

SNOW+ICE

GUIDE

Liquid saves the season

When salt supplies dried up, this Michigan contractor knew it was time to try something different — or suffer through another tough winter.

BY DANIEL WEISS



New sprayer models feature lightweight construction for reduced stress on the vehicle and in-cab controllers for convenient operation from inside the cab.

PHOTO COURTESY: BOMEX, A DIVISION OF TRINEX INTERNATIONAL

THE PROBLEMS OF THE WINTER of 2007-2008 were not going to be repeated, I promised myself, heading into this past snow and ice management season. As you may remember, in mid-season 2008, salt ran out. There was little warning, a few rumors, grumblings from vendors, but little clarity. Salt deliveries were on the way — yet, by about February (at least in Michigan), the salt was gone. First it slowed to a dribble, and then like the drying action of a bread-and-butter snow melt, it was just gone.

Here's what we heard in our market: There are two major deposits of salt in the United States, one stretching from northern Ohio into Michigan and the other in Louisiana and northeast Texas. Curiously, much of the salt in Michigan, where we offer services, is sold elsewhere, out of state. Barges travel down the Mississippi with grain and bring back salt. But because of record-high fuel prices and the big push to produce bio-fuels, grain that ordinarily would have been shipped south stayed in the Midwest to be turned into bio-fuel. Fewer barges going south empty helped push up the price of the salt coming back. Eventually the stores of salt available for transport ran out.

This wasn't a new development. It started the previous winter — with the economy in the dumper, a record snowfall in our region of the country and salt, when it was available, at previously

continued on page 41

continued from page 39
unimaginable high prices.

Yes, salt was occasionally available, but lines were long to get loaded. That winter, contractors showed up with fists of cash trying to outbid other contractors for salt. Complicating matters, the media took its time reporting on the salt shortage — so most customers hadn't heard of the shortage, and they didn't want excuses. They expected service. Consequently, we used a lot of very expensive bagged salt and paid dearly for the salt we could get our hands on.

Near the end of the 2007-2008 season, customers finally began to realize that salt was gone, especially when they noticed that city and county roads were left untreated. Suddenly, the availability of salt wasn't just a contractor problem. This realization helped us improve relations with customers, but some still didn't get it.

I didn't want to experience that again, so I began investigating liquid products for the 2008-2009 winter season. Admittedly, I was reluctant to



Liquid deicers are often a better option than salt.

change, and I began asking myself a lot of questions.

Could we make the change and be successful? Would it work? Would we be able to keep customers happy using liquids on their properties?

The liquid diet

That first season, we put liquids to the test. We didn't feel comfortable com-

pletely abandoning salt, so we kept a stock of both products to use. Now with two winters under our belts, we have a much better idea of what liquid can and can't do, and how it compares to salt.

Within a few winter events, we determined that the liquid did not work as well as we would have liked when additional precipitation covered it and temperatures remained cold. Keep in mind that preventing freezing and burning off snow or ice aren't the same thing. Also, preventing freezing doesn't mean the area that was treated won't be slippery — something we learned early last season when we were using just the liquid. By contrast, salt burns from the top down and continues working even when some additional precipitation covers it.

Our use of liquid ice melter did find a place in our treatment regimen, however. And it did have several pluses. For starters, we had an ample supply of the liquid ice melter all winter. Also, equipment was easier to operate and we could do more with smaller trucks. These factors combined to save us a lot of money, particularly when there was just a dusting of snow. Why spend more than you need to on salt when you only needed a little ice melter to burn it off?

All in all, we considered the switch to using liquids in some situations and on some properties to have been successful. Different snow or precipitation

Dynamic fluid		
	SALT	LIQUID (MAGNESIUM CHLORIDE)
advantage	<ul style="list-style-type: none"> » Works from the bottom up and top down » It melts and dries 	<ul style="list-style-type: none"> » Non-corrosive » Low price versus what you can charge » Can use smaller truck to spread more material » Works to below freezing » Ample supply » Equipment easier to operate
disadvantage	<ul style="list-style-type: none"> » Corrosive » High price/scarcity » Need larger truck for larger amounts » Works well to about 20°F » Equipment needs maintenance, washing 	<ul style="list-style-type: none"> » Works top down only (additional precipitation will cover) » Prevents freezing, but surface tends to refreeze » Slow to melt snow » Must plow more often and to lower depths

events usually call for different management strategies. On many events, we sent out trucks with both salt and liquid. One route was liquid and one route was salt, depending on the needs of our customers and the amount of freezing rain, ice or snow. We saved money on salt, and made money on the liquid, which was our goal when we began the season.

