How to maximize your fungicide purchases

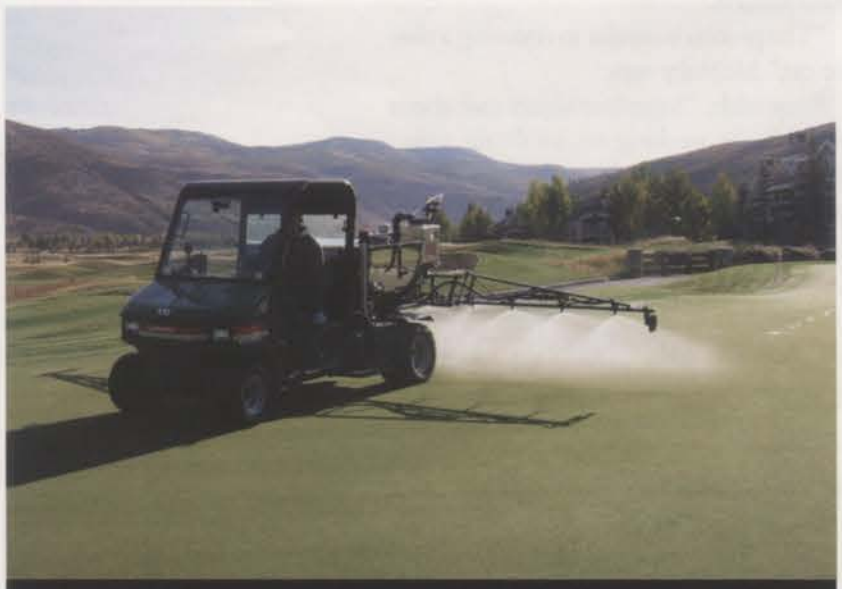
COMPARISON SHOP YOUR FUNGICIDE PURCHASES BY COMPUTING THE COST PER OUNCE, COST PER DAY AND TOTAL APPLICATION COSTS

by GREGG PHILLIPS, JR., AGRN.

With maintenance budgets under pressure, fungicide purchases can be a major factor in a golf course maintenance program. Often, superintendents or their purchasing agents consider the case, bag or unit price to determine which product is the most economical to use. Getting the most for your money requires a range of considerations.

Use vendor price lists to simplify comparisons

One way to comparatively shop fungicides is to distribute a price list for vendors to submit to you. In putting a price list together simply list the product name, an estimate of the number of units you will need for the coming year and an estimated delivery date. Giving the vendor a delivery date allows them to consider delivering the product through their own trucking schedule, which can save you commercial shipping costs. Because shipping costs add up very quickly be sure to note whether the vendor's price includes shipping, and also ask for a copy of their shipping policy. Organizing delivery dates will ensure products will be on hand when you need them and keep your inventory down.



Smart fungicide purchase decisions require making apples-to-apples comparisons.

Your bid list should also include the quantity per unit. For example, one vendor may give you a price for Banner Maxx per 2-gallon case while another may give you a price per gallon. Being specific will cut down on confusion and ensure you are getting an apples-to-apples comparison. An example bid list can be found in Table 1.

You may also include a letter or a note on the sheet to encourage any special financing available and a copy of their payment policy.

Traditionally fungicide prices are in vendors hands in November for the following year. This allows you to send out the bid list in November with a request for responses by mid-January and have time for questions and budget considerations.

The chemical group a fungicide belongs to is defined by its mode of action on a fungus. There may be differences among products in a particular group. However, all products in that group will attack the fungus in the same manner. For this reason, the differences between products within the same chemical group are usually agronomically insignificant. For example, the fungal group of Dithiocarbamates includes the active ingredients Mancozeb, Maneb and Thiram. The trade names of products with these active ingredients include Fore, Dithane, Manex, Spotrete 75 and Thramed. When forming your price list be sure to consider the other products are within the same chemical group. This will give you the ability to not only compare vendor prices, but prices among several manufacturers as well.

Having the unit prices from your vendors is one element of the equation. Other considerations include:

- Past performance of the fungicide
- How long will the fungicide control the pathogen once applied to the turf
- What the fungicide controls
- What rotation will be required to insure resistance does not occur

Computing the cost per ounce price

After you have the cost of the product containers you should convert the price to a cost per ounce basis. For example, Curlan/Touche comes in 11-ounce soluble packets, four to a pack and four packs in a case – giving you a total of 176 ounces per case (11oz x 4 x 4=176 ounces). Now, take the total price per case and divide it by the total ounces in the case. (Price / 176 ounces = cost per ounce). This will give you the cost of the product per ounce. Once you found the price per ounce you are ready to begin to compare the other factors in the cost equation.

