofungicide, which provides natural, effective dollar spot control. EcoGuard combines a patented microorganism and other natural ingredients for robust control of dollar spot, faster recovery from turf disease and protection from future infestations. It helps superintendents reduce the cumulative chemical exposure on their courses and meet integrated pest management (IPM) objectives when used in a recommended rotation program with standard chemical fungicides. For more information, contact 800-788-9886 or www.novozymes.com.