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HOLE NOTES

OFFICIAL PUBLICATION OF THE MINNESOTA GOLF COURSE SUPERINTENDENTS' ASSOCIATION

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FROM THE PRESIDENT'S DESK

DON LINDBLAD

Another month has come and gone and it's time to bat out another article for HOLE NOTES. I would like to thank Steve Schumacher and his staff for a great day and fine lunch at Hastings Country Club. I did not get to play golf but the course looked great. I, for one, really enjoyed hearing from Dr. French again. It has been too long since we have heard from him. He imparted some of his wisdom to us and it was much appreciated by all.

Keith Scott tells me every thing is on track for "Turf Expo 84" on June 13 and I want to take this opportunity to ask all of you again to attend that day. The entire Board of Directors will be around to say hello to all of you. This is a "first" for Minnesota. We want the M.G.C.S.A. well represented so that it can be turned into an annual affair.

The new 1984 M.G.C.S.A. roster should now be in your hands. This complete roster is on the computer in our office. We cannot stress enough that it is up to you to inform the office of any changes in status. This includes employment, address, phone numbers, classifications. All of these updates can now be made easily but we have to be informed by you. Just give the office a call.

The way the grass is growing I don't believe that anybody in the turf business is looking for something to do this year. Hope to see you all at the June 11 meeting at Forest Hills Golf Club. We will have one of the foremost authorities on drainage in the state speaking to us. Come one, come all and find out why those wet spots never seem to dry up and what you can do about it.

SUPPORT YOUR ADVERTISERS

DRAINAGE SOLUTION

by G. M. MURPHY
Superintendent
Somerset Country Club

Slit trench on Greens?

As I sit here looking at the snow melt from our putting green, I note that our slit trench is still working. Every spring we would have dead spots where water would pond on several greens. This was a season-long problem. We would have standing water after each rain. On the fairways we corrected this situation by installing slit trenches. Why not on greens? So we did it. It works. Our oldest green slit trench dates back to when Jim Holmes traveled this area for the U.S.G.A. He came upon us as we were installing a trench on our #11 green. He took pictures then asked us to let him know if it worked. He then used those slides in talks in the Mid-west area.

Let me explain how we install slit trenches in greens:

Step #1: Important, select a very old sprocket, bar and chain for a 14 inch plus chain saw.

Step #2: After installing the above equipment on your saw, or someone else's, if you can borrow it, begin to use it like a ditch witch. Start your cut in the green above the wet area then proceed through the wet area ending wherever you like in a dry area.

Step #3: Work the saw as if you were cutting with a hand saw, moving the blade into the hole, full depth, then pulling it most of the way out, etc. Every time you pull the saw out, you clean the cutters.

Step #4: When you finish your "trench" remove the soil and back fill the trench with surface.

A word of caution, if you cut into the collar be sure your operator knows where the electrical or hydraulic control lines are and where the plastic pipe is found.

It's simple, it's quick and it works!!!
Good Luck!

SUMMER STRESS

by GLEN F. LENTNER
Superintendent
Rich Acres Golf Course

When a superintendent hears the phrase "summer stress" the first thing that comes to mind is wilt, high humidity, disease and soil compaction. All variables that have a direct impact on the growth of turf. But, what about "summer stress" of the Superintendent?

Sure, winter is a few months down the road - a chance to unwind, look back, gather thoughts and regroup for the following year. But in July and August, mid-winter is too far away to even think about. That's why a superintendent should evaluate himself and his/her staff along with the golf course.

First of all, a superintendent must realize that stress is a non-specific response of the body to any demand made on it. During the summer months many demands are placed on an individual both mentally and physically. When the occupational demands become too great to handle, the result is stress overload.

Summer stress cannot be eliminated, but a superintendent can take steps to avoid "summer stress overload" of oneself.

Open line of communication - keep members and/or management aware of maintenance activities.

Make use of professional services - attend monthly association meetings, give a fellow member a call; don't be afraid to ask for help.

Delegate authority - don't try and do everything yourself.

