Rough Road Ahead

FDA Changes Coming for Livestock Owners
When Power and Performance Really Matter

You don’t have to risk expensive downtime during the winter. Whether you rely on diesel fuel for agriculture, construction, trucking or simply getting around town, give your equipment the best fuel for cold temperatures, and keep your operation running right.

Take Charge.

All diesel fuels are not created equal. Try MFA Oil’s BOSS Performance Diesel™ today.

Learn more at www.bossperformance.diesel.com.
FEATURES

6
Rough Road Ahead: Rural Infrastructure Repairs Needed

12
MFA Oil to Return $11.8 Million in Patronage to Owners

18
FDA Changes Coming for Livestock Owners

20
AAA Study Shows Top Tier Gasoline Benefits Drivers

22
Herbicide-resistant Palmer Amaranth Confirmed in Missouri

DEPARTMENTS

Letter from the President ..........4
Clearing Up Some Misconceptions: Responding with Facts

The Big Picture ..............................16
Farmland Values Face "Near-Term Correction"

Market Commentary ..................24
Consider Contracts to Save on Fuel

From the Board ............................26
Sharing in the Company's Success

Acquisitions ..............................28
Ozark County LP Gas Company, Inc.

News Briefs ...............................29

Giving Back ...............................30
Supporting Special Olympics Missouri

Department Focus .......................32
Field Support: Fueling MFA Oil’s Field Operations

Automotive ...............................34
6 Tips to Get Your Vehicle Ready for Winter

WWW.MFAOIL.COM
Clearing Up Some Misconceptions: Responding with Facts

“It must be true, I read it on the Internet!” You’ve probably heard something like this from a friend, relative or, more likely, one of your kids. I’m guessing most of us have had enough experience with the Internet and social media to know we can’t always believe everything we read.

Recently, we discovered a dialogue about MFA Oil on an online agricultural forum. We know it’s normal for our customers to share their opinions about MFA Oil on the Internet, and we take the concerns seriously. Certainly, everyone is entitled to their opinion. However, we would be remiss if we allowed certain misconceptions to be perpetuated without response.

I learned a long time ago that if you are going to argue with someone you should always stick to the facts. Emotions can sometimes get the best of us, but sticking to facts will many times douse emotional fires that arise through misguided perceptions. The postings below come from two different farmers in the same chat group discussing MFA Oil. I am responding with facts to both of their comments.

Farmer A: “Who runs MFA (Oil)? How weak and ineffective has the Board of Directors become. Like most organizations and cooperatives over time it becomes a top down driven affair. The local plant took out E-85 a couple months ago. I’m guessing they didn’t sell enough to tie up a tank. Of course they priced it within a dime or less of E-10 most of the time so why would they sell any…MFA (Oil) should be dissolved and their assets returned to their shareholders.”

Fact: MFA Oil is governed by an eight-member Board of Directors composed of farmers and ranchers who are elected by their local delegates. Our board is very effective, listens intently and provides excellent feedback to the MFA Oil management team. They always have the cooperative’s member-owners in mind.

As president and CEO, I report directly to the board, and my team and I are fully accountable to them.

Fact: MFA Oil has been supporting ethanol blending for decades. We are one of the largest ethanol retailers in the Midwest and we have more E-85 sites than any other Missouri retailer.

Fact: MFA Oil (as well as most retailers) has difficulty selling higher ethanol blends without substantial discounts for those higher blends. It often takes more than a 40-cent-per-gallon discount for us to sell much E-85, compared to E-10. For some time, the lower energy market has caused the price we pay for ethanol to be higher than the price we pay for gasoline.

Farmer B: “I have a problem with them using my patronage to buy out the competition, in order to limit my choices and ultimately charge me more. Their magazine recently had information about all their acquisitions the last few years. It seems they’ve went on quite the buying spree. I wonder where they got all the money?”

Fact: Yes, it’s true we do list our recent acquisitions in this magazine and we can agree we’ve been on a bit of a buying spree. However, we did not use patronage dollars for these acquisitions. These acquisitions were funded in two ways:

The sale of MFA Oil’s interest in the refinery in McPherson, Kan., has provided the company with an influx of capital that has been strategically reinvested in acquisitions to grow member earnings.
1. The sale of our interest in the refinery in McPherson, Kan., happened at a great time and has given us millions of dollars of capital. Frankly, we had no choice in the sale and were quite fortunate that we were not bought out of our stake much sooner. It was a bit scary, because the refinery earnings represented approximately 70 percent of our income over the last 15 years; however, the sale has also provided us with an excellent opportunity. Management and the board agreed we needed to use these dollars to replace the refinery income. Together, we decided the best way to accomplish this task was by strategically acquiring similar businesses that fit our area of expertise.

2. Earnings from our own operations, which include strong earnings from our non-member business, provided the second source of funds for acquisitions. Our non-member business consists of our Break Time, Big O Tires and Jiffy Lube stores, in addition to the non-member business we do in our bulk fuel and propane plants.

Fact: This strategy has strengthened our income statements and balance sheet. So, instead of depleting member patronage or equity, we’ve improved our balance sheet. This allows us to pay a higher percentage of member earnings in cash and retire deferred member equity more quickly.

While negative comments easily outpace positive ones in this day and age, we did have customers defending us during the very same chat. See below comments from Farmers C and D.

**Farmer C:** “I only buy fuel from MFA Oil... here, they have good prices and services... Have you taken time to talk with your plant manager, your district manager and your districts board member to express your concerns?”

**Farmer D:** “Their gas and diesel prices are lower than competitors here. I’ve bought from them for 35 years and am a satisfied customer. They shoot straight unlike other places we’ve tried to buy.”

We don’t know who these individuals are, but we appreciate their comments. Farmer C does a great job of pointing out the ability to discuss any concerns our customers might have with their plant managers or others, if need be.

We do our best to add value. Value can be defined in many ways: service, price, safety, relationships, philanthropy, etc. What one customer may find as a value, others may not. We know we are far from perfect, but at the end of the day, you have a say in the matter as a member-owner. We wouldn’t want it any other way, and we thank those who actively participate in and defend this great cooperative.

Cooperatively,

Mark Fenner
President and CEO
ROUGH ROAD

RURAL INFRASTRUCTURE REPAIRS NEEDED
Farmers in the United States are faced with losing one of their most valuable competitive advantages over foreign competitors if drastic improvements are not made to the nation’s deteriorating network of roads and bridges.

A growing list of reports have detailed the worsening condition of America’s rural transportation system and emphasized the need for long-overdue repairs and upgrades to the backroads and bridges in the Heartland.

According to TRIP, a non-profit national transportation research group, 15 percent of rural roads in America were rated as poor as of 2013 and another 39 percent were reported to be in mediocre to fair condition. In 2014, 11 percent of rural bridges in the United States were rated as structurally deficient and 10 percent were functionally obsolete.

In its 2013 report card, the most recent, the American Society of Civil Engineers (ASCE) gave U.S. roadways a D on an A to F scale and the nation’s bridges a C+.

