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THERE'S NOTHING LIKE IT ON TURF

HEALTH CARE: top insurance issue of '90s?

by Rick Bersnak
M.F.P. Insurance Co.

■ Many insurance issues face small business owners—particularly those in the lawn care profession—in 1994. They will affect their ability to grow their businesses and earn a profit in the future.

Health care reform could be the most damaging if small business is required to provide basic coverage for all employees. Although mandatory coverage may not be enforced until 1995 or 1996, there is a good possibility that employers will have to pay up to 80 percent of the cost for employees.

Worker's Compensation costs continue to rise from state to state an average of six to seven percent per year. A survey of our clientel (more than 100 lawn care operators) indicated—to our surprise—that Worker's Compensation premiums represented an average of almost 30 percent of total insurance costs.

Insurers are forcing policyholders into state-managed pools or funds, which in some cases place a surcharge on the base premiums. Self-insured pools are forming as an alternative to traditional forms of coverage, and will continue to be a choice in the future (though they can be a financial risk in early years).

Commercial automobile rates have not increased for LCOs with good loss experience. Many small companies (one or two trucks) insure their vehicles on personal policies, which are less expensive than a commercial policy. However, personal policies typically will not insure employees of the owner, nor do they contemplate the exposure of a vehicle transporting fertilizers or pesticides. Companies which depend on personal automobile policies to insure production vehicles are assuming a substantial risk.

General liability rates are stable in most states. However, there are still very few insurers which are willing to provide the correct coverage by adding the Pesticide/Herbicide Applicators Endorsement to a standard policy. There are still a limited number of standard insurers willing to provide the proper coverage for LCOs and even fewer agents who understand the green industry.

Companies of all sizes must look to the future to avoid the rate increases that are sure to come, by considering alternatives like

- lobbying against Pres. Clinton's health care reform as it is currently proposed; and
- using pre-employment physicals and drug testing.

Features employers loathe about President Clinton's medical insurance package

1) The plan denies them control over employee health care benefits, but hits them up with the cost.

2) Caps on premiums (7.9% of payroll or less) are not guaranteed in the future.

3) The plan permits numerous new changes and taxes on companies if funding runs short.

4) Self-insuring, while allowed, would in practice be taxed and regulated almost to death.

—*Fortune*, Nov. 29, 1993

What the media is saying about President Clinton's medical insurance package

"A Lewin-VHI study finds that higher premiums and the requirement to cover part-timers...will cost employers who now offer health benefits \$21.5 billion in the first two years of reform."

—*Business Week*, Dec. 20, 1993

"The company pays at least 80% of the ("basic plan") premium, the employee the rest. Some small businesses that now don't offer coverage protest that the price will force them to fire some of their workers.

"Employer-paid plans are one more course in the Great American Free Lunch."

—*Newsweek*, Nov. 29, 1993

standards for care and costs.

Under the plan, the federal government would impose new corporate and payroll taxes to fund most of the program's costs. Individuals would pay no premiums.

Fortney: According to the plan of Rep. Fortney Stark (D-Calif.), states would have broad flexibility to set up plans and voluntary purchasing cooperatives.

Employers would pay 80% of workers' premiums, plus a 0.8% payroll tax to pay for those who can't afford coverage.

Alternate health insurance plans are getting a Congressional look

■ Here are the highlights of five alternatives to Pres. Clinton's health reform plan, according to Hearst News Syndicate:

Cooper/Breaux: This plan is sponsored by Rep. Jim Cooper (D-Tenn.) and Sen. John Breaux (D-La.). It requires employers to offer, but not pay for, health insurance.

Employers with fewer than 100 employees would be forced to join purchasing cooperatives that are much like Pres. Clinton's alliances. The cooperatives would negotiate for low-priced premiums and quality care.

Chafee/Thomas: This plan is sponsored by Sen. John Chafee (R-R.I.) and Rep. William M. Thomas (R-Calif.).

It makes employers offer insurance to employees, but does not force the employer to pay.

Under this plan, the current system

remains, but states could voluntarily set up purchasing cooperatives.

Employers with fewer than 100 workers would offer either a standard package or one covering catastrophic illnesses.

Michel/Lott: This plan, sponsored by Rep. Robert Michel (R-Ill.) and Sen. Trent Lott (R-Miss.), would offer the same coverage as the Cooper/Breaux plan.

It would keep the current system, and would add no new regulations. Under this plan, individuals and companies could set up tax-free medical savings accounts to cover insurance and medical bills.

McDermott/Wellstone: This is a single-payer plan sponsored by Rep. Jim McDermott (D-Wash.) and Sen. Paul Wellstone (D-Minn.).