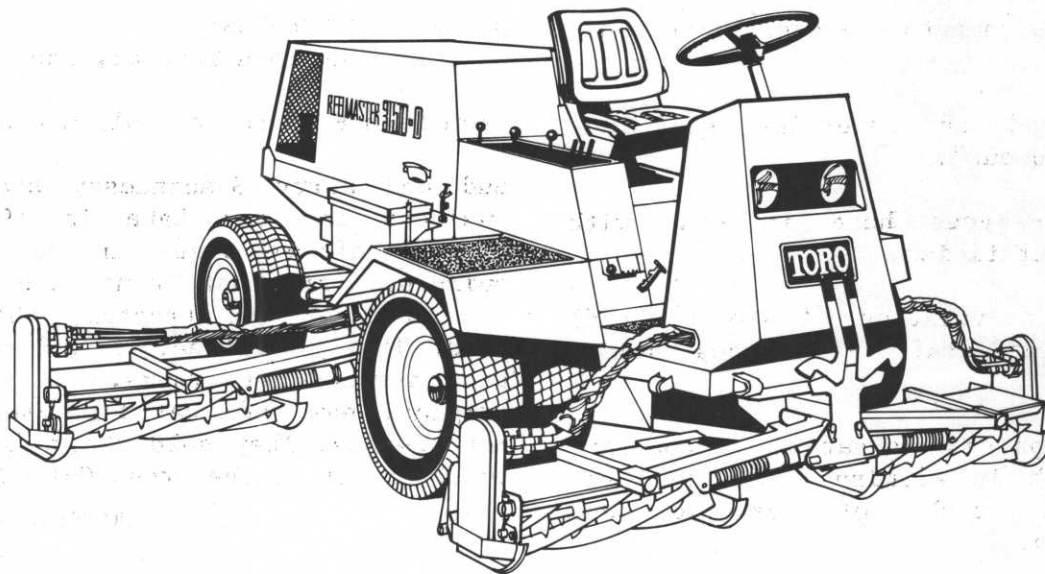
Develop an outside hobby or interest - totally unrelated to present occupation.

Look for physical or mental stress - observe employees in various situations and take time to listen.

Lunch break - don't skip lunch and don't "junk out".

CONTINUED PAGE 5

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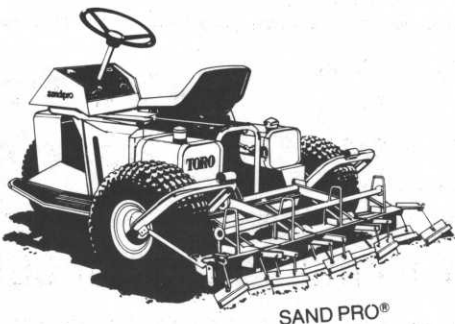
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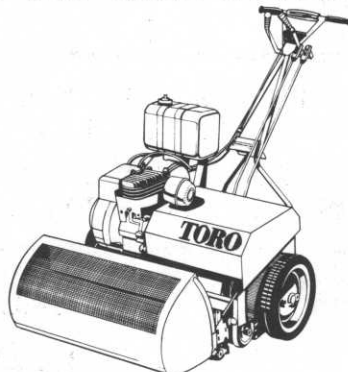
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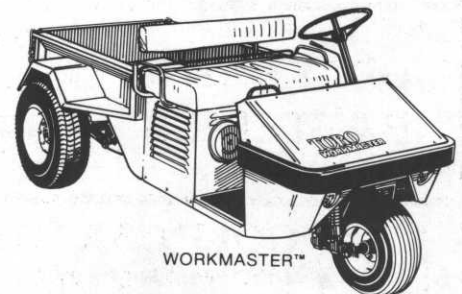
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Summer crew party - great moral booster, save and cash in aluminum cans to cover cost; frees club of expense and responsibility.

July and August can be the two longest months of the year. If a superintendent learns to recognize and makes an attempt to deal with physical and mental summer stress, it just may give him that necessary extra edge on environmental summer stress of the turf.

ASSOCIATES' CORNER

by GREG SHAUGHNESSY
Long Lake Ford Tractor, Inc.