These facts make it clear that America’s highways and bridges are aging, underfunded and inadequate to meet the demands placed upon them today, much less in the future.

ESSENTIAL INFRASTRUCTURE

The rural transportation system provides the first and last link in the supply chain from farm to market. When it weakens, the farm economy suffers.

“America’s rural transportation network plays a key role in the success and quality of life for U.S. farmers and ranchers,” said Bob Stallman, former president of the American Farm Bureau Federation. “Adequate roads and bridges are necessary to deliver our agricultural bounty…but deteriorated and deficient rural roads and bridges are hindering our nation’s agricultural goods from reaching markets at home and abroad and slowing the pace of economic growth in rural America.”

If any state knows the challenges of moving large volumes of agricultural commodities over aging roads and bridges, it is Iowa. The state is one of the world’s leading agricultural centers—producing more corn than all but three
countries. Unfortunately, the state's surface transportation system is also one of the worst in the country. Iowa has the largest inventory of structurally deficient bridges in the nation with 5,022, or one out of every five bridges in the state. Additionally, 58 percent of the rural roads in Iowa are rated to be in poor to mediocre condition.

Bridges are considered to be structurally deficient when they exhibit signs of significant deterioration of the bridge deck, supports or other major components. Structurally deficient bridges are often posted for lower weight or closed to traffic, restricting or redirecting large vehicles, including farm equipment, commercial trucks and emergency services vehicles.

The problems with Iowa's roads and bridges are sadly common throughout the country, including many of the states where MFA Oil does business. Poor pavement conditions on rural roads are prevalent in Kansas (30 percent), Oklahoma (27 percent), Missouri (21 percent) and Arkansas (19 percent). Both Oklahoma and Missouri join Iowa in the top 10 states with the highest percentage of structurally deficient bridges at 19 percent and 15 percent, respectively.

These conditions negatively affect the connectivity and capacity of the Midwest's rural transportation network, making it more difficult for farmers and companies that supply farmers and rural residents, like MFA Oil, to efficiently transport goods.

**A LACK OF INVESTMENT**

Missouri's decrepit bridges are a prime example of what happens when infrastructure is not properly cared for and replaced in due time.

**“WE HAVE ROADS THAT ARE COLLAPSING, WE HAVE HIGHWAYS AND BRIDGES AND TUNNELS THAT ARE IN A HORRIBLE STATE OF REPAIR.” - PRESIDENT-ELECT DONALD TRUMP**

Roads and bridges are designed with a defined span of time in mind for which they are meant to be used. In Missouri, the average age of the state's bridges is 46 years, and most of them were designed to last 50 years. Currently, 60 percent of Missouri's bridges are beyond their original intended life.

The Missouri Department of Transportation (MoDOT) website paints a bleak outlook for bridges within Missouri, stating, "We currently have 866 bridges that have been rated 'poor' by the Federal Highway Administration. Each year about 100 bridges fall into the 'poor' category, and we fix or replace about 100. The number of poor bridges in Missouri, though, is rising steadily as we struggle to hold our own. We can only stretch our dollars so far, and must prioritize our work. The stark reality for bridges in our current funding situation is that more of them will be weight restricted, some will need to be closed, and the economic vitality of our state and mobility of our citizens will be compromised."

In recent years, MoDOT has been forced to slash its workforce by 20 percent, shutter numerous facilities and sell off equipment because it has only about half the money it used to have to take care of the state's transportation needs.

"Missouri has the seventh-largest highway system in the nation, but ranks 47th in revenue spent per mile," said Roberta Broeker, chief financial officer for MoDOT. "That kind of underinvestment has consequences, including an impact to safety and economic growth. While we are committed to do the best we can with limited resources, we know the condition
of our system will deteriorate without additional investment.”

Allowing roads and bridges to slip into disrepair ultimately costs states and local governments billions more than the cost of regular, timely repair. Over a 25-year period, deferring maintenance of bridges and highways can cost three times as much as preventative repairs. The backlog also increases safety risks, hinders economic prosperity and significantly burdens taxpayers.

According to a 2015 report from the American Association of State Highway and Transportation Officials, the current backlog of improvements needed to fix the country’s roads, highways and bridges would cost an estimated $740 billion.

LOCAL ISSUES
The burden of maintenance for 45 percent of U.S. roadways falls on the 3,143 counties and county-equivalents in the United States.

This has created problems for rural counties dealing with declining populations and a shrinking tax base, said Bob Fox, a county commissioner from Renville County, Minn.

Fox, who is also vice-chair of the agriculture and rural affairs steering committee for the National Association of Counties, spoke about the challenges county governments face at the Rural Infrastructure Summit hosted at Iowa State University in August.

“Counties rely on local revenue sources such as property taxes and local option sales taxes to make infrastructure work,” Fox said. “A few years ago, we bonded for $12 million (to pay for transportation projects) because our board could not wait any longer for state or federal help. It’s a tough decision for a board to bond for $12 million when you have a population of 15,000 people, but the job needed to be done.”

Rising construction costs that are increasing at a rate greater than general inflation compound the issues counties deal with as they attempt to finance upgrades to their roads and bridges.

“A few years ago, we could rebuild a mile of roadway for $300,000,” Fox said. “Last year, we finished four miles of rebuilt road at just shy of $1 million per mile. Some rural counties just can’t afford these expenses.”

Fox attributes part of the problem to “federal and state partners pushing the can down the road,” which leads to funding shortfalls and projects becoming more expensive.

TRUMP’S PLAN
When President-elect Donald Trump delivered his victory speech in the early morning hours of Wednesday, Nov. 9, he highlighted a number of issues he hopes to address while in office. The first priority he cited was the sorry state of the country’s infrastructure.
“We are going to fix our inner cities and rebuild our highways, bridges, tunnels, airports, schools, hospitals,” Trump said. “We’re going to rebuild our infrastructure, which will become, by the way, second to none.”

Trump frequently panned the state of U.S. infrastructure during his presidential campaign and vowed to spend nearly $1 trillion on transportation projects to address the issues.

“We have roads that are collapsing, we have highways and bridges and tunnels that are in a horrible state of repair,” Trump told his supporters at a campaign event in September.

While many of the details of Trump’s plan to upgrade the nation’s transportation systems have yet to be released, it is expected his infrastructure plan will have a prime place on his agenda for his first 100 days in office.

The biggest question surrounding any infrastructure spending bill is, of course, how it would be financed.

Congress routinely decries the pitiful state of U.S. roadways and bridges, but has yet to put together a long-term plan to fund improvements.

Last year, Congress passed its latest federal funding authorization for surface transportation—Fixing America’s Surface Transportation (FAST) Act—which allows an average of $56.2 billion per year of federal funds for highway and transit programs through 2020. Though this represented a 7 percent increase over the prior federal program for highway and transit programs, it barely keeps up with inflation and essentially keeps the federal transportation funding level close to flat.

In its 2016 “Failure to Act” report, ASCE noted federal gasoline and diesel fuel tax rates, which fund the national Highway Trust Fund (HTF), haven’t been increased since 1993.