The 2009-2010 season was challenging and once again, we learned a lot. In the northern United States, low-pressure systems spin counterclockwise, taking moisture from ground level to the sky, then dumping it back down as precipitation. Because of the rotation and its usually slow track speed, Michigan had several long-lasting systems that would produce a half to a full inch of snow during a 12- to 24-hour period for several

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days in a row. Unfortunately, we had to turn to salt to keep up with this kind of storm system. Liquid would work to keep roadways from freezing, but they became snow-covered. With commercial contracts, depth of snow is often less important than if the roads are snow-covered at all. The liquid couldn't keep up. Even with the price of salt coming back down by 20%, it made for busy and expensive storms.

Will this treatment strategy work for you? It might be worth trying. **LM**

WEISS owns Elysian Design Group. Contact him at ElysianDesign@aol.com.

The lighter side

Fisher's new HT Series snowplow is designed to fit today's lighter half-ton 4WD pickup trucks for standard-duty commercial and institutional applications. The full-featured HT Series boasts many of the same features of larger Fisher plows, including Intensifire lights, the fast Minute Mount 2 on/off system and Fisher's original trip edge. It also incorporates a hydraulic scrape lock for clean scraping and back dragging. *FisherPlows.com*



Quiet power

Ariens' new AMP 24 Sno-Thro is an all-electric two-stage snow thrower with a 24-in. clearing width. The machine runs 45 to 60 minutes on a single charge depending on snow conditions, and provides a quieter alternative to traditional gas-powered snow throwers. It's powered by a 4-hp brushless

DC electric motor and energized by two 48-volt AGM Valve Regulated battery packs. Starting the machine is as simple as turning the key and pulling the PTO switch, which instantly starts the electric motor. With no gas engine, the unit reduces service requirements, fuel costs and special storage requirements during the summer months. *Ariens.com*

Hydraulic power

Available in either electric/hydraulic or central hydraulic powered configurations, **Hiniker's** new 1032 Series 10-ft. plows are designed for use with trucks such as GM 4500/5500 series, the Ford F-450 and F-550, and the Dodge 4500/5500 series. The 32-in.-tall moldboard uses a dent-resistant, corrosion-free plowing surface made of low-friction HDPE polyethylene. A top-mounted extruded polyethylene snow deflector is included as standard equipment. The trip hinges have been designed to eliminate any pinch points, assuring a full return after tripping. *Hiniker.com*



continued on page 44

continued from page 42

Slick success

Available in two sizes (8 ft., 2 in. and 9 ft., 2 in.), The **Boss**' new Poly Power-V XT Plow features a super-slick poly surface that lets snow easily slide off the blade, saving on fuel costs and minimizing wear and tear on the vehicle drivetrain. The multi-position plow also features a 37-in. flared blade wing that improves snow discharge. Among its many other features are the SmartHitch 2 Attachment System and the SmartTouch 2 Handheld Control. BossPlow.com



Let it blow

Two new models of front-mounted snowblower implements, featuring a 49- or 62-in. cutting width, are now available for Bobcat compact tractor models CT120 to CT235. A 72-in. cutting width model for the CT225 to CT450 will be available at a later date. The discharge chute on the snowblower rotates hydraulically, so the operator can easily redirect snow as needed. To operate a front-mounted snowblower, the tractor must be equipped with a mid-PTO, loader joystick and control valve. The snowblower requires a lift kit and PTO kit to mount to the tractor. BobcatDealer.com

Heated wipers

Now made of silicone, **W.N. Miller Co.**'s newly redesigned Everblades heated wipers are more robust and provide a streak-free wipe — regardless of whether they're in heat mode. The redesigned squeegee profile also offers better durability, life and functionality to enhance winter driving vision, safety and productivity. Everblades.com

Rugged performance

The new 9 ft. **Blizzard** 9000HD straight blade snow plow features a flared moldboard that rolls snow far ahead and to the side, an aggressive cutting edge angle, optimized blade curl, and the fast, hydraulically powered Power Hitch 2 mounting system. BlizzardPlows.com