Similar to the current policy in Canada, it would set up a national health board, administered by the states, to set

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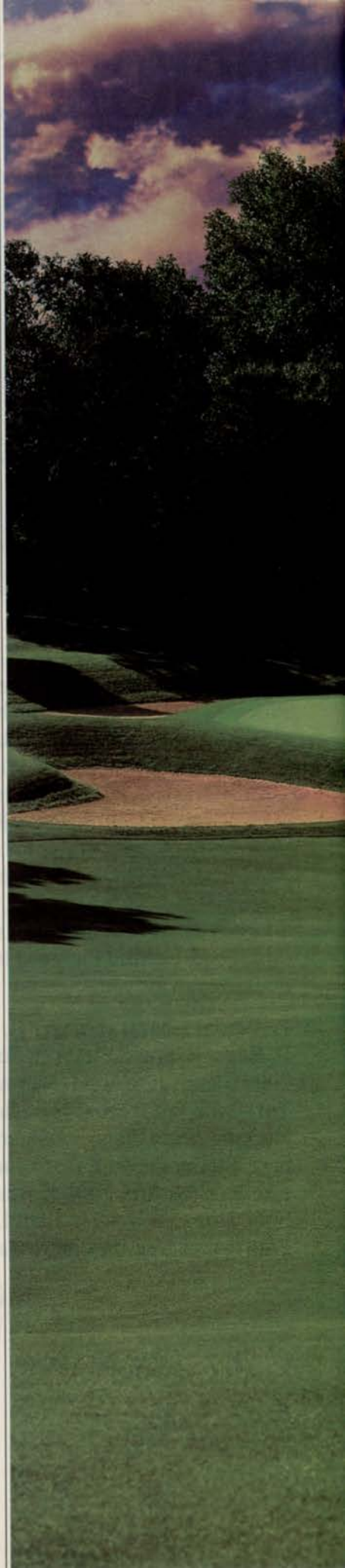
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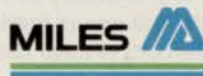


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DECIPHERING INCOME STATEMENTS

By being able to read them effectively, you can chart the course and future of your business.

by Dan Sautner
Padgett Business Services

■ The statement on this page can be called an income statement, a statement of operation, a profit-and-loss (P&L), or the simple revenue and expense. They all tell the same thing: financial results of operating the business for a specified period of time.

The second line uses the phrase "for the 5th month Ended 05/31/91." This phrase gives you the period of time under consideration. The statement shows the current period (May) and the year-to-date totals. In an annual statement, you may see this year and last year, which titles will note.

Sales—Statements always start with sales, followed by expenses. "Sales" lines tell you the composition of the business in terms of gross dollars.

In the example, sales are essentially based on providing services rather than products. You might ask yourself, "Can the company do better with product sales?" or "Is that an area that can be expanded?" or "Should we ignore product sales altogether?" The low product sales should also indicate a low inventory of product. The sample statement groups together the supplies and the costs of these sales.

Expenses—In this sample, expenses are organized by type. On some state-

ments, they can be listed alphabetically; on others, from largest to smallest in dollar value.

Expenses are aligned into three types:

Variable costs vary with the level or volume of business. Labor, for instance, is included here.

In our sample, the year-to-date labor expenses, as a percentage of sales, is higher than the current period. It would seem that the volume is reaching a level where the labor costs are incremental. This means that we have passed the base sales and the expense should fluctuate with volume. If the percentage is erratic, or constantly shrinking, it could mean that you are under- or over-staffed.

Labor is the largest item on this income statement; that alone means we should examine the return on this expense very closely.

Fixed costs tend to remain the same, within certain wide ranges of volumes. The rent expense, for example, is unlikely to change until such time as more space is needed.

Look at the fixed components of cost to determine the base level of sales that this business can be supported on. Look also in terms of the highest level of business that can be done before an expansion of fixed costs is necessary.