“Economists say the revenue now buys less than 60 percent of the surface transportation infrastructure it bought in the early 1990s,” the report stated. “Worse, even after the passage of the FAST Act last year, total user fees and taxes going into the HTF are expected to provide only $38 billion a year while spending from the fund will run about $54 billion a year.”

Don Young (R-Alaska), former chairman of the U.S. House of Representatives Transportation and Infrastructure Committee, told Politico he would hike the gas tax to pay for transportation projects, and he faulted both his own party and President Obama for blocking it in past years.

“There’s no pie in the sky, no magic wand,” Young said. “We have to pay for it.”

**FIXING INFRASTRUCTURE FUNDING**

Whether through a tax on fuel or other means, it is clear something must be done to address the lack of funding for infrastructure in the United States.

Patrick McKenna, director of MoDOT, has suggested raising Missouri’s vehicle licensing fees or the 17-cents-per-gallon gasoline tax, which have not changed since 1984 and 1996, respectively, to increase his department’s budget.

Missouri has one of the lowest fuel taxes in the country, and the purchasing power of the state’s gas tax has eroded over time with inflation.

In January 2016, McKenna told the Jefferson City News-Tribune, “The view that I have is that moving toward a sustainable solution—even if that means taking steps to get there—we should be supportive of those.

“It’s really important to take the first step... There are very substantial needs when you have 34,000 miles of roads to take care of and 10,400 (state-owned) bridges....”

The state of Iowa has made recent strides toward addressing its crumbling roads and bridges. In March 2015, Iowa increased its fuel tax by 10 cents per gallon, which is expected to add more than $200 million in additional revenue for critical road and bridge projects in the state.

“It took 13 years of hard work to make the case for increased investment,” said Stuart Anderson, director of planning and programming for the Iowa Department of Transportation, during a panel at the Rural Infrastructure Conference.

“This additional revenue is being put into the system as we speak, and local governments get a large portion of that funding to improve rural roads and bridges. This year (2016) will be a record year for construction in the state.”

Exactly how crucial infrastructure improvements in Missouri and other states will be paid for in the future remains a mystery, but the proverbial can may be kicked only so far down the road.

MFA Oil supports lawmakers at the state and federal level who are working to find a practical solution to the nation’s infrastructure issues.

“We support common-sense tax increases with designated funding for road and bridge improvements,” said James Greer, MFA Oil vice president of supply and government relations. “We need reliable routes to effectively deliver fuel and propane to our farmer-owners.”

---

**STATES WITH THE WORST RURAL ROADS**

<table>
<thead>
<tr>
<th>Percentage of Rural Pavement in Poor Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Michigan</td>
</tr>
<tr>
<td>2. Rhode Island</td>
</tr>
<tr>
<td>3. Hawaii</td>
</tr>
<tr>
<td>4. Idaho</td>
</tr>
<tr>
<td>5. Kansas</td>
</tr>
<tr>
<td>6. West Virginia</td>
</tr>
<tr>
<td>7. Oklahoma</td>
</tr>
<tr>
<td>8. Maine</td>
</tr>
<tr>
<td>9. Alaska</td>
</tr>
<tr>
<td>10. New Mexico</td>
</tr>
<tr>
<td>11. Connecticut</td>
</tr>
<tr>
<td>12. Vermont</td>
</tr>
<tr>
<td>13. Mississippi</td>
</tr>
<tr>
<td>14. Washington</td>
</tr>
<tr>
<td>15. Missouri</td>
</tr>
<tr>
<td>16. New Hampshire</td>
</tr>
<tr>
<td>17. Virginia</td>
</tr>
<tr>
<td>18. Arkansas</td>
</tr>
<tr>
<td>19. Wisconsin</td>
</tr>
<tr>
<td>20. Pennsylvania</td>
</tr>
</tbody>
</table>

---

10 /// MOMENTUM

WINTER 2016
GET THE JOB DONE

Don’t allow friction to cut down your chain saw’s performance. Bucky’s Best is specially formulated to adhere to your chain saw’s bar and chain, providing optimal lubrication and protecting against wear, even at low temperatures.

For more information, contact your MFA Oil office, call (800) 366-0200 or visit us at www.mfaoil.com.
MFA Oil Company recently declared it will pay $11.8 million in cash to its members in exchange for doing business with the company.

The announcement was made at the 87th Annual MFA Oil Delegate Meeting in Branson, Mo., on Nov. 15 and 16. Approximately 500 delegates, guests and employees of the company attended the meeting, where MFA Oil recapped its 2016 fiscal year and provided an overview of the company’s operations.

Robert Condron, chief financial officer, presented a rundown of the company’s fiscal performance, including companywide earnings of $33.6 million, $15.7 million in earnings on MFA Oil operations and a net worth of $300.7 million.

“We had a successful year despite an unseasonably mild winter which caused propane volumes to decrease by nearly 20 percent from the previous year,” Condron noted. “Overall, we are in great financial position, and we are poised for continued growth.”

**PATRONAGE RETURNS**

The annual disbursement of patronage and equity redemptions are approved by the MFA Oil Board of Directors, which is composed of eight farmer-leaders who are elected by the members of the cooperative. The patronage distribution represents 80
percent of MFA Oil’s member earnings for the 2016 fiscal year and includes a retirement of member equities from 2003.

“Our company has a strong balance sheet, which allows us to return a substantial portion of our earnings in patronage,” says Benny Farrell, MFA Oil Board chairman. “This is the third consecutive year that we have returned 80 percent of the company’s member earnings to our qualified farmer-owners in cash.”

MFA Oil members are eligible to receive patronage refunds based on a percentage of the total money they spend on products such as gasoline, diesel, propane and lubricants purchased through the company’s refined fuel and propane plants, as well as at Petro-Card 24 stations.

“Patronage refunds allow our nearly 40,000 farmer-owners to share in the cooperative’s success and rewards members for doing business with the company,” said Mark Fenner, president and CEO.

The $11.8 million in patronage for fiscal 2016 represents the fifth-largest return to the membership in the company’s 87 years of existence.

MOMENTUM

Fenner spoke about the many ways MFA Oil is growing and what the company is doing to ensure its continued success.

“We achieved our second-highest earnings on our own operations in fiscal 2016 thanks to strategic investments, such as the eight acquisitions we made this year,” Fenner said. “Our bulk fuel and propane acquisitions in Kansas and refined fuel acquisitions in Oklahoma have opened up new markets to grow our business and generate higher returns to our membership.”
Above: Tom Kloza, global head of energy analysis for Oil Price Information Service, discussed the outlook for fuel prices. Right: Delegates applauded the announcement of patronage.

Left: Approximately 500 delegates, guests and employees attended the meeting. Above: MFA Oil President and CEO Mark Fenner provided updates on company operations.

Above: A trade show was held before the meeting for delegates to learn more about the company. Right: MFA Oil sales and service teams offered games to engage delegates at the trade show.
MFA Oil has also made improvements to its fleet of delivery and service trucks. The company purchased 13 10-wheel refined fuel trucks, 13 service trucks, seven propane bobtails and two 15-ton crane trucks.

