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 SNOWEX, A DIVISION OF TYMCO 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


Liquid deicers are often a better option than salt.

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 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 completely 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	» Works from the bottom up and top down » It melts and dries	» 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	» Corrosive » High price/scarcity » Need larger truck for larger amounts » Works well to about 20°F » Equipment needs maintenance, washing	» 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

PHOTO COURTESY: DANIEL WEISS

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 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.

We used a lot of very expensive bagged salt, and paid dearly for the salt we could get our hands on. (With liquid) equipment was easier to operate and we could do more with smaller trucks.

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

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

PRODUCTS

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