How many businessmen would be interested in increasing their profits by 20%, 30%, 40%, or even 50%? The fact is, many businesses in the tree care industry have that opportunity. And what's more, you can do it without raising prices and without getting another nickel's worth of business.

Before the readers of this article begin to question my sanity, let me explain in a short phrase — health and safety related costs. For most businesses, these costs now represent the second largest cost of doing business next to payroll. Furthermore, they are easily the fastest growing costs in the tree care industry today! It is a difficult figure to precisely determine, but best estimates are that this industry spends in excess of 300 million dollars per year on health and safety related costs.

The sad part is that most of these costs are loss-related, therefore controllable. As any businessman knows, in order to be profitable you must control costs.

The field of arboriculture contains a diverse blend of professional talents. Most who belong to an organization like ISA do so because they are truly interested in advancing the professionalism of the industry and increasing their knowledge. Many are businessmen, competing for their share of the market and profits. Some represent electric utilities and operate or manage line clearance contractors. Some operate or are part of a company that has an effective safety and loss prevention program. But, by and large, this industry is doing a dismal job of loss prevention. That’s the bad news. The really bad news is this: it is getting worse!

Safety and Health Costs

What are health and safety related costs? I would like to start out by identifying those costs typically encountered by businesses and talk in detail about the major items.

The first category and generally the largest is insurance. Insurance is a necessary evil in any business, particularly in high risk industries like many of the areas of arboriculture. Within this area, most businesses will require the following major types of coverage:

- Workers Compensation Insurance. This insurance covers employees for "personal injury caused by accidents arising out of and in the course of employment." This includes medical benefits, disability benefits, and rehabilitation cost and survivor benefits.
- General Liability. Covers injury to persons other than employees and damage to public or private property.
- Products Liability. Covers the responsibility of manufacturers and distributors of products to insure that those products are free from recognizable potential hazards which may result from proper or improper use of these products.
- Vehicle. All insurance related to cars, trucks, and other vehicles and equipment.
- Medical and Health. Coverage of employees and their families for non-occupational related health care and disability costs. This, of course, is optional to any company. However, most companies must offer it to attract and hold good employees.

The second major area of concern to most businesses should be this one: OSHA. This agency may have lost some of its teeth in the past few years, but it's still there, concentrating on fatalities, employee complaints, and industries with chronically poor safety records.

There are several other cost areas associated with safety and health, some of which are difficult to identify or quantify. Administrative procedures for operating mandated health and safety programs are tedious, time-consuming, and costly. Protective equipment must be provided where required by job hazards. Also, there are numerous

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1Presented at the annual conference of the International Society of Arboriculture in Milwaukee in August of 1985.
intangible costs, such as the negative effects on productivity and morale caused by accidents. However, insurance and OSHA are the two major areas of concern.

Workers Compensation Insurance

Workers Compensation laws have long existed in all 50 U.S. states and the provinces of Canada. Workers comp. coverage is mandatory in all states except South Carolina, New Jersey and Texas. In essence, these laws hold that employers should assume the costs of occupational disabilities without regard to fault. The meaning of that statement is quite simple. Regardless of whether the injury results from a hazard, carelessness or a broken safety rule — you, Mr. Employer, must pay. The resulting expenses are part of your cost of doing business.

Workers Comp. laws have five basic objectives:
1. Provide sure, prompt and reasonable income and medical benefits to injured employees and death benefits to surviving dependents.
2. Provide a single remedy for such injuries while reducing court delays, costs and workloads arising out of personal injury litigation. Generally, an employee cannot sue his employer for damages, although this can happen under certain circumstances.
3. Eliminate payment of lawyer fees, witness fees and time-consuming trials and appeals.
4. Encourage employer safety interest through an experience rating mechanism, and
5. Promote frank study of causes of accidents, rather than concealment of fault or search for a “scapegoat,” and to reduce future accidents and human suffering.

In the tree care industry, workers compensation is typically the single largest health and safety related cost. I would venture to say, with very few exceptions, that compensation costs are greater than the profits of any ISA member company. Nationwide, rates in the industry average almost 15% of payroll, and fluctuate to as high as 42% for line clearance companies operating in the state of Minnesota. At an estimated industry average wage rate of $8.00 per hour, the national average for compensation premiums is over $2,000 per year per employee. This means that the industry spends an estimated $120 - $150 million per year on workers comp. alone.

Workers comp. premiums are generally determined based upon a company’s prior loss experience in each state. A new company would be assigned the manual rate, or 100%. This rate would then vary up or down annually, depending on the company’s loss experience.