“The new trucks will provide our employees the tools they need to maintain excellent service to our customers,” Fenner shared. “Additionally, we have rededicated our efforts to ensuring our employees are highly trained and knowledgeable in their field of expertise. We recently introduced MFA Oil University, an online training program for our more than 1,750 employees.”

**Diehl Elected to Board, Massey Re-elected**

Caucuses were held for the company’s West Central and Mid-South voting districts. Delegates from the West Central district elected Kim Diehl of Butler, Mo., to the MFA Oil Board of Directors. Diehl replaced Kevin Buckstead of Holden, Mo., who had served on the board since 2010.

Joey Massey of Paragould, Ark., was re-elected to the board to represent the Mid-South district. Massey was originally elected to the board in 2007.

**The Energy Market**

The annual meeting concluded with an outlook on where fuel prices may be headed in the future. Guest speaker Tom Kloza, global head of energy analysis for the Oil Price Information Service, predicts crude oil prices will remain low through January but will begin to rise in a slow-acting bull market by mid- to late 2017, provided there isn’t a recession.

“Crude oil prices are too low currently to be sustainable,” Kloza said. “Global demand could outpace global supply gains by more than one million barrels per day in 2017, thinning the crude glut. Meanwhile, spending for crude oil and gas projects are down some $300 billion from the 2014 peak.”

Additionally, Kloza said fuel storage capacity per capita in the United States is a mere fraction of what it was from 1975 to 1985. This has led to shallow inventories that can empty quickly and cause prices to spike during outages.

If Kloza’s predictions prove to be on target, it may make sense for some MFA Oil customers to lock in pricing with fuel contracts. More information on fuel contracting can be found on Page 24.
Farmland prices in the United States are headed for “the first significant correction since the mid-1980s,” according to a recent report from MetLife Agricultural Finance. The private agricultural lender, one of North America’s largest, expects land values to drop by an average of 20 percent by 2018 from recent peaks due to declining farmer profitability. The latest quarterly Ag Credit Survey conducted by the Federal Reserve Bank of Kansas City stated “low commodity prices continued to weigh on farm sector profits in the third quarter” and “profit margins remain weak throughout the agricultural sector.”

MetLife expects farmland values in the Midwest and Upper Plains regions to decline 22 and 26 percent, respectively, from peak to trough. This will be primarily due to corn and soybean prices bottoming out in the 2016-17 marketing year. Corn and oilseeds make up half of farm cash receipts in these regions, and MetLife anticipates the low price environment for agricultural commodities will persist through 2017. The report forecasts a milder drop in farmland values in the Southeast because the region has already experienced a correction that began during the Great Recession.

While the correction in farmland values may remind some of the crisis farmers faced in the 1980s, MetLife indicates the current situation is less dire because farmers are not as highly leveraged, interest rates are lower and the agricultural sector benefits from mandated corn demand for biofuels. On average, agricultural producers’ debt-to-asset ratios have ranged between 11 and 13 percent in recent years, well below the 1985 peak of 22 percent.

“The crisis in the 1980s was a product of policies that incentivized the sector to take on excessive leverage and an abrupt change in monetary policy that caused interest rates to rise,” MetLife said. “This is not the case today.”

WWW.MFAOIL.COM

MOMENTUM /// 17
FDA CHANGES COMING FOR LIVESTOCK OWNERS

New rules go into effect Jan. 1.

By Logan Jackson, University of Missouri Extension
Livestock owners are encouraged to prepare for Food and Drug Administration rule changes on antibiotics that will go into effect Jan. 1.

Craig Payne, director of veterinary medical extension at the University of Missouri, said there are two main changes. The first deals with medically important feed-grade or water-soluble antibiotics with a claim on the label, such as improved rate of weight gain or improved feed efficiency. These claims will be removed from the label and the antibiotic will no longer be permissible to use for those production purposes.

The second change deals with the same antibiotics, many of which have been available over the counter in the past. On Jan. 1, these antibiotics will be available only with veterinarian oversight.

The FDA created a list of antimicrobials in 2003 that are important in human medicine, Payne said.

“Any of the antimicrobials that are on that list will be impacted by the upcoming changes.”

Antimicrobials are agents that destroy microorganisms or hinder their growth. Antibiotics are used against bacteria, for example.

Several antibiotics have claims on the label for improved rate of weight gain or improved feed efficiency. Payne said they are typically fed at low levels over a long period of time.

“The FDA is eliminating production uses by making these label changes,” he said. “They want the antibiotics used just for treatment, prevention or control of disease.”

For feed-grade antimicrobials, livestock owners will need a veterinary feed directive. A veterinarian fills out the VFD form, which is then given to the feed distributor, who issues the medicated feed. For water-soluble antimicrobials, a prescription from a veterinarian will be required.

“The veterinarian-client-patient relationship (VCPR) is at the heart of all of this,” Payne said. “It’s not a new concept. Veterinarians have issued prescription medications for years, and they need to have a VCPR in place to do this. A VCPR means the veterinarian must be acquainted with the care and keeping of the animals before they issue a VFD or prescription.”

Livestock owners need to develop a relationship with a veterinarian in preparation for the changes.

“For producers that use a veterinarian, chances are they have a VCPR in place,” Payne said. “There isn’t a different requirement that they have to meet. They just need to visit with their vet and make sure it’s in place. For those who don’t use a veterinarian very often, chances are they don’t have a VCPR. They would need to identify a vet and start the discussion. I would encourage them not to wait until the first of the year.”

A variety of species will be affected by the changes—even insects such as bees.

“I’ve had several questions from beekeepers,” Payne said. “While bees aren’t considered livestock, some beekeepers use water-soluble antibiotics in their beehives. The label on that water-soluble antibiotic will require you to have a prescription before you can obtain it.

“This goes for your backyard poultry flock or your kid’s 4-H rabbit as well. It doesn’t matter what species that the antibiotic is going to be used for. It has a more widespread impact than your typical livestock such as cattle or hogs.”

The VFD the veterinarian issues will come with an expiration date. Once that date hits, it is no longer appropriate to give the medicated feed, despite how much is left over.

Livestock owners will need to monitor their feed supplies and expiration dates to ensure they are not violating the FDA rule. For example, a producer may have a 50-pound bag of feed that could only be partially used before its VFD expires. In this scenario, Payne said livestock owners who “want to work off the same bag” will need to get their veterinarian to renew their VFD to remain compliant.

Payne has been traveling across Missouri, passing along information about the new FDA rule to livestock owners. He’s also met with several veterinarians to discuss the changes. Payne said anyone interested in finding a veterinarian can contact their local MU Extension center for more details.

For a closer look at the upcoming changes, visit www.fda.gov/AnimalVeterinary/ucm071807.htm.
Filling your gas tank based on the cheapest fuel prices may benefit your wallet in the short term but it could be hurting your vehicle in the long term. A new study from American Automobile Association reveals gasoline quality in the United States can affect vehicular performance, mileage and emissions.

