

Corn Maze

Decision Making Tool



Considerations Before You Start

Do you like interacting with the public and hosting them on your farm?

Entertainment farming is very weather dependant. People are less likely to come if it is too hot, too cold, or too wet. Be sure your season suits this type of attraction. If the corn isn't high enough until mid August you'll have too small a window in which to attract customers. Another type of maze would fit your situation better.

Maze vs. Labyrinth

A labyrinth has only one path and no dead ends. A maze is a puzzle using a series of paths and walls with some dead ends.

The three most important factors in successful retailing are "location, location, location." We all can't be located on a major highway so you need good signage and publicity. You can advertise all you want but if customers can't find you, your business will suffer. Talk to the local municipalities and provincial highway authorities to make sure they will allow you to erect directional signs.

If there are other corn mazes in the area assess them as competition. Visit them and ask yourself, "How can mine be different? Can I do a better job?"

Time is a critical factor. Not just the time to build a maze, but more importantly, the time and interest to promote your new venture. Some maze companies will design the maze, cut it out for you and do your advertising and promotion. Others will give you the tools. Making the public

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aware of what you are doing is very important for success. Sit down with your family and track how everyone uses their time. If everyone is busy now, what will they give up to make time for this new venture? Will you need to hire additional labour to get the maze built and promoted?

Discuss the maze enterprise with your insurance agent before you start. They must know what you are planning and that you are going to charge admission. They may require that you have a security plan outlining what you will do if a child gets lost on your property or in the maze. Have them add a “liability extension” to your existing farm policy. The liability extension acknowledges that the

insurance agent knows what you are doing and the maze has liability coverage.

Hand washing stations are required. It is a good policy for customers to wash their hands before eating and after visiting the maze, playing in soil, using the washroom, and before leaving the farm at the end of the tour. Alcohol based gel hand sanitizers, available at any drug store are an option if hands aren't soiled but the best way to clean hands is with soap and warm water. Two or three hand washing stations should allow customers to wash their hands in a reasonable time. It is more economical to buy portable hand washing stations than to rent them. See Helpful Websites and Resources for suppliers.



Kinds of Mazes

There are lots of different kinds of mazes made from different plants and non-plant material. You are only limited by your imagination. Some farms will offer more than one kind of maze to meet different age groups' expectations. A corn maze can be as small as 0.2 hectare (0.5 acre) but is typically between 2 to 4 hectares (5 to 10 acres). The paths in larger mazes can range from basic to fairly complex (e.g. a 4 hectare maze can have 6 kilometres of trails in it). The complexity of your maze will depend on the age of the consumer group you are targeting.

Sample types of mazes:

- evergreen hedge
- stone
- rope
- straw
- mirror
- panel
- grass (as basic as making a path by lifting sod in the lawn, or having a path through tall grass)
- tire
- sweet pea
- sunflower
- corn
- haunted maze (often in a corn maze in the evening hours, but it doesn't have to be corn)

The target audience that gives you the greatest income potential may drive the season you are open. For example, if summer is when your greatest market potential is, a corn maze that isn't tall enough until August 1st or later may not be your best choice as you will only be open for half of your July to August market.

Some mazes (stone, rope, grass and tire) allow an unobstructed view of the entire maze area. For families with small children this greater visibility has appeal.



Improve Your Chances of Success

The maze is the “hook” that brings people to the farm. It should be profitable on its own but you can improve your profit potential by offering other products or services. The easiest way to increase gross sales is by increasing your average sale per customer. For example, if you charge \$5 admission to the corn maze consider offering food or another activity. If the average customer spends just \$1 more on food, you will have increased your average sale/customer by 20 per cent.

Food

Food sales are often a key income source. There are options when considering foodservice.

Option A – Offer commercially pre-packaged food items. These are low risk, because another commercially inspected facility has manufactured them. Examples include snack items like whole fresh fruit, potato chips, cheezies, cookies, pretzels, and



single serving fruit juices, pop or bottled water.

Option B – Prepare medium risk items like hotdogs, sausage-dogs, popcorn, hot cider, coffee, barbequed sweet corn, pizza slices, candy corn, ice cream, etc.