How can this affect your company’s competitiveness or profits? Drastically! As an example, Company A and Company B are competing for a contract in a state with a manual rate of 15% of payroll. Each has an average wage rate of $8.00 per hour, but Company A has a 125% loss rating while Company B has a 75% rating. In this example, Company B has a $.60 per man-hour compensation cost advantage over Company A. I do not have to tell many contractors that bids are often won or lost on less than $.60 per hour. If Company A were to somehow obtain the contract, they would lose the $.60/man hour from profits. If only 10 employees are involved, this amounts to $12,000 per year.

Even if your company is maintaining a constant rating, it is losing out in the battle to control workers comp. costs. The inflation of the costs over the past five years has been staggering (Fig. 1).

Property and Casualty Insurance

In all types of property and casualty insurances, the tide has turned dramatically in the past few years from a buyers to a sellers market. Insurance industry profits have been on a downward spiral for several years as interest rates on their investments tumbled and underwriting losses have surpassed premiums (Fig. 2). In 1984, the insurance industry lost an aggregate $3.5 billion on property and casualty coverage.

As a result, insurance companies are now closely scrutinizing the types of coverage they offer, the limits of that coverage, and the risks involved. Premiums for most types of insurance are increasing by as much as 300, 500 or 1,000 percent. Companies with poor records, if they can find coverage at all, may be placed in high risk pools at even more exorbitant rates. Certain types of insurances may no longer even be available, or only available with much lower limits. For example, Union Carbide was covered by “sudden and ac-
cidental” pollution coverage of $200 million in the Bhopal disaster. This coverage is virtually impossible to find today, as is environmental impairment liability, which covers gradual pollution and is necessary to those involved in chemical spraying operations.

A close to home example of the insurance problem can be drawn from the experience of the National Arborists Association. Many ISA members are also NAA members, and some were involved with its group insurance plan with Chubb. As a high risk industry with a poor loss rating, the NAA group became too risky for Chubb (or for that matter any other carrier) and its plan was cancelled. I am sure that those participants who had to scramble for alternate coverage are painfully aware of the higher cost of insurance today.

Occupational Safety and Health Act

The Occupational Safety and Health Act of 1971 contains thousands of standards designed to protect the health and safety of workers. Many tree care and utility workers are covered by one of two sections of this law: CFR 29-1910 Line Clearance and CFR 29-1926 Electric Construction. In addition, the law contains a catch all known as the General Duty Clause, which applies to all industries and states an employer’s responsibility under the law as follows:

“Each employer shall furnish employees a place of employment free of recognized hazards that are causing or likely to cause death or serious harm to employees.”

The impact of this clause is significant and leaves a great deal of room for interpretation by an OSHA compliance officer.

Citation of an employer under the General Duty Clause or under specific standards can result in fines or penalties. The severity of these fines or penalties is determined by the nature of the violation. Non-serious violations may be subject to a minimal fine, or no fine at all. Serious or repeat non-serious violations carry fines of up to $1,000. Repeated serious violations and violations that are determined to be “willful” serious violations can have fines levied of up to $10,000. In addition, willful serious violations which involve gross negligence can involve criminal penalties. These penalties can include fines of up to $25,000 and possible jail sentences in extreme cases.

A recent case in Chicago, a court determined that employer willful negligence resulted in three employee deaths. This resulted in criminal conviction of the three company owners and subsequent sentencing to a $25,000 fine and 25 years in jail. The case is currently under appeal.

A Virginia contractor and its two top officials were indicted for “willful and unlawful” failure to use proper safety procedures in bracing a ditch, which resulted in the deaths of two employees.

Employers also have a responsibility under OSHA, stated as follows: Each employer shall comply with all occupational safety and health standards, rules, regulations and orders issued under the Act that apply to his own actions and conduct on the job.

However, there are no penalties for employees under the law. These must be handled through

![Figure 1.](image1)

![Figure 2.](image2)
company work rules, disciplinary procedures and the collective bargaining process.

**The Solution — Cost Control**

The question now becomes — what can be done to control or even reduce these runaway safety and health related costs? The solution can be summed up in two words — “loss prevention.” An effective loss prevention program can achieve dramatic results. My recommendation is the adoption of a “building block” approach to the problem. The components of this program are as follows:

**Corporate commitment and support.** The foundation for a successful loss prevention program must be the full support of top management. This is true in a large utility, a line clearance contractor or a private tree care firm. It is not enough to designate someone as a “Safety Director” and give him sole responsibility for your program. He must be supported by financial backing, authority, and management involvement. Otherwise, your program will not produce results.