AAA commissioned an independent laboratory to analyze the effectiveness of both Top Tier and non-Top Tier gasoline. The fuel quality tests revealed non-Top Tier gasolines caused 19 times more engine deposits than Top Tier brands after just 4,000 miles of simulated driving.

“AAA was surprised to learn the extent to which detergent additives impact gasoline quality,” said John Nielsen, AAA’s managing director of Automotive Engineering and Repair. “As advertised, tested Top Tier gasolines kept engines remarkably cleaner than other fuels we tested.” Additionally, the study found long-term use of a gasoline without an enhanced additive package can lead to reductions in fuel economy of 2 to 4 percent, drivability issues and roughly double the carbon monoxide emissions.

WHAT IS TOP TIER GASOLINE?
Top Tier gasoline is not a grade or an octane level of gas, rather it identifies a gas with special detergent additives providing improved engine performance compared to other gas blends.

The Top Tier gasoline specification was created by automakers in 2004 to help drivers avoid lower quality gasoline and prevent the problems poor fuel quality can cause, such as rough idling, hesitation, knocking, reduced fuel economy and increased emissions.

“When it comes to selecting a gasoline, automakers got it right – Top Tier gasoline performs best,” continued Nielsen. “By selecting a quality gasoline, drivers can minimize engine deposits, increase vehicle performance and improve fuel economy.”

WORTH IT TO SWITCH
Despite the fact two-thirds of U.S. drivers believe there is a difference in quality of gasoline sold by different gas stations, a AAA survey reveals that Americans value convenience and price over quality when it comes to selecting a gas station.

“Americans are six times more likely to choose a gas station based on the price of gasoline rather than the quality of the fuel,” Nielsen noted. “Since Top Tier gasoline is widely available and only an average of three cents more per gallon, AAA urges drivers to reconsider their priorities when selecting a gas station.”

While the practice of driving to a specific Top Tier gasoline retailer may be less convenient in some situations, AAA says motorists who do will often save more money in the long run through better fuel economy and reduced need for repairs.

The good news for drivers who do not regularly buy gasoline containing an enhanced detergent additive is that switching to Top Tier fuel can remove or reduce most existing deposits that have accumulated over time.

“Fortunately, consumers can reverse some engine deposits simply by switching gasoline brands,” said Greg Brannon, AAA’s director of Automotive Engineering. “After a few thousand miles with Top Tier gasoline, performance issues like rough idling or hesitation during acceleration can often be resolved.”

MFA Oil takes pride in providing customers with competitively priced, high-quality products that meet or exceed their needs. All grades of gasoline sold by the company at its bulk plants, Petro-Card 24 locations and Break Time convenience stores meet the stringent Top Tier performance standards.
HERBICIDE-RESISTANT PAMER AMARANTH CONFIRMED IN MISSOURI

By: Linda Geist, University of Missouri Extension
University of Missouri Extension weed scientists report the first confirmed case of multiple-herbicide-resistant Palmer amaranth in Missouri. It likely is the wave of the future.

MU Division of Plant Sciences research specialist Mandy Bish says this has weed scientists concerned because of Palmer amaranth’s competitive and aggressive nature.

“As the incidences of herbicide-resistant Palmer amaranth increase, producers lose chemical control options,” Bish says.

Bish works with MU Extension weed scientist Kevin Bradley, who has tracked the spread of Palmer amaranth in Missouri and cautioned producers about the weed for almost a decade.

Southern Illinois University researchers Karla Gage and Ronald Krausz identified the Palmer amaranth population with resistance to glyphosate and group 14 PPO inhibitors. The weed came from Mississippi River bottoms north of St. Louis. Scientists first discovered PPO resistance in Tennessee in 2015 and recently in southern Illinois.

In recent years, agronomists and weed scientists throughout the Midwest have reported PPO-resistant populations of the most common pigweed species, waterhemp, which is a relative of Palmer amaranth.

“Multiresistant waterhemp is now the rule rather than the exception,” Bish says. “We assume the same will be true in the future with Palmer amaranth.”

Palmer amaranth is much more aggressive than waterhemp. Under optimal conditions, waterhemp typically grows 1 to 1 1/4 inches daily, while Palmer amaranth can grow up to 2 1/2 inches per day.

“Its fast growth makes it very difficult to effectively treat and control,” Bish says.

While it can be difficult to distinguish waterhemp from Palmer amaranth early on, the leaves of Palmer amaranth are typically wider and distinctively diamond-shaped, and have longer petioles. At harvest, Palmer amaranth can be distinguished from waterhemp by the longer seed head. Additionally, the female seed heads are prickly to the touch. Each plant contains about 500,000 seeds.

Research has shown that Palmer amaranth can reduce yield by as much as 79 percent when there are only five plants per 2 feet of soybean row. With multiple-herbicide-resistant populations of Palmer amaranth confirmed in different regions of the United States, Bish says it will be important to implement nonchemical methods as part of control.

Both waterhemp and Palmer amaranth seeds are only viable in the soil for four to six years. Research by Bradley’s group indicates that one pass of deep tillage in affected areas can reduce both Palmer amaranth and waterhemp densities. Pigweed seeds need sunlight. If buried, they cannot germinate.

Bish urges farmers to actively scout for Palmer amaranth.

For more information about Palmer amaranth, search the MU Extension website at extension.missouri.edu.

Since the late 1980s, Palmer amaranth has evolved resistance to five different herbicide sites of action.

<table>
<thead>
<tr>
<th>Group #</th>
<th>Site of Action</th>
<th>Product Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 2</td>
<td>ALS Inhibitors</td>
<td>Classic®, Pursuit*</td>
</tr>
<tr>
<td>Group 3</td>
<td>Microtubule Inhibitors</td>
<td>Treflan*</td>
</tr>
<tr>
<td>Group 5</td>
<td>Photosystem II Inhibitors</td>
<td>atrazine, metribuzin</td>
</tr>
<tr>
<td>Group 9</td>
<td>EPSP Synthase Inhibitors</td>
<td>glyphosate</td>
</tr>
<tr>
<td>Group 14</td>
<td>PPO Inhibitors</td>
<td>Sharpen*, Authority*</td>
</tr>
<tr>
<td>Group 27</td>
<td>HPPD Inhibitors</td>
<td>Callisto*, Laudis*</td>
</tr>
</tbody>
</table>
Consider Contracts to Save on Fuel

By the time you read this column, you may have heard the news about OPEC’s recent decision to cut crude oil production. I have to give OPEC credit; I did not think it would be able to pull off this historic agreement to limit its members’ crude output. The details of this agreement are still being questioned and analyzed, but the bottom line is if OPEC and non-OPEC members can work to scale back production as they have agreed, supply and demand will begin to rebalance at a faster pace.

Oil prices rallied approximately 15 percent in the days following OPEC’s announcement. Historically, winter and early spring present the best opportunities to lock in cheaper fuel prices through contracting, and that may be especially true this year in light of the OPEC agreement.