Discretionary costs occur as the result of a specific purpose. In our example, advertising is listed as discretionary. These

| Income Statement For the 5th month Ended 05/31/91 | | | |
|--|-------------------|--------------|------------------|
| | Current Period | % | Year-to- Date |
| Sales: | | | |
| Services | 2,800 | 93.3 | 10,000 |
| Products | 200 | 6.7 | 550 |
| Total Sales | 3,000 | 100.0 | 10,550 |
| Expenses: | | | |
| Variable: | | | |
| Wages | 1,050 | 35.0 | 3,950 |
| Supplies | 410 | 13.7 | 1,450 |
| Maintenance & Repair | 25 | 0.8 | 85 |
| Fixed: | | | |
| Rent | 250 | 8.3 | 1,250 |
| Depreciation | 200 | 6.7 | 1,000 |
| Accounting & Legal | 100 | 3.3 | 500 |
| Telephone | 60 | 2.0 | 300 |
| Utilities | 25 | 0.8 | 145 |
| Discretionary: | | | |
| Advertising | 150 | 5.0 | 400 |
| Memberships | 125 | 4.2 | 175 |
| Total Expenses | 2,395 | 31.2 | 9,255 |
| Income from Operations | 605 | 20.2 | 1,295 |
| | | | 87.7 |
| | | | 12.3 |

costs should be reviewed in terms of their ability to help the company grow.

What the amount will not show you is how effective the expenditure was. When reviewing these lines, try to understand why the money was spent and what it was meant to achieve. Think in terms of long- and short-term effectiveness.

Compared to most income statements, the one on this page is simple. In this statement, we have shown clear-cut divisions among the three types of expenses. The reality is that every expense is inter-related.

The bottom line—Here is where the sum of activity shows. Is the company profitable? If the statements says "yes," make sure to recognize that this is an accounting profit. Adding back depreciation will give you a close look at cash profits. By better understanding your tax situation, there may be a third type, the taxable profit.

At any rate, strive to be profitable and let accountants sort out the rest.

—Dan Sautner is chairman of Padgett Business Services, Atlanta, Ga. This article is one in a series he is writing specifically for LANDSCAPE MANAGEMENT.

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Insect control, cool-season turf

By monitoring your pest problems, you can combine IPM and conventional control measures.

by J. Kevin Mathias, Ph.D.
University of Maryland

Effective insect control programs rely on an integrated approach which includes integrated pest management (IPM) practices.

The components of an IPM program are: accurate field diagnosis or monitoring, an understanding of economic or action thresholds, and selecting an appropriate control action.

Monitoring and proper identification of the pest and/or its damage symptoms are essential. Sampling methods may consist of both active and passive techniques which provide accurate and timely information on pest activity. Examples of active monitoring practices are visual observations by a trained individual or the use of flotation or irritant sampling techniques

to determine thatch-inhabiting insects. Passive techniques may include pitfall traps for the adult billbug or black light traps for cutworm and sod webworm moths. (Table 1)

Control actions may include only one or a combination of the following:

- chemical insecticides;
- biorational insecticides;
- establishing endophyte-enhanced grasses;
- conserving beneficials;
- adjusting primary cultural practices to minimize insect damage.

Insecticides labeled for control are listed in Table 1.

Two new chemical insecticides recently released or soon to be released are Lesco's Mainstay 2G and Merit, from Miles, Inc.

Mainstay contains the same active ingredient as Crusade (fonofos) but is formulated as a 2% granular. Fonofos has been shown to provide excellent (more



Endophyte-enhanced grasses provide excellent control of surface-feeding insects.

than 90 percent) control of white grubs, with a broad spectrum of activity.

The current labeling for this new formulation of fonofos will expand its use to lawn and commercial turfgrass sites.

Merit (imidacloprid) is expected to be released on a limited basis this spring. It is a chloronicotynyl insecticide having a broad spectrum of control. It has provided excellent control of white grubs in U.S. field trials and will be labeled for white grub control and for several sucking insects.

Biorational controls—Five biorational insecticides can be used for turfgrass insect control.

Biorational insecticides consist of materials derived from living organisms such as bacteria (Steward, Doom and Dipel), nematodes (Exhibit) and plant extracts (Turplex Bioinsecticide). These materials are specific to the insect pest, thus having minimal adverse effects on humans, the environment and beneficial insect predators and parasites.

The major disadvantage to the biorationals are high cost and high application rates.

Fungal endophytes (*Acremonium* sp.), which convey insect resistance, provide another important control option for the turfgrass professional. Endophyte-enhanced resistance has been reported in tall fescue, perennial ryegrass and the fine fescues for several surface-feeding insects such as chinch bug, sod webworm, billbug

Economic/aesthetic thresholds

The **economic threshold** level is the minimum number of insects which will cause turf or economic loss. Variation in the economic threshold level can occur. It may be due to changes in environmental conditions and/or cultural practices.

Aesthetic threshold is often used in ornamentals where the damage level, as perceived by the customer or the professional, is unacceptable. The aesthetic threshold is often set at 15 percent loss of plant foliage.