Full line

The Ice Control Sprayers line from **Turbo Technologies** ranges in size from 30 gal. for ATVs to 1,600 gal., truck-mounted units. It also offers both electric pumps for quiet operation and gasoline-powered engines and pumps. Integrated liquid transfer is standard on gasoline-powered units. Remote operated booms for up to three-lane coverage are available, as well as multi-nozzle turret booms and ice control sprayers on over-the-road trailers. Units can be equipped with spray guns for sidewalk and step applications. IceControlSprayers.com

Clean sweep

Attachable to most brand-name snowplows, **SnowEx**'s new SPB-072 and SPB-090 Snowbrooms are capable of clearing snow and slush without damaging concrete, sod or sprinkler heads. This makes them an ideal choice for use on decorative concrete, sidewalks and paths. They also add versatility to mid- and full-sized pickup trucks by allowing them to remove sand, salt and other debris after the winter season. Because the patented Snowbrooms take advantage of existing equipment, they contain no engines, pulleys, sprockets, belts, chains or any other moving parts. Trynexfactory.com



continued on page 46



continued from page 44

Brine converter

The ABS-800 from **GVM Snow Equipment** will convert standard rock salt to a liquid brine for anti-icing or prewetting at the spinner, resulting in more efficient results for snow and ice management practices. The brine maker has the capability of making up to 3,000 gal. of brine per hour. The pump station is enclosed in a poly enclosure, with plenty of room to store all necessary hoses required to manufacture the brine. Voltage requirements to run the pump station are 115 volts, making this system portable if needed. *SnowEquipmentSales.com*



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Even distribution

With a 32-in. height and 75-degree attack angle, **Meyer's** new Lot Pro delivers quick clearing performance and quality back dragging. Supporting the tall, aggressive moldboard is a redesigned "black iron" consisting of a heavy-walled, tubular-steel A-frame and push bar. This improved design has been simplified to create a stronger plow at key pressure zones and more evenly distributes the load. It's also interchangeable with the Meyer Super V and Diamond Edge bottom-trip plow. In addition, the modular EZ-Mount Plus system attaches or detaches from the truck quickly and easily. *MeyerProducts.com*

Safe and secure

The exclusive Security Guard Anti-theft System provides a safe and secure way to electronically "lock" Western snowplows, providing a deterrent from theft or non-permitted use. The system works by electronically synchronizing the snowplow control and snowplow's electrical system. When activated, the system disables the electrical controls and renders the plow inoperable to unauthorized users. It's currently available on select Western snowplow models. *WesternPlows.com*

continued on page 48

continued from page 46

Dual edges

Pro-Tech's Switchblade is a reversible Sno Pusher for loaders, backhoes and skid steers that has both a rubber cutting edge and a steel cutting edge. The rubber edge is designed for wet, heavy snow conditions where the rubber can squeegee the surface clean. The steel side is ideal for breaking up hard packed snow conditions and now comes standard with the patented IST steel trip system. Like all of Pro-Tech's products, the Switchblade is engineered for simplicity and reliability. SnoPusher.com



Salting options

Morton Salt's line of professional-grade ice melting solutions includes the economical Safe-T-Salt, the fast-acting Ice Melter Blend, the low-temperature Calcium Chloride Ice Melter, the environmentally friendly Eco-Safe Blend (pictured) and the high-visibility Ice Melter Blend with Fast-Acting Blue Crystals. MortonSalt.com



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Mix it up

Fecon's new CM2000 Salt Mixing System combines de-icing, liquid-based agents with bulk salt or sand solutions to use as pre-treatment before snowstorms. It features a 170-hp John Deere engine and mixes up to 240 tons per hour. The unit includes a feed hopper, a primary mixing chamber and an automated continuous flow additive injection metering system. An optional stainless steel body is also available. Fecon.com



Electric drive

SnowDogg plows from **Buyers Products** include a stainless-steel, corrosion-free moldboard, heavy-duty covered power unit and quick mount system. The plows are available for light-duty trucks up through heavy-duty commercial/municipal applications. A full line of SaltDogg spreaders completes the plow truck. From 4-cu.-ft. tailgate spreaders to 15-yd. municipal spreaders, there's a SaltDogg for a complete range of applications and preferences. The new electric-drive stainless steel undertailgate and electric-drive stainless steel hopper spreaders are popular choices. SnowDoggPlows.com / SaltDogg.com