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PROBLEM SOLVING

Agriculture and Rural Division

Although you may not realize it, solving problems is something that you do every waking hour. Some problems are small and you automatically come to a solution, like what to have for breakfast. Others are more complicated and require extra time and effort to come up with an appropriate solution. Problem solving builds a bridge between where you are and where you want to be. The objective of this Factsheet is to give you a framework to help you solve problems.

It is an easy step-by-step method; however, to be effective, there is one rule: **Don't skip any of the following steps**:

1. Identify the problem.
2. Generate possible solutions.
3. Select best possible solution.
4. Plan actions.
5. Evaluate.

Sometimes you don't even realize you've used these steps, as in our breakfast example, but when the problem is more complicated, each step becomes critical to the solution. Let's look at the fictional community of Acorn. This example will show you the merits of working through the steps of problem solving. They have a BIG problem!

STEP 1 — IDENTIFY THE PROBLEM

It is important in this step that all the stakeholders are involved. Everyone will bring information to give the most accurate picture. In Acorn, it is important to have both farmers and commuters involved in the process.

The hardest and most crucial part of problem solving is identifying the problem, that is, making sure you have the real problem. How can you tell? Ask yourself, if we solve this problem will we make the difference we want?

To help clarify the problem, and to make sure you have all the pieces to the puzzle, ask questions such as: How/when did the problem originate? Who is affected by the problem? and What other problems are related to the situation?

Beware that you don't jump to a solution. It is tempting once the problem is clearly stated to use the first solution you think of, but read on....

Here's the situation: Acorn is located about an hour's drive north of a large metropolis. Many of the residents are new to Acorn, having recently moved here from the city, where they still commute to work. The long standing residents operate farms on the rolling fertile land. A warm spring day doesn't go by without at least one farmer getting complaints from his new neighbours about barnyard smells. When the farmers spread manure, they often have to use a road popular with commuters to access their fields. This leads to another complaint from the commuters about their cars becoming dirty from the manure dropped on the road. The farmers have some complaints about the commuters lack of safe driving skills around farm equipment on the road. Not only that, but the farmers feel that the advent of newcomers has changed the flavour of the community. What used to be good will in the neighbourhood has changed to tension.

Even as we speak, six individuals are walking into a meeting to talk about Acorn's problems. Cam Driver and Fred Farmer initiated the meeting, recognizing their community has a problem, and somebody had to do something!

In Acorn, originally the group identified the problem: commuters and farmers have to use the same road. However, when Cam asked "Will the tension disappear if we solve this problem?" it became obvious that this wasn't the root problem.

STEP 2 — GENERATE POSSIBLE SOLUTIONS

It is important to think of a number of possible solutions to the problem to be able to choose the best. The first solution you think of may not be the most effective one. Most of us tend to think in set patterns and react in a similar and predictable way when confronted with a given situation. At this stage in problem solving, it is important to force ourselves to think beyond our conventional ways.

Dr. Edward de Bono originated the concept of "lateral thinking." He uses six colours to develop new ways of thinking. Each colour triggers a different way to look at the situation. This method can be used by an individual or in a group.

Cam and Fred found out that:

How/when did the problem originate?

- originated when the makeup of the neighbourhood changed.

Who is affected by the problem?

- everyone in Acorn.

What other problems are related to the situation?

- driving skills, manure smells, manure spreaders drop manure on the road, commuters and farmers must use same road. Some of the "puzzle parts" are contributing factors. These are factors that affect or contribute to the problem. The wet spring in Acorn contributed to the problem because the roads were more sloppy. By identifying the contributing factors you further clarify the problem.

Blue

Blue is associated with COOLNESS and CONTROL so this type of thinking is often called for in the chairperson's role. In Acorn, Cam and Fred (acting in the blue role) help to keep the meeting on track and make sure the group doesn't skip any of the problem solving steps. They encourage everyone to be involved in each of the colours of thinking. Both realize that the success of their problem solving efforts, at this stage, depends on the quantity of ideas generated.

White

The white thinker looks at facts and figures; is very objective or neutral. In the Acorn situation, the white thinker quotes facts of the community: each household in Acorn receives the weekly paper.

Therefore, a possible solution would be to use the newspaper to communicate.

Yellow

We associate the colour yellow with the sun. So when you're in this mode you look only at the positive aspects, introduce dreams, visions and hopes. With all the newcomers in Acorn, a yellow thinker sees all the positive contributions these new neighbours can make to the community if communication efforts are made.

Mr. Yellow thinks a community picnic would help bridge the communication gap.

Black

In contrast to yellow, black is the colour that we associate with the NEGATIVE aspect of thinking. Yellow should always come before black. Black thinking is not meant to be argumentative and should be like white thinking, concerned only with facts, but brings up the what ifs. The black thinker says, "What if nobody comes to the picnic? Or what if it rains? We don't get along now, so why would we try to put the two groups together?"