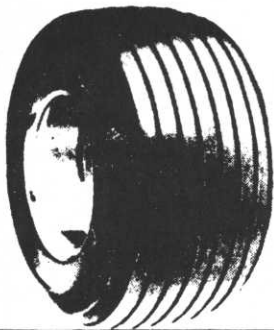
From Farm Pastures to Golf Courses....

Bud and Jerry Shaughnessy started their business in Long Lake in 1951 with a handful of employees in an old rented building. At that time the Ford line consisted of one tractor, the Model 8N Ford. They sold tractors and equipment to the surrounding farms. In fact, the original name at that time was Long Lake Farm Supply. They sold their first 8N Ford to Leo Feser of the Orono Golf Course.

CONTINUED ON PAGE 7

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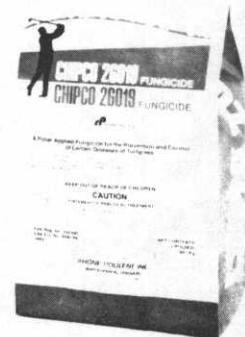
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The metropolitan area was growing and it wasn't long before the farm pastures became golf courses. In 1956 when they needed more space they built a new building just a little west on Highway 12. They also expanded their employees to twelve.

In 1972 Ford's equipment line was expanding and they were offering more tractors and equipment to light utility users like the ever growing golf courses. Bud and Jerry needed to expand one more time. They built their present building in 1972. This enabled them to supply the needed equipment and services for the golf course business.

Long Lake Ford Tractor now is employing a total of thirty people; 10 mechanics; 2 service managers, 8 sales people and a complete bookkeeping department. They sell a complete line of equipment ranging from lawn and garden equipment, nursery and golf course equipment, skid loaders, excavators, wheel loaders and backhoes in all sizes. They also carry a complete line of trailers.

The building facilities cover five acres and can supply the equipment, parts and service to handle all Ford owners.

Thank you for giving us the opportunity to serve you. We sincerely appreciate your business.

EDITOR'S CORNER

by DOUG MAHAL
Chairman
Editorial Committee

It looks as though we may finally get some warm weather. Much of the Poa annua I saw in May didn't grow at all. Mother Nature certainly can be unpredictable from year to year or even day to day. What makes the superintendent's job a real challenge is coping with the unpredictability and still maintaining a predictable golf track. The turf managers in Minnesota do this as well as anyone in the world. It's a great accomplishment! Keep those channels of communication with the pro, manager and committee chairmen free and open. It can only improve your management tasks.

It was a beautiful day for our monthly meeting at Hastings Country Club. Steve Schumacher had the course finely tuned and in great shape. It was a real pleasure to play. Thanks to Steve and the entire club

CONTINUED ON PAGE 9

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THE 1983-84 SNOW MOLD RESEARCH RESULTS

DR. W. C. STIENSTRA

EXTENSION PLANT PATHOLOGIST

UNIVERSITY OF MINNESOTA

The 1983-84 snow mold studies were conducted at Gilbert, International Falls, Detroit Lakes, Rochester, Duluth, St. Louis Park, Hopkins and Falcon Heights. The study consisted of 4 golf green research situations, 2 demonstration plots and 2 fairway research plots. The spray treatments were applied in 5 gal/1000 sq. ft. with a hand pushed wheel mounted two nozzle boom pressurized by liquid carbon dioxide. Granules were applied with a 3 ft. Scotts drop spreader, calibrated for each product used. Disease results were obtained at each location except Gilbert which had no disease on the plot.

Snow mold was expected to be very common and damaging during the winter of 1983-84. The growing green grass was covered with snow early and ground was not frozen at that time. This condition is reported to promote winter disease, while snow mold was present in many locations - Kentucky bluegrass lawns and sod fields and winter ryegrass fields - damage was quite superficial. The dead areas were the result of foliar blight - leaf disease and nearly no long lasting crown damage was observed on bluegrass. Most golf turf, if treated survived very well and golf courses are in good shape. The early snow melt this spring was, I believe a major factor in preventing significant long term damage from snow mold.