Ivan Glasenberg, CEO of Glencore, one of the largest global natural resource commodity companies in the world, said the oil market will be at the mercy of a “cat and mouse game” between OPEC and its shale-producing rivals in the United States during 2017. The market rally in crude delivered an opportunity for U.S. frackers to hedge or sell forward production for 2017 and beyond, to increase their coffers against possible future price declines.

OPEC will have to prove its members are capable of following through on their pledge to reduce crude production for any of this to matter.

In its Short Term Energy Outlook Report, the U.S. Energy Information Administration said, “The extent to which (OPEC’s) announced plans will be carried out and actually reduce supply below levels that would have occurred in their absence remains uncertain.”

According to the consensus opinion of 260 energy professionals who were informally surveyed, OPEC will achieve some, but not all, of the agreed-upon production cuts. The respondents expect OPEC will lower its output to about 33 million barrels per day in January 2017, down marginally from 33.6 million barrels per day in October, but well above the target of 32.5 million barrels per day.

If OPEC is able to make the cuts it pledged, the market will respond. I do not want to create a panic, but fuel contracting may be even more prudent now than in past years given the circumstances. There are still plenty of questions to be answered, but the season is at hand and if the market price is in your budget range, it’s probably a good idea to lock in pricing on a percentage of your future fuel needs.

MFA Oil Company offers customers the opportunity to lock in a fixed or maximum price on future diesel or gasoline purchases. These options are helpful for budgeting fuel expenses and managing risk.

Here’s a quick overview of the two contract options:

**FIXED PRICE**

A fixed price contract can be purchased for a single month, a few separate months or a block of consecutive months to lock in a price for a given timeframe. The best way to think about these contracts is to look at them with respect to your budget or at what price you need to run a profitable business, farm, etc. We all want to buy the low in the market, but it’s extremely difficult to time the market perfectly. Instead, I recommend determining the fuel pricing level that enables you to operate profitably and then locking in a price as close to that level as possible.

**MAXIMUM PRICE**

Maximum price contracts can be purchased in similar increments as fixed price contracts. You will still be locking in a fixed price, however, for a fee, you can participate in lower prices should the market move lower. Think of the fee like an insurance premium. It gives you protection should fuel prices drop considerably, allowing you to buy at the lower price at the time of your delivery.

**CONTRACTING FUEL**

The MFA Oil fuel contract program offers pricing for 12 months into the future. The contract program is flexible and relatively simple. All you need to do is determine which months make sense for price protection, the number of gallons you think you will need and a good sense of what price you need to be profitable.

Your goal should be to lock in a price on a percentage of your projected needs. You are likely to never buy the low, so work to lock in a price that best fits your budget.

Because fuel prices tend to trend lower near the end of the year and early into the new calendar year, that’s when you typically find the best opportunities to put price protection in place.

Another thing to consider when deciding on futures contracts is that you will likely pay more than today’s prices. It is rare that you can lock in forward contract prices at lower values than current ones. Futures pricing factors the current spot price, time until delivery, risk-free interest rates and storage costs. In other words, futures have the volatility and risk of the market priced into them.

The decision to buy a fixed price or a maximum price contract is a personal decision that should be weighed with regard to your business’s fuel needs. Signing a contract can make budgeting easier, provide potential cost savings, reduce time spent shopping around and guarantee supply in case of a fuel shortage.

TIM DANZE

is the hedging manager for MFA Oil.
LOCK IN. LOAD UP.

Take the guesswork out of budgeting your fuel needs. Lock in your price when the market is in your favor – and load up on savings later, when the price goes up.

EASY AS 1-2-3

1 Choose your fuel type.
2 Choose your amount.
3 Choose your delivery method.

With Fixed Price and Max Price contracts available year-round, MFA Oil’s Fuel Contracting Program will help you gain control of your fuel costs. Contact your local MFA Oil representative for details.
Sharing in the Company's Success

Farmers are generally considered to be financially conservative, and the same is true of the MFA Oil Board of Directors, says Marion Kertz, who farms in Ste. Genevieve, Mo. and represents District 4 on the board.

The MFA Oil Board of Directors is elected by the company’s farmer-owners to govern the company and to provide the membership with oversight of the cooperative's operations and finances.

“We have a responsibility to ensure the company is run efficiently and provides a good return to our fellow farmer-owners,” Kertz says.

One of the most important financial decisions the board makes annually is how much of the company's profits should be disbursed to members in the form of patronage and how much to retain to keep the cooperative operating at a high level.

“Patronage is a valuable advantage to being a member of MFA Oil, and it’s something that benefits all of our farmer-owners,” Kertz says. “Everyone always wants to know how much they’re going to get back in patronage for the year, and the company has done a great job of consistently paying a high percentage of its profits back to members in recent years.”

MFA Oil members are eligible to receive patronage refunds based on a percentage of the total money they spend on products such as gasoline, diesel, propane and lubricants purchased through the company’s refined fuel and propane plants, as well as at Petro-Card 24 stations.

MFA Oil announced an estimated $10.4 million in patronage refunds for the 2016 fiscal year at its 2016 Annual Delegate Meeting in November. Combined with $1.4 million in member equities from 2003, the total amount of money that will be paid in cash to the membership adds up to $11.8 million.

“This is the third year in a row that we’ve approved paying out 80 percent of the company’s profits for the year in patronage,” Kertz says. “It’s nice to be able to return so much of our profits to our members, especially in years like this when the farm economy is down. It really helps the younger farmers who need the cash to keep their operations going.”

Kertz says the percentage of patronage paid in cash and the distribution of equities from past years is approved by the board and is dependent on the financial health of the company.

“The board strives to strike a balance between returning cash to our members and reinvesting profits to improve the company,” Kertz says. “Just like with our farms, we need to make sure we’re allocating enough funds to buy new equipment and upgrade our technology when needed.”

The excellent financial standing of the company has enabled the board to approve the recent high percentage of cash returns, Kertz says. He points to two factors that have greatly contributed to MFA Oil’s strong balance sheet.

“First, our employees have made great strides in improving our cooperative’s operations, which can be seen in the earnings,” Kertz says. “We also received a great deal of money from the sale of the NCRA refinery that we partially owned. We’ve been reinvesting the proceeds of the refinery sale to fund our recent acquisitions, which, in turn, will help us produce greater returns to the membership in the future.”

Since 2007, MFA Oil has returned approximately $132.2 million in patronage distributions and equity redemptions to the membership, averaging $13.2 million in cash payments annually.

MFA Oil
Board of Directors Representative
District 4 – Southeast
APP-SOLUTELY AMAZING!

DOWNLOAD THE APP
GET A FOUNTAIN DRINK FREE!

SCAN HERE TO DOWNLOAD
MFA Oil Company has acquired Ozark County LP Gas Company, Inc., a propane retailer with offices in Gainesville, Mo., and Mountain Home, Ark.