Because of the black thinker's comments, the group comes up with an alternate idea of organizing a community dance with special RSVP invitations. Don't jump into detailed evaluations of each idea, because that's in the next stage of problem solving!

Red

The colour red relates to emotions, feelings, hunches and intuition. There's no factual basis for the ideas that are generated in red thinking. The red thinker can't help feeling that if we could only meet each other face to face, we'd all get along.

So the red thinker proposes a "Friendship Tea", where the whole neighbourhood would get together on a Sunday afternoon to meet, mingle and chat with their neighbours. It is even suggested that they organize mixer games.

Green

This is where you get really creative since green stands for growth, newness, and fertility. Green thinking is the most demanding, but it can also be the most fun, and we don't spend enough time thinking this way. Remember: there is no judgment passed at this stage.

The Green thinker comes up with ideas like:

- organizing a clean-up bee where everyone works together
- a pot luck dinner that progresses from home to home, mixing the farmers and the commuters
- a project to paint a billboard welcoming people to Acorn.

The group in Acorn has already generated eight possible solutions to their problem, and they're just getting started. With Cam and Fred's help, they will have more ideas with which to work.

STEP 3 — SELECT BEST POSSIBLE SOLUTION

Before you can select your best solution, you have to identify and set the criteria for your goal. This can be expressed as what you want to accomplish, and why.

To go any further in problem solving in the community of Acorn, Fred and Cam's group needs to decide this goal.

What to accomplish: increased clear communication between the commuters and the farmers.

Why: to restore harmony in the community.

The next step is to consider the advantages and disadvantages of each of the ideas generated in step two. As you consider the ideas, you may have to slide into the action planning step, but beware that you don't get carried away in action planning before all the ideas are tested. Don't forget to think about factors such as:

- the readiness of people to participate in your plan
- resources necessary
- other activities happening
- the time to implement the plan
- potential pay-off and future consequences of putting this plan into action.

A similar list will be generated for each of the possible solutions. Once you have your lists of pros and cons, pick the solution that is closest to the goal you identified. You could consider choosing a solution that is a combination of two or more ideas.

The group has decided that they will select the newspaper idea in combination with the dance. In the next step, they will develop their plan.

Fred and Cam's group is ready to weigh the pros and cons of the white thinker's proposal to communicate through the newspaper. Here is their list:

PROS:
- non-threatening method of communication
- restricted opportunity for confrontation
- every household is reached.

CONS:
- no guarantee it will be read
- could be perceived as being biased
- no follow up action is required by community
- limited input

STEP 4 — PLAN ACTIONS

This stage can be called the "meat of the matter." Here you add details to the chosen plan. To develop your plan, write down each of the steps you need to take, then number the steps in the order they need to be done. Add to each step: **who** is responsible and **when** will that task be completed. To make sure you have included everything, check to see that the steps answer the who, what, when, where, why and how of the situation.

Many hands make light work. Include others in your scheme so that more people will be committed to the activity. Remember to use regular progress reports to ensure everything gets done to schedule. When you implement the plan, some flexibility may be required. If a change in plan becomes necessary, act on it; don't sacrifice the success of your event by refusing to vary from the original plan. Make sure communication lines are open at all times. Everyone needs to know what's happening.

STEP 5 — EVALUATE

Don't forget this important step since it is the yardstick for measuring your success. It will answer the questions: Have you accomplished your goal?; Do you need to try something else?; What could you have done differently? In step three, you said what you wanted to accomplish and why. Using these objectives, see if you have achieved what you wanted. Your evaluation needs to match the type of plan you have designed.

Part of Acorn's action plan looks like this:

1. Type and copy this job list to all committee members (Fred January 10th)
2. Contact the newspaper to ask for space for regular articles (John January 15th)
3. Line up volunteers to write articles (Mary January 22nd)
4. Book hall for dance (Sid January 31st)
5. Meet with article writers to talk about objectives and topics (Cam February 15th)
6. Investigate costs and availability of local bands and DJs (Betty February 20th)

If your plan is ongoing, be sure that your evaluation is also ongoing. This will allow you to alter your program if the situation changes.

CONCLUSION

There are certainly more complex problems than those found in Acorn, but by using these steps, problem solving is made easy. By clearly stating the problem, looking at a wide variety of solutions before selecting your best alternative, action planning and evaluating, you are well on the way to crossing the bridge of successful problem solving. In a community like Acorn, all it takes is initiators, like Fred and Cam, and this simple process to get the ball rolling.

Revisiting Acorn, Fred and Cam and their group are having an informal discussion about the success of their newspaper articles and dance. To some extent they have accomplished their goal. Many of the farmers and newcomers do communicate, however there are a few who have not changed. The ones involved in the original conflict did not come out to the dance. Next time the committee would be sure to personally contact these families about the merits of attending. Given the nature of the community, the committee sees the importance of more activities of this type. They are planning to meet in two months time to set out further steps to solve this problem.

REFERENCES

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This Factsheet was authored by **Judy Taggart** and **Tricia Reid**, Rural Community Advisors.

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