The primary objective of this presentation is to identify and discuss some management methods, techniques and attitudes that can contribute to solving problems in your plant.

A problem is any situation that is not as we would like it to be. Reducing or eliminating the difference between the way it is and the way we want it to be is solving the problem. We can find these conditions in all segments of our environment - in our relationships with our families, our community, our employees, and in our plant equipment. Almost everything has room for improvement.

While the techniques we will be presenting can be applied to every situation to varying degrees, the language, the dialogue, and the participants will be unique for each problem. In order to simplify my communications problem with you, so all can readily relate to the problems, I will confine my remarks to plant problems of a physical nature. These types of problems lend themselves to classic treatment and to more positive resolutions than do personnel problems.

ATTITUDES: The approach one takes in solving a problem is of major importance. The attitude of the manager toward the problem dictates the approach. We, as managers or problem-solving leaders, must make a conscious effort to position our attitudes properly in order to manage and/or organize the problem-solving system for maximum results.

1. We should recognize that a solution can be found for every problem. The solution may not always be acceptable. The time, money and resources required to find the solution may be more than we can pay. The taxpayers of our great country spent billions of dollars and a decade to put a man on the moon. We substantially eliminated polio from our world. What about television? Organ transplants? In the face of these facts, who can say anything is impossible?

2. We should recognize that the forces of management are irresistible. Any leader can accomplish anything he wants if he is willing to pay the price in time, in money and in blood, sweat or tears.

A leader’s job is to motivate his people and his peers. Everyone has a "hot button" which makes him respond. To some it is money, to others it is status, or recognition, or the satisfaction

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of a job well done. Even KITA works with a few. The leader who discovers his people's hot buttons and uses this knowledge to benefit his people and to further his aims can accomplish anything at some cost.

3. We should recognize that 90% of all research (problem-solving investigations) being conducted today has been done before. Just think of how much time and money we could save if we could find the people who have already done the work we want to do and could ask them. Of course, we should expect to find most of the solutions found in the little-known research experiments did not perform satisfactorily. It is very helpful to know the things that would not work, for it helps to narrow our choices and points toward solutions that will work. The successful research is quickly adopted and becomes common knowledge. A great fund of useful knowledge about every problem would be available to us if we knew who and where to ask. I have often said that if I knew who to ask I could get more free knowledge than I could buy at any price from any qualified expert in the field. Where does one start asking -- At home? At the plant? His neighbors? Everywhere! He must let people know he has a problem and is looking for a solution or for someone who already has a solution.

After asking people in his area, he may need to broaden his inquiry in an ever-widening circle to include the Crop Improvement Association, state control labs, the extension services and the colleges. One of the major reasons I attend field days, conventions and short courses such as this one, is to meet people who may be able to supply me with new ideas and information that could lead to more effective solutions.

4. We should recognize that we have a limited amount of time and money that can be devoted to solving a given problem. The successful solution to the problem should be worth far more to you than your cost in resources. None of us represent non-profit organizations, even if it may turn out to be that way some years. One should weigh the value of a problem's solution against an estimate of the time, the cost and the probability of finding a successful solution.

We have noticed, as we gain experience, we do not seem to collect answers. What we seem to collect are more questions. All of us have more problems than we have time or money to solve. The most important task of the problem-solving manager is to set priorities. That is, to pick the problem he can solve which will have the most favorable impact on his business. We need success in problem-solving to pay our way, to help motivate our employees and to win the future support of top management.

Having made inquiry of many of our friends as to possible sources of information and possible solutions to our problems, we
should have sufficient knowledge to estimate (a) the likelihood of finding a satisfactory solution, (b) the amount of work, (c) the cost, and (d) the time frame we will need to identify and institute our solutions.

These factors are weighed against the value of having the problem solved in the time schedule we have estimated. This analysis provides the basis for setting priorities, for attempting to solve the problem or dropping the proposal in favor of other more fruitful endeavors.

PROBLEM SOLVING: Every solution to a problem has two dimensions. One is the technical or mechanical aspect. That is, how well does the machinery or equipment fit the need? The second dimension is the people aspect. How well will the solution be accepted by the people involved. The perfect mechanical solution to a problem is of little value if no one is able or willing to run the machine. At the other end of the spectrum, I have seen motivated employees willingly tackle and solve a difficult mechanical problem by attention and work beyond the call of duty.

In considering the likelihood of finding a satisfactory solution, one must consider the affect on all the people involved - not only your people who will be instituting a change in procedure but also the people who will be the recipients of the change. Wherever possible, involve the people who will be affected by the decision in the decision-making process.

To analyze a problem effectively, a manager takes these steps in this order. For large and complex problems, one should formalize this process by having the steps in written form:

1. State the problem clearly. What?
2. Gather data to quantify the problem. How much? How often? When? Where?
3. Identify probable causes. Why?

To make a good decision, a manager takes these steps:

4. Involve knowledgeable people, particularly those who are affected by the solution.
5. Set objectives. What must the solution accomplish? Are there additional benefits that might be had? What time limits apply?
6. Get ideas. Use your people. Use "brain-storming." No idea is too wild.
7. Evaluate alternatives. Use your people to help you select the best ideas.
8. Test the best alternatives. Will the idea work mechanically? Will the people accept the new method?
9. Make your decision. Institute the new method or re-evaluate the project. The problem isn't solved until the new methods
are implemented and in satisfactory use. Implementation may require the manager to take these steps:

10. Make further decisions. Adjust the methods and perfect the techniques.
12. Provide feedback. Continue to monitor results. Let participants know the degree of success of their efforts.

Last but not least, be aware that problem-solving is not easy. All the easily solved problems have been conquered long ago. All that is left for us are the hard-to-answer problems. Be prepared for less than perfect answers and some failures. Progress is slow but irresistible. Many successful seedsmen use some variation of these problem-solving techniques to advance their position. What are you doing to stay abreast of them?