“The acquisition of Ozark County LP fills a market void in our southern Missouri territory and builds on our growing presence in Arkansas,” said Jon Ihler, MFA Oil vice president of sales and marketing.

Ozark County LP Gas has primarily served the propane needs of residential customers in south-central Missouri and north-central Arkansas for more than 50 years.

“We chose to sell our business to MFA Oil because it’s a very community-oriented company based in Columbia, Mo., and I appreciate the company’s Midwest mentality,” said Johnna Morgan, former owner of Ozark County LP Gas. “They were a pleasure to work with, and I know our customers and employees will be in good hands…. That was very important to me.”

MFA OIL HAS ACQUIRED A TOTAL OF 34 COMPANIES SINCE THE BEGINNING OF ITS 2012 FISCAL YEAR.

“Johnna Morgan and her family have built an outstanding business, and we are proud that they have chosen us to carry on their tradition of integrity and service to their customers,” said Ihler. “We will make the transition process as seamless as possible for the customers.”

This is MFA Oil’s first acquisition of its fiscal year, which began Sept. 1, 2016. MFA Oil has acquired a total of 34 companies since the beginning of its 2012 fiscal year.

MFA Oil will continue to evaluate strategic acquisition opportunities in its existing market area and other states where it can expand its footprint.
Ehrman Named VP of Logistics

In September 2016, MFA Oil named Larry Ehrman vice president of logistics. In this new position, Ehrman oversees operations at the MFA Oil Business Support Campus in Moberly, Mo., which includes the company’s parts and packaged goods warehouse, bulk lubricant storage, truck services shop, training center, field support, maintenance department and quality control lab.

“I’ve known Larry for a long time, and we are thrilled to have landed such a talented individual to lead our operations in Moberly,” says Mark Fenner, MFA Oil president and CEO. “His expertise and knowledge of logistics and the cooperative business model make him an excellent addition to our executive team.”

Ehrman has more than 30 years of cooperative energy experience. He is a former cooperative CEO and most recently was serving as chief operating officer at a cooperative in Colorado before joining MFA Oil.

Save the Date for Annual Meeting

MFA Oil will hold its 88th Annual Delegate Meeting in Branson, Mo., on Nov. 7 and 8, 2017.

Delegates of the cooperative come together at the annual meeting to conduct elections for the MFA Oil Board of Directors and approve the patronage distributions to the membership. Attendees are provided with an update on the company’s performance and outlook of what to expect from the company in the future.

MFA Oil–Break Time Shootout

The 24th Annual MFA Oil-Break Time Shootout, benefiting the Show-Me STATE GAMES, is scheduled to tip off at noon on Sunday, Jan. 22, 2017, at Mizzou Arena in Columbia, Mo. The event features top high school basketball teams and some of the best athletes from around the state of Missouri.

Tickets are available at participating schools and area Break Time stores for $8. Tickets will also be available at Mizzou Arena on the day of the games for $10.

MFA Oil is proud to sponsor the Shootout and appreciates the valuable opportunities sporting competitions provide to teach participants important life lessons about teamwork, leadership and fair play.

The Show-Me STATE GAMES were established in 1985 as a nonprofit program of the Governor’s Council on Physical Fitness and Health. Now the largest state games in the nation, the Show-Me STATE GAMES are hosted annually by the University of Missouri.

2017 BREAK TIME SHOOTOUT SCHEDULE

<table>
<thead>
<tr>
<th>Time</th>
<th>Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00 pm</td>
<td>Glasgow vs. Lincoln (boys)</td>
</tr>
<tr>
<td>1:30 pm</td>
<td>Southern Boone vs. Boonville (girls)</td>
</tr>
<tr>
<td>3:00 pm</td>
<td>Southern Boone vs. Boonville (boys)</td>
</tr>
<tr>
<td>4:45 pm</td>
<td>Salisbury vs. Sacred Heart (boys)</td>
</tr>
<tr>
<td>6:15 pm</td>
<td>Tolton Catholic vs. Hickman (girls)</td>
</tr>
<tr>
<td>8:00 pm</td>
<td>Tolton Catholic vs. Harrisburg (boys)</td>
</tr>
</tbody>
</table>

SHARE THE LOVE.

Refer a friend and you’ll both get $50.

As a current MFA Oil account holder, you can earn a $50 MFA Oil gift card for every new propane customer you refer. There is no limit! And, not only will your friends enjoy friendly, reliable service, they will get a $50 gift card too!

Call your MFA Oil Propane office or visit www.mfaoil.com to get started. Some restrictions apply. Contact your MFA Oil Propane office for details.
Supporting Special Olympics Missouri

Fundraising is underway to build a permanent home for Special Olympics Missouri (SOMO) that will serve current and future generations of individuals with intellectual disabilities by providing enhanced facilities and programs.

SOMO intends to construct the Training for Life Campus on 16.5 acres in Jefferson City, Mo. Once completed, it will include a 16,000-square-foot sports facility featuring basketball and volleyball courts, a health and fitness center for cardiovascular and weight training, and a central office for coordination of SOMO's state wide efforts. It will also offer seasonal play to support 21 sports, including soccer, softball, bocce, flag football, track and field and golf. The campus will be the largest such facility in scope in the United States.

“For over 40 years, our athletes, coaches, volunteers and staff have not had their own place to call home,” said Mark Musso, president and CEO of SOMO. “The Training for Life Campus will be their transformative place to train, compete and learn the lessons of sport and life that inspire all of us.”

The new campus will enable SOMO to offer a comprehensive set of programs including: a lifetime wellness program providing on-site screenings for dental, vision, hearing and physical health; comprehensive coach and volunteer training and certification for all Special Olympics sports; and a young athletes program providing screening and intervention services for children as young as three.

“The cost to support one athlete for one year is $483—so for every 483 customers that participate in MFA Oil’s promotion, one athlete will be supported for the year,” Rampy Stegeman said.

“The services Special Olympics Missouri provides are vital to the development of many intellectually disabled residents within our state, and we are proud to support their efforts,” said Mark Fenner, MFA Oil president and CEO. “We hope our customers will embrace the opportunity to help us max out our contribution through the Get Fueled for Special Olympics campaign.”

SOMO is a year-round program of sports training and athletic competition for children and adults with intellectual disabilities. More than 15,000 athletes participate in 21 Olympic-type sports throughout the state. Special Olympics provides its participants with continuing opportunities to develop physical fitness, demonstrate courage and experience joy as they participate in the sharing of gifts and friendship with their fellow athletes, their family and friends and communities across Missouri.
Fuel Your Winter with Top Tier Gasoline

TOP TIER is the premier standard for gasoline, recommended by the world’s top automakers. With higher levels of detergent additives, TOP TIER helps reduce engine deposits and exhaust emissions, enhancing performance and optimizing fuel economy.

Try TOP TIER today, available in all grades of gasoline from MFA Oil. Your engine will thank you.

Find a location near you at www.mfaoil.com.
If ever an MFA Oil driver experiences an issue with a software program while on a service call, the Field Support team is standing by to help.