Billbugs—6-8 larvae/sq. ft., or 2-5 adults/day in pitfall traps

Black turfgrass *Ataenius*—30-40

grubs/sq. ft. for annual bluegrass and creeping bentgrass turf; higher threshold for other deep-rooter turf.

Chinch bugs—15-20/sq. ft.

Cutworms/armyworms—1-3 larvae/sq. ft.

Sod webworms—4-6 larvae/sq. ft.

Grubs

Japanese beetle—6-10/sq. ft. in Kentucky bluegrass; 8-15/sq. ft. for tall fescue

Masked chafer—8-15/sq. ft.

European chafer—10-15/sq. ft.

Asiatic Ganelis beetle—18/sq. ft.

Greenbug aphid—no thresholds yet established

and cutworm.

Predation—insects eating other insects—has ranged from 60 to 75 percent mortality in field studies. Indiscriminately using broad spectrum chemical insecticides will adversely affect beneficial predators such as ants, spiders and ground bee-

gles within a turfgrass stand. As new biorational insecticides are developed and released, they will give turfgrass professionals additional means of natural control.

For successful insect control, the turfgrass professional must rely on an inte-

grated program. This type of control strategy will result in better control at less cost and greater environmental safety.

—Dr. Mathias is turfgrass lecturer at the University of Maryland, Institute of Applied Sciences.

Cool-season insect control strategies

| Pest | Monitoring program | Control action |
|---------------------------------|--|---|
| Billbugs | Adults move into turf in April-May. Use pitfall traps to gauge Spring activity. Grub damage visible by June on Kentucky bluegrass, fine fescues and zoysiagrass. | Preventive applications if pitfall traps show high adult counts. Use Dursban, Tempo and Scimitar for adult control in April to mid-May. For grub control use one of the following: Sevin, Oftanol, Diazinon, Crusade, Mainstay, Triumph. Cool, wet summers favor a fungal disease outbreak of <i>Beauveria sp.</i> which reduces populations. Plant endophyte-enhanced grasses. |
| Black turfgrass Ataenius | Adults move into turf in late March-April. First generation damage by late June; 2nd generation damage by late July-early Aug. Serious golf course problem in annual bluegrass and creeping bentgrass. | Preventive applications if past history dictates, with Dursban in April. Soil insecticides such as Proxol/Dylox/Turcam, Crusade, Triumph, Mocap, Oftanol and Mainstay are recommended in June-Sept. time frame. |
| Chinch bugs | Prefer warm, sunny spots. Emerge as temperatures reach 70°F. Flotation sampling is effective. | Preventive applications in April-mid-May for habitual problem sites. Dursban, Diazinon, Sevin, Triumph, Tempo, Oftanol, Mainstay, and Turcam labeled for control. Cool wet summer favors fungal pathogens which control chinch bugs. Plant endophyte-enhanced grasses. Big-eyed bug a beneficial predator. |
| Cutworms Armyworms | Five species may be seen (caterpillars, adults) from May-September. Turf thins due to defoliation. Irritant sampling techniques flushes pests to surface. Common on bent green. Adults like light. | Labeled for control are: Sevin, Dursban, diazinon, Proxol/Dylox, Scimitar, Tempo, Crusade, Triumph, and Mainstay. Biorational products include Steward, Dipel, Exhibit and Turplex. Light irrigation may be required to work material into thatch. Plant endophyte-enhanced grasses. |
| Sod webworms | More than 20 species exist in U.S. Defoliation damage visible from May-Sept. High damage in July-late Sept. Irritant sampling techniques will flush larvae to surface. | Refer to insecticide list (biorational and chemical) for cutworms and armyworms. Also may use Oftanol, Turcam and Orthene. Plant endophyte-enhanced grasses. |
| Grubs | White grub species feed on roots. Damage appears as brown turf, easy to up-root. | Soil insecticides will give good to excellent control if watered in with half-inch of water. Labeled products include Dylox/Proxol, Turcam, Mocap, Mainstay, Crusade, Oftanol, Sevin, Diazinon and Triumph. Apply in mid-August-Sept. or in April-May. Milky spore disease(Doom) for Japanese beetle larvae only is recommended for community-wide treatments. |
| Greenbug aphid | Kentucky blugrass major host; worst outbreaks occur after mild winters followed by cool, wet springs. | Orthene, Dursban and Diazinon for control in June-Sept. period. Treat if turf turns yellow. |

Triumph only for use by commercial lawn pest control personnel, and only on golf course greens, tees and aprons, and on sod farms. Crusade only for use in professional turf areas such as golf course and commercial sod. Diazinon may not be used on golf courses or sod farms.