**Policies and Procedures.** Clearly established policies and procedures should address all areas of risk management, including the specific responsibilities of both supervisory personnel and workers. Safety rules and regulations, once established, should be consistently enforced and necessary disciplinary action incorporated into labor-management agreements and company work rules. If a union exists, their support for the program should be enlisted. After all, they share the responsibility and common goal of worker protection and were the impetus for OSHA in the first place. The importance of documentation should always be remembered. Well-kept records are proof positive of your company’s commitment to its safety program.

**Safety equipment.** It is estimated that the tree care industry spends $10 million to $15 million per year on safety equipment — less than $200 per employee. This expenditure amounts to only about 10% of workers compensation costs. In effect, safety equipment is really another form of insurance. It represents an investment that not only helps protect employees from the hazards inherent to their jobs, but in most instances, also improves their productivity. A tree climber’s saddle, for example, is both a piece of safety gear and a necessary working tool. Insulated fiberglass pruning poles provide electrical insulation, as well as performance advantages.

Safety equipment is very inexpensive when compared with other forms of insurance. A graphic example of this is the hypothetical case of a worker in Pennsylvania losing an eye in a job-related injury. Under state compensation laws, this accident would cost approximately $137,000 in medical and disability costs. The $5.00 pair of safety glasses which would likely have prevented this injury would have been inexpensive insurance. I am certain that a worker who has endured the pain, suffering, and trauma of such an injury would gladly trade his $92,000 disability award to have his lost eye back.

As for the employer, this single incident could cause his compensation premiums to skyrocket and put OSHA on his doorstep.

Selection of protective equipment is an important decision and should be done carefully. The proper equipment must not only meet applicable standards, but should also take comfort and real life job conditions into consideration. Remember, the most effective safety equipment is that which is used, not left on the truck. Sometimes the expenditure of a few extra dollars for the right equipment can save thousands of dollars in accident-related costs later on.

**Training.** The Occupational Safety and Health Act clearly states an employer’s responsibility for training as follows: *Employers are responsible for instructing employees in the hazards of the work, the proper use of tools and equipment, and proper work techniques.*

Training is a frequently overlooked and underutilized loss prevention tool. Employees should not be assigned tasks for which they have not been properly trained or before they have proven their ability to handle these tasks. Veteran employees also should be continually trained and retrained.

Programs like the NAA’s Electrical Hazards Awareness Program and Tailgate Safety Talks are excellent training aids for first line supervisors, who are your closest link to your workers. They are the key to a successful training program.

Training in the proper use, care and maintenance of safety products and tools is also
essential. Improperly used equipment can be as dangerous as no equipment at all.

Field audits. Regular inspection of tools, equipment and work procedures can reveal potential serious hazards before an accident occurs. Virtually all accidents are caused by unsafe conditions, unsafe acts, or a combination of both. By eliminating these causes, the domino effect of an accident sequence is averted and most accidents prevented.

Equipment should be inspected daily by workers and supervisors, as well as regular impromptu inspections by persons outside the crew.

Accident analysis. All accidents that do occur should be thoroughly investigated to determine the cause or causes and eliminate repeat occurrences. It is a good idea to publicize the analysis of these accidents within your company so that all others can benefit from the findings of the investigation. It is important not to find a scapegoat, but rather to prevent future accidents by eliminating the cause.

Conclusion

The results of this building block process, while maybe not evident overnight, can be dramatic. The eventual rewards of achieving these goals can be bountiful — more business, improved profits, better morale and productivity, and reduction of human suffering. The customer also benefits since the costs of doing business, which are passed on to him eventually, are reduced.

If, however, an effective loss prevention program is not developed, the probable results can be less promising, or even disastrous.

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ABSTRACT


Good drainage is the most important factor in maintaining healthy plants. Poor drainage kills more trees and shrubs than sloppy planting techniques, poor soil, or lack of maintenance. Sometimes it’s possible to correct the drainage problem after planting, but usually it’s best to resolve it beforehand. You can accomplish some improvement in drainage by amending existing soil to increase the amount of pore space. Another approach to providing drainage involves tying the plant hole into the storm sewer system. Occasionally, regrading will provide a means of getting rid of trapped water. The same problem can occur with building a mound over the low spot and planting on top. Remember that the effectiveness of a drainage system depends on the nature and properties of the soil in which the system is installed. No drainage system is effective if the soil won’t permit water to pass through it.