“We’re the equivalent of customer service for our field employees,” says Tina Ford, director of the Field Support Department.

For questions ranging from printing issues to propane meter troubles, Field Support is a first-stop resource for those employees outside an office building, including drivers, managers and other representatives.

“We always have someone available from 7 a.m. to 5 p.m., Monday through Friday, to support our field employees,” says Ford, who assumed responsibility of the department in 2014.

In addition to troubleshooting and maintaining current software systems, the department is tasked with training field employees on new company software. With the rollout of EnterpriseOne (E1), MFA Oil’s new sales management program, a major focus of the department’s efforts has been training.

“Field support has played an instrumental role in developing E1 and maintaining our current system,” says Kenny Steeves, vice president of bulk and propane plant operations. “The support they provide has been crucial in troubleshooting, implementing and training staff and drivers on the new system.”

At this time, E1 is being utilized only for non-fuel sales, such as oils and lubricants. However, MFA Oil will add fuel sales to the software soon.

“Adding fuel sales to E1 will really expand our knowledge of what our customers need and when they need it,” says Steeves.

MFA Oil is installing new tablet computers in delivery trucks to help improve the efficiency of its drivers.

“We will be able to provide greater detail on monthly statements and annually on patronage payments, and Field Support will be responsible for educating our employees and helping to minimize any problems associated with the rollout.”

The hands-on training sessions, led by Ford and six senior customer service representatives, take place throughout MFA Oil’s three service regions. Between May and September, the department trained staff from 40 different plants.

“I see Field Support becoming the master trainers within our company,” Steeves says.

Call volume varies, Ford says. Some days, the calls are nonstop. When they are not busy on the phone or training in the field, Ford and her team create tip sheets for employees to make their jobs easier.

“We support our field employees so they can better serve our customers,” Ford says. “Solving these problems quickly allows our company to deliver better customer service.”
Convenience Pays

Petro-Card 24 systems are fast, convenient and open to the public. Purchase fuel 24/7. Simply drive in, fuel up and drive on – no waiting in cashier lines. Plus, MFA Oil members earn patronage on every gallon! Ask your local MFA Oil representative for details.

Get a $20 MFA Oil Gift Card with an approved Petro-Card 24 credit application.*

Why use a Petro-Card 24 credit card?

- No monthly fees
- Higher gallon limit for large purchases
- Simplified record keeping
- Tax exemptions on dyed diesel
- Manage fuel expenses through contract pricing
- Members earn patronage on every gallon

170+ unattended fueling system locations in Missouri, Arkansas, Iowa and Kansas open 24 hours a day, 365 days a year.

For more information, contact your MFA Oil office, call (800) 366-0200 or visit us at www.mfaoil.com.

* A $20 gift card will be rewarded to new Petro-Card 24 customers with approved credit application. Must make purchase with Petro-Card 24 card within 90 days of credit approval to qualify. Allow 6-8 weeks following purchase transaction to receive gift card.
Extreme cold, snow, sleet and freezing rain present a number of challenges to drivers and their vehicles. That is why it is important to take the time to prep your car or truck for winter weather. We asked the experts at Big O Tires and Jiffy Lube for their advice on winterizing vehicles. They recommend following these guidelines to ensure your vehicle can handle the rigors of winter.

1. **Keep Windshields Clear**
Few things are as nerve-wracking as trying to drive with a windshield covered in ice, road grime and dirt. Installing a fresh pair of wiper blades can help keep your field of view clear. The blades should glide smoothly across the windshield without leaving streaks or blind spots.

Windshield washer fluid is crucial for maintaining a clear field of vision. Inspect the wiper fluid reservoir and add more if it is low. A harsh winter storm is the worst possible time to run out of wiper fluid.

2. **Check Tire Pressure and Tread**
Cold weather can do a number on tire pressure, so keep a gauge handy for frequent checks. Your vehicle’s tire pressure information usually can be found on a sticker in the doorjamb or in the owner’s manual.

Underinflated or worn tires can be dangerous on slick, icy roads. Driving on tires with low air pressure creates extra heat where the rubber meets the road, degrading the tire structure, wearing out the tread and reducing traction. Make sure your tires are properly inflated and have adequate tread depth to provide excellent traction.

Keeping tires properly inflated can also save you money. Correctly inflated tires can improve fuel economy by about three cents per gallon of gasoline.
3. TAKE CARE OF THE BATTERY
A weak battery is unreliable and may take longer to start on frigid winter mornings. Have your vehicle’s battery tested at the beginning of the season to make sure it has enough cranking power to withstand the cold. A battery that is plenty strong at 60°F can have 35 percent less power at 32°F and 60 percent less at 0°F. While you are checking the battery’s strength, make sure the cables and terminals are corrosion-free.

4. CONSIDER A LIGHTER GRADE OF OIL
The oil in your engine changes depending on how hot or cold the engine is running. Because the outside temperatures will influence the internal temperature of your engine, you need to make sure you are using the proper oil for the conditions. Check your vehicle manufacturer’s motor oil recommendations and take heed of any variations advised for cold weather conditions.

Cold temperatures make motor oil thicker. Switching to a lighter, less viscous oil for winter driving can help reduce unwanted friction in the engine. If you run a 10W-30 in the summer, for example, you may think about moving to a 5W-30 at your next oil change. Be sure to check the fuel, air and transmission filters at the same time.

5. FILL UP FREQUENTLY
Keep your gas tank at least half full. Water vapor can condense on the inner walls of an empty fuel tank overnight in cold weather and drip into the gas. Your fuel system can deal with a little water, but a lot mixed in a little gas can make the vehicle run rough, or not at all if the water freezes in the fuel lines. So consider the half-full mark “empty” in winter to avoid this. The extra gas also adds weight over the nearest axle (usually the rear), which can be an aid to winter traction.

6. PACK A WINTER EMERGENCY KIT
A well-stocked emergency kit is essential in winter. Make sure it contains a flashlight, extra batteries, water, flares, blankets, a shovel, a snowbrush and an ice scraper. Kitty litter or sand are also handy for sprinkling under tires to get better traction when starting from an ice patch or in the snow.

STAY HOME
Do not tempt fate. If you really do not have to go out, do not do it.

YOU CRUISE, YOU LOSE
Avoid using cruise control in snowy or icy conditions. In adverse conditions, you want as much control of your car as possible.

Beware of Black Ice
Slow down before intersections, off-ramps, bridges and overpasses where black ice can form.

Take it Slow
Reduce your speed and increase your following distance as road conditions and visibility worsen.

Double the Distance
Braking takes longer on snow-covered roads. Give yourself plenty of time to maneuver by driving slowly and putting more distance between yourself and other vehicles. Always leave yourself an out.
GET **Fueled** FOR SPECIAL OLYMPICS

MFA Oil will donate $1 to Special Olympics Missouri for every customer who subscribes to our Fueled e-newsletter between Dec. 15 and Feb. 28, up to $10,000. Visit [fueled.mfaoil.com/somo](http://fueled.mfaoil.com/somo) today to help make a difference for these athletes.