Source: Dr. Mathias

Insect control, warm-season turf



Damage done by feeding beetles.

Learn to anticipate pest problems and spot situations conducive to pest outbreaks.

by Beverly Sparks, Ph. D.
University of Georgia

■ Managing the numerous insect and mite pests found in landscape situations is a challenging and often frustrating task. Due to the variety of plant landscapes, many different species of insects and mites can be found. However, remember not every insect or mite is a potential problem.

Learn the common pests, and become familiar with common plant materials in your area. Next, learn about the insect and mite problems associated with these plants. Learn to recognize these pests and the damage they cause. While some plants

are relatively pest free, others are pest prone and require a lot of maintenance to keep them healthy and pest free. Once the pests are identified, collect information on their lifecycle and identify environmental conditions which favor a rapid increase in numbers.

Sucking insects pests damage plants by removing sap from plant tissues. Symptoms of infestation:

- wilting plant tissues;
- curling or distortion of new growth;
- chlorotic spots or stippling of leaf surface;
- sticky substance or black fungal growth on upper leaf.

Common insects and mites causing this type of damage: aphids, scale insects, lace bugs, whiteflies and spider mites.

Chart on page 44

insects causing this type of damage include tent caterpillars, webworms, bagworms, shadetree borers, and other beetles.

Tent caterpillars are attractively-colored caterpillars that reach about 1½ inches in length. They have a few long hairs on their bodies, mostly along the sides. They are commonly seen in the early spring, closely associated with the webs or "tents" they construct in the crotch of small limbs on their host plant. This tent serves as a refuge for the larvae during the night and during rainy weather. They have only one generation per year.

Webworms are about one inch long when full grown and are pale yellow or green in color. There is a broad, dusky stripe running down the back, bordered on each side by a yellow stripe. They are covered with tufts of long whitish hairs. They are found inside unsightly webs at the terminal ends of branches on their host plants. There are three to four generations per year in the southern U.S.

Bagworms build and live in a 1- to 2-inch tough, tear-shaped portable silken case. These bags are the insect's most easily seen and identifiable feature. Outside, the silken texture of the bag is somewhat concealed with layers of leaf, twig and bark fragments. The bag has an opening at the larger end that allows the worm to partially crawl out to feed and make repairs to its bag.

Shadetree borers: Many insects boring or living in the wood of shade trees are the larval or grub stage of beetles. Most of these pests attack trees or shrubs that are already weakened or injured by transplant shock, drought, flooding, soil fills, mechanical damage or disease. These larvae or grubs are 1/4 to 2 inches long, yellowish white, legless with either a fleshy, rounded head area or a large flattened area behind the head. They are found burrowing or tunneling under the bark of infested trees.

Common warm-season pests

■ About 1½ inches in length, **aphids** are soft-bodied insects that vary in color from green to yellow to black. Some are winged during certain times of the year. Generally, aphids can be recognized by their cornicles, a pair of tube-like structures projecting from the rear of their bodies. They are frequently found in large numbers, clustered together on the backs of leaves or on the stems of new growth.

Scale insects are very small, soft-bodied pests that secrete a protective covering over their bodies. These coverings vary in color from white to red to black. Some are flattened while others are more turtle-shaped. This covering protects the scale and makes control difficult. Scale insects are most easily controlled when insecticide applications are timed for egg hatch when the "crawler" stage of the scale is present.

Lace bugs get their name from the appearance of the area behind their head and the wing covers. The area forms a lacelike covering over the body of the insect. They are 1/8 to 1/4-inch long, and are partially transparent. Lace bug damage to the upper leaf surface appears as white to yellow chlorotic spots and the lower leaf surfaces

will be cluttered with black spots and the old cast skins of immature lace bugs.

Whitefly adults resemble small gnats. They range in size from 1/16 to 1/10 inch and have four broad, delicate, milk-white wings. Immature whiteflies are found on the underside of leaves and resemble scale insects. They are oval, flattened and yellow to almost transparent. Whiteflies often occur in tremendous numbers and when they are disturbed, the air is filled with a white cloud of insects.

Spider mites: Often called "red spiders," these are most often found on the backs of leaves. They are so small they can barely be seen with the unaided eye. The adults are oval-shaped and have eight legs and no antennae or wings. Expect rapid increase in spider mite populations during periods of hot, dry weather.

Chewing insect pests cause damage by consuming plant parts such as leaves and stems, or by burrowing in plant tissues to cause damage to the host plant. Symptoms of chewing insect pests include holes in leaves, silvering of leaf tissue, complete removal of leaf tissues, burrowing in or around stems, branches or trunks of plants. Common