PROBLEM SOLVING IS DETECTIVE WORK

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The planning function of the greenhouse manager, or any manager for that matter, includes problem solving as an important component. Of the many planning activities, problem-solving is potentially one of the most challenging and fun. It can also be one of the most threatening and feared. Regardless, problem solving is important to the success of the manager and the business. However, constant fire-fighting (crisis management) is a strong indication that managerial functions are not being performed well, if at all.

Solving problems is best done by anticipating them and dealing with them in an orderly fashion. An orderly process to deal with problem solving is a priority.

"It isn't that they can't see the solution. It is that they can't see the problem." - G.K. Chesterton.

Not all problems, however, can be anticipated. As with other managerial skills, problem-solving can get better with experience. Some of the pitfalls managers face with problem solving are:

- ✓ non-recognition of the problem (at least in the early stages);
- ✓ poor use of available information;
- ✓ succumbing to time pressure, action before analysis;
- ✓ treating symptom, not causes;
- ✓ problem ill-defined;
- ✓ stating problems in ways that limit responses;
- ✓ desired outcomes not specified;
- ✓ a limited number of alternatives surfaced or considered;
- ✓ only low quality alternatives considered due to limited technical knowledge and skills;
- ✓ irrelevant criteria used to make alternative selection;
- ✓ problem solving not viewed as a learned process.

Most managers do not follow a systematic approach to problem solving. Little documentation occurs making identification of trends and patterns very difficult, if not impossible. The ultimate goals of a manager should not be to become a problem solver, but rather the facilitator of problem solving among all people who work at the greenhouse or nursery. The earlier a problem is detected and solved, the less it will affect the business.

This process of problem solving is similar to the scientific method. Creativity plays a major role in each step. The following systematic approach to problem solving is easy to document, easy to use in time sensitive situations, easy to teach others, and helpful in determining long range solutions. It can help greenhouse managers overcome some or all of the common mistakes mentioned earlier.

First, ask the following questions and see if they can be answered:

1. What is the problem?
2. What are the causes of the problem?
3. What are the possible solutions to the problem?
4. What is the best solution to the problem?
5. What action is to be taken?

Then, follow through on the process to answer each question. Following is a more in depth description of each of the five steps in problem solving. The five steps relate directly to the five questions listed above:

A. Problem identification;
B. Problem diagnosis;
C. Generating alternatives;
D. Decision making;
E. Tactical planning.

Problem Identification: Problem Defining.

"A problem well stated is a problem half solved."
- Charles F. Kettering

Define the problem in terms of unmet, unset, or conflicting objectives. A definition provides clarity and understanding of the problem. How a problem is defined will either expand or limit the possible solutions. It is desirable to define a problem in such a way as to maximize the possible solutions. Problem identification answers the question, what is the problem?

Problem Diagnosis

"To solve a problem, it is necessary to think. It is necessary to think even to decide what facts to collect."
- Robert Maynard Hutchins.

Gathering information to sort through symptoms on the way to finding the root cause of a problem. Avoid predefining the problem. Ask the question, what are the causes of the problem, what happened or didn't happen. Then ask the question, why?, listing technical as well as management reasons.

The purpose of the diagnosis is to clearly define the problem and it's root causes both technical and managerial. Occasionally diagnosis reveals some clues about possible alternative solutions or possible methods of solving the problem.

Generate Alternative Solutions

Answer the question, what are the possible solutions to the problem? The more solutions available to solve the identified/diagnosed problem, the greater the chance of finding the "best" solution.

The method known as brainstorming is frequently used for this step. In brainstorming, everyone who might be helpful is encour-

aged to suggest possible solutions. No ideas are rejected or evaluated until all ideas have been noted. Even seemingly ridiculous alternatives should be shared and listed. They maybe the spark needed to produce a really creative solution. The most important aspect of this step is to generate many possible solutions before selecting one. The rules to brainstorming are:

- ✓ no evaluation of ideas; defer judgement
- ✓ goal is quantity of ideas, not quality;
- ✓ piggy-backing is good
- ✓ be free-wheeling - don't feel inhibited
- ✓ quantity of ideas is more important than quality of ideas.

Decision Making: Selecting a Course of Action

"A good problem statement often includes:
(a) what is known,
(b) what is unknown,
and (c) what is sought."
- Edward Hodnett

This answers the question, what is the best solution to the problem? Evaluate alternatives by scoring them on the basis of some relevant, rational selection criteria to help decide which options to select. Realize that some problems require multiple solutions. The process does not always result in the choice of a single alternative. Caution should be taken not to choose more solutions than the available resources can implement.

When analyzing alternatives for implementation during problem solving, several options may be equal and choosing the best one may be difficult. Reviewing the decision making matrix may be of help in narrowing down the best possible choice.

Tactical Planning

"Our plans miscarry because they have no aim.
When a man does not know what harbor he is making for,
no wind is the right wind."
- Seneca (4 B.C. - A.D. 65)

Tactical planning answers the question, what specific actions must be taken to implement the decision? Tactical plans define what is to be done, who will do it, when will it get done, and how/where will it be done. Writing out tactical plans ensures that none of the details of putting the decision into action will be overlooked. Furthermore, written tactical plans can easily be shared with all people involved n the greenhouse business to get commitment and motivation to solve the problem. Finally, the tactical plan must be carried out while being constantly monitored and controlled.

"To decide not to decide is to decide."
- Anonymous.