If your snow mold program failed this past year you should seriously consider what you did last fall and revise it to include treatments that are recommended for your area. Results at Detroit Lakes and Rochester are typical of product performance under low scattered disease pressure, while at Minneapolis where disease pressure was moderate fewer treatments resulted in disease control and at Duluth where disease pressure was nearly 100% the standard treatments still performed satisfactory. All golf locations do not need the level of protection which is adequate at Duluth yet it is a good location to evaluate chemical control under consistent high disease pressure. It is

however typical of what can happen in those years when snow mold is common and severe in more than the northern Minnesota Arrowhead area.

The results for Northland Country Club - Duluth, Minneapolis Golf Club - St. Louis Park, Rochester Golf and Country Club - Rochester and Detroit Country Club - Detroit Lakes are presented in Table one.

The major disease organism at all locations was Typhula ishikariensis, or small sclerotial Typhula. A few spots had Typhula incarnata while I observed no Gerlachia nivalis or Myriosclerotinia borealis. Caloclor is the only chemical, when applied alone which provided 100% disease control on a percentage basis. Caloclor in combination (Tank Mix) with Terraclor or plus Terraclor and Chloroneb also resulted in 100% disease control. Terraclor plus Chloroneb which failed at Duluth did result in 100% disease control at the other locations. Daconil 4F performed quite well, second best single chemical treatment at Duluth and should be tested in future years as a component of a tank mix. While the results at Rochester, Minneapolis and Detroit Lakes in 1984 suggest its use other years data indicates the results are variable. It does appear however, that tank mixes or sequential treatments with Daconil 4F should be evaluated further. Results with Tersan SP, Terraclor, Bayleton, Ciba Geigy 64250, Rubigan and SN 84364 at Minneapolis all suggest activity. Performance at Duluth, where at least twice the disease pressure exists reveal weakness but opportunity does exist for combinations.

The demonstration plot at International Falls was free of snow in February - the earliest spring ever. Treatment results are shown in Table two.

The results with FFII were clearly better than turfcide. No fertilization response was observed at the time the plot was visited therefore the response is judged to be due to better product performance. This difference was seen before and does not

Snow Mold Results 1983-84 at Four Minnesota Locations.
 Data Expressed as means of 4 replicates.
 Plot size is 4' x 11'.

Treatment and Rate /1000 sq ft	% Area Diseased		# Spots per 44 sq ft	
	Duluth 10/21	Minneapolis 11/3	Rochester 10/28	Detroit Lakes 10/20
No Treatment Check	95	47	9	10.5
Caloclor 3 oz.	3.8	0	0	0
Caloclor 5 oz.	0	0	--	0
Tersan SP 5 oz	45	4.5	2	2.3
Tersan SP 9 oz.	51.3	6.8	--	2
Terraclor 8 oz	47.5	0.5	1.8	0
Terraclor 16 oz.	35.	0.3	--	1.8
Tersan 1991 2 oz.	92.5	47	3.5	3.5
Chipco 26019 4 oz.	83.8	19	14.3	5
Bayleton 2 oz.	92.5	5.5	2.3	2.3
Bayleton 4 oz.	81.3	3	5	0
Bayleton 2 oz.*	86.3	13.8	11.3	--
Bayleton 4 oz.*	91.3	18.8	5.3	--
Ciba Geigy 64250 32 gms ai.	42.5	1	0	0.3
Ciba Geigy 64250 16 gms ai.	65	4.8	2	0.8
Rubigan 2 oz.	86.3	2	5.3	2.8
Rubigan 4 oz.	63.8	4.8	0.8	1.5
SN 84364 1.5 oz.	46.3	4.3	0.5	3
SN 84364 2.4 oz.	35.	1.8	0	3
Daconil 4F 8 Fl. oz.	22	1.8	0	1.8
Daconil 4F 16 Fl. oz.	11.3	0.5	0	1.5
Daconil 4F 8 Fl. oz. plus Tersan 1991 2 oz.	10.8	0.8	1	3
plus Rubigan 2 oz.	16.3	1	0	1.3
plus C 26019 4 oz	13.5	0	0.3	2.5
Tersan SP 5 oz. plus Tersan 1991 2 oz.	51.3	27	0.3	4.3
Caloclor 3 oz. plus Terraclor 8 oz.	0	0	0	0
plus Tersan SP 5 oz.	0.3	0	0	0.8
plus Terraclor 8 oz. and Tersan SP 5 oz.	0	0	0	0
Terraclor 8 oz. plus Tersan SP 5 oz.	19.3	0	0	0

*Applied before date listed - Duluth 10/5, Minneapolis 10/10 and Rochester 9/27.