Consider the effect of application intervals

Fungicide labels specify recommended application intervals based on how long the fungicide can be expected to control the pathogen and thus when the next application should be made. However, the actual application interval can vary by area and is dependent on heat, humidity and other environmental conditions. Look at the application interval as a guide in your consideration.

A key element when looking at the application interval is how long is the fungicide likely to control a particular pathogen. For example, compare two different fungicides/active ingredients used to control brown patch: Mancozeb (Fore, Dithane) and Vinclozolin (Touche, Vorlan, Curlan). Products with Mancozeb as the active ingredient will give seven days of control before the next application is needed, according to the label. Products with the active ingredient Vinclozolin need to be applied every 14 to 28 days depend-

TABLE 1.

EXAMPLE BID LIST

Product	Size	Approximate Delivery Date	Projected Min. Quantity Needed	Unit Price	Total Price
Heritage	1 lb	May 30, 2003	1		
Signature	4 x 5.5 lb	May 30, 2003	4		
Manicure or Daconil	2 x 2.5 gal	May 30, 2003	2		
Touche or Curlan	11ozx4x4	April 1, 2003	2		

ing on disease pressure, according to the label. With the application interval in mind we need to then consider the application rate of the product.

Compare the label application rates

Variables in application rates are based on the product used, disease pressure and even the particular fungus. Taking our example between Mancozeb and Vinclozolin, let's look at the application rate for each chemical. Mancozeb, according to the label, will need to be applied it at 4 ounces per 1,000 square feet to control brown patch. The label rate for Vinclozolin is 1 ounce per 1,000 square feet.

Computing cost per day

The cost of control per day of a fungicide gives you a valuable indication of the cost of the fungicide. This amount can be calculated for each fungicide you are considering. The cost of control per day is calculated by taking the application rate then multiplying it by the cost of the product on a per ounce basis then dividing the result by the recommended application interval. This will give you a cost per day to control a pathogen.

Using our earlier example of Vinclozolin and Mancozeb, Table 2 illustrates the equation. When comparing the two fungicides we can see it would cost $0.08 cents per day to when using Vinclozolin, and $0.23 cents per day when using Mancozeb to control brown patch.

Computing total application costs

Using the costs illustrated in Table 2 on a course with 130,000 square feet of greens we can calculate and compare how much it would cost to control brown patch over a 21-day period. As indicated in Table 3, a club could control brown patch over a 21-day period for $336.70 less using Vinclozolin rather than a Mancozeb product.

Control methods and fungicide use

Control methods must be designed and executed by the superintendent based on differences from course to course and even turf area to turf area. The two basic program options are preventive or curative. In a curative program, no treatment is made until the turf damage symptoms are noticed. In a preventive program, fungicide applications are made when environmental conditions are favorable for fungal growth.

It may seem logical that a curative approach would ensure that fungicides are only used when absolutely necessary, resulting in less fungicide use and lower costs. However, this may not be the case for three key reasons: First, preventive rates are frequently one half the curative rate. Second, once fungus is prevalent enough in a turf area to cause symptoms or turf damage, two treatments at the curative rate are often required. Third, turf weakened by fungal damage is less able to fight off future infection which can result in more fungicide use to maintain turf quality.

The adage that an ounce of prevention is worth a pound of cure holds truth. For example, let's say course A on May applies a preventive 2 ounce per 1,000 square feet application of Daconil for dollar spot that yields 14 days of control. Course B, using a curative method, waits until the disease appears and applies a curative rate of 4 ounce per 1,000 square feet Daconil on May 4. Both courses receive 14 days of control for each application. On May 15, course A applies another 2 ounces of Daconil as a preventive treatment. On May 20 course B has another outbreak of dollar spot and applies another 4 ounces. In order to control dollar spot in the month of May, course A used a total of 4 ounces of Daconil while course B used 8 ounces. In addition, course A had no dollar spot damage.

Conclusion

Putting all of these factors and techniques together will ensure you have all of the information you will need to make an effective evaluation of the prices among vendors and products. Setting up delivery dates, knowing the actual application costs of products in advance and ensuring they are available when needed, and executing an efficient fungal program will make the most of your purchase decision. GCN

Greg Phillips Jr. Agrm., is a golf and sports turf consultant from Buckhannon, WV. He can be contacted at turfguru@yahoo.com.

TABLE 2.

CALCULATING FUNGICIDE COST PER DAY OF CONTROL

	(Application Rate oz/1,000	X	Cost/oz*)	/	Application Interval in days	=	Cost Per Day of Control
Mancozeb	4		$0.40		7		$0.23
Vinclozolin	1		$1.70		21		$0.08

*Cost of Mancozeb is based on a 768 oz case at $306.00 Vinclozolin based on a 176 oz case at $299.75