Table 2.

Snow Mold Results at International Falls
 Data expressed as means of areas treated
 Treatments 3 ft. wide by 40 ft. long.

Treatment and Rate	% Area Diseased
No Treatment Check	60
Calogran 6 lbs.	2
Calogran 10 lbs.	0
Fungicide II N	60
Fungicide II D	60
Turfcide 5 lbs.	40
Turfcide 7.5 lbs.	40
FFII N	10
FFII D	5
Calogran 10 lbs plus Fungicide II D	2
plus Turfcide 7.5 lbs.	0
plus Turfcide 7.5 lbs. + Fungicide II D	0
Fungicide II D + Turfcide 7.5 lbs.	30

appear to be dependent on fertilizer. A granular form of FFII without fertilizer has also performed better than Turfcide in previous plots. The lack of control with Fungicide II was not completely expected as it often reduced disease level by 50% but in either case it is unacceptable.

Fairway plots were very disappointing due to lack of disease and non uniform turf areas. Results at one location averaged near the untreated check when disease level and injury -- chemical burn were included in ranking. The benefit of disease control was negated by chemical discoloration due to PMA. Data are presented from the plot at the University of Minnesota location in Table three.

The results from Table 3 show disease control with all products but Thiram and Chipco 26019. Turf appearance over several weeks was best with Daconil, Chipco 26019 and MF701 which contains caloclor and nitrogen. No nitrogen response was observed during April due to nitrogen. Turf color was improved when thiram was added to PMA at 1 Fl. oz. but not when 2 Fl. oz. was applied. PCNB plots appeared to be slightly pale green but the color was judged to be okay on subsequent visits. Thiram may reduce chemical injury but it also reduces

disease control. Daconil 4F results are interesting and combinations will be tested next year on fairway plots. New plot areas are needed for more uniform turf stands and sites which may have higher disease pressure. Any volunteers?

ALL ABOUT TREES--CONT.

system may become stunted because of the lack of oxygen. If you are concerned about weeds, apply a herbicide to control residual and invading weeds.

The practices discussed here are aimed at maintaining the tree in a healthy condition. By setting up a regular schedule of monitoring, pruning, fertilizing, and mulching, you can lessen the chance of treating a tree problem that can only be resolved by removal. Over the long run this attention to tree care will save you time and money.

Table 3.

Snow Mold Results at University of Minnesota
 Data expressed as means of 4 replicates
 Plot Size is 4' x 11'

<u>Treatment and Rate</u>	<u>% Disease</u>	<u>Color*</u>
No Treatment Check	24	2
PCNB 2 oz.	1.3	2
PCNB 4 oz.	2.5	2
PMA 1 Fl. oz.	3	3
PMA 2 Fl. oz.	3	4
Thiram 4 oz.	25	2
plus PMA 1 Fl. oz.	8	2
plus PMA 2 Fl. oz.	5	4
plus PMA 1 Fl. oz. & PCNB 4 oz.	0	3
plus PCNB 4 oz.	1.8	2
Daconil 4F 8 Fl. oz.	2.5	1
Daconil 4F 4 Fl. oz.	0.5	1
plus Chipco 26019 2 oz.	1	1
Chipco 26019 2 oz.	13.8	1
MF 701	0	1

*Color Scale = 1 Best, 2 Okay, 3 Poor, 4 Burn

WHAT IF THE SKY IS FALLING?

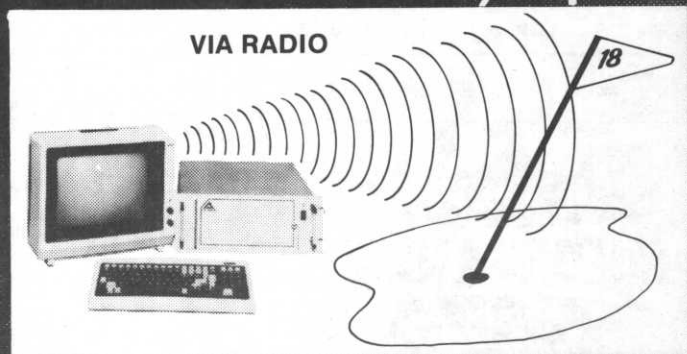
This time maybe the weather warning you heard on radio really is meant for you . . . and in 15 minutes 70 mph winds and vicious cloud-to-ground lightning will be striking your facility . . . or then again, maybe it was just another "false alarm" for some storm two counties away . . .

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staff for a super day. We also appreciate the time Dr. French from the U of M could spend updating us on current tree concerns. His sincerity and frankness are always welcome.

And speaking of frankness, thanks to our HOLE NOTES contributors for last month, Roger Kisch, Jeff Markow and John Hopko. Very timely subject matter, fellas. Remember, if anyone has a thought they would like to share with the membership, get it on paper and shoot it down to Anita in the M.G.A. office or myself.

Plan to attend our monthly meeting on June 11 at Forest Hills in Forest Lake. Superintendent Lyle Olson will discuss his 55,000 ft. drainage tile project. What an undertaking. It should be interesting to hear Lyle's comments.

Keith Scott who is the M.G.C.S.A. representative for the first annual Green Expo Show is still looking for volunteers to help with this huge endeavor. The date for the Expo is Wednesday, June 13 and will be held at Anoka Vo-Tech, Rum River campus site. You all should have received a special mailing on the event. Get those in

and give Keith a call if you can help him with some of the work.

On a sad note, Superintendent Jerry Weyrens of Angushire Golf Course in St. Cloud died recently while in Arizona. As a gesture expressing our gratitude for Jerry's dedication to the profession, M.G.C.S.A. has sent flowers to his wife, Mary Ellen, and family. Our condolences go out to them.

Most of us have our full compliment of seasonal employees now. We can now begin putting on the fine touches which make upper midwest golf courses some of the best. Have a great month of June and see you on the 11th and 13th, hopefully.

ALL ABOUT TREES

by JOHN BALL UNIVERSITY OF MINNESOTA
TIM SPENCER TECHNICAL COLLEGE, WASECA

The most important golf course plants are grasses, no question; but the dominant plants on most courses are trees. By dominant, we are referring to their size. Trees stand above the horizon, define

CONTINUED ON PAGE 11

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GOLF GREENS AND TEES . . . Milorganite feeding (write for detailed program) — as the source of nitrogen, phosphorus, and all minor elements — simplifies maintenance. This fertilizer insures a uniform and continuous growth. Dollar spot and other turf diseases are less frequent and less severe according to tests at noted Agriculture Experiment Stations. Less fungicide is needed to prevent or stop them. Milorganite assures optimum turf color and density — true quality.

ATHLETIC FIELDS . . . Ample Milorganite every 4 to 6 weeks of growing weather is the secret of good grass cover on heavy wear sports fields. A dormant application following the last game is widely practiced for early spring "greenup."



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Magnesium	0.32
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Aluminum	1.20
Chromium	0.60
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Blazon Questions of the Year

1. Why is Blazon blue instead of green?

Blue shows up better on live turf and combines with the yellow pigment in live turf to give a darker green.

2. What is Blazon's shelf life?

Unopened at least two years—opened at least one year. Contamination by other chemicals may shorten shelf life.

3. What are the rates for application of Blazon?

The recommended rate of Blazon application varies from eight (8) ounces for dormant turf to sixteen (16) ounces per acre for live turf.

4. What is the cost for an application of Blazon?

At a cost of 4.50 dollars per pound the sixteen ounce rate will cost \$4.50 per acre. This also adds up to \$0.2813 per ounce.

5. What is the cost for an application of Blazon?

There is some confusion on cost of this product. The manufacturer has seen fit to put the product



up as a liquid, yet they speak in tongues of weight instead of liquid measure. If the product weighs 8 lbs. per gallon as they imply, then 16 ounces becomes one pint. One pint of the liquid costs \$4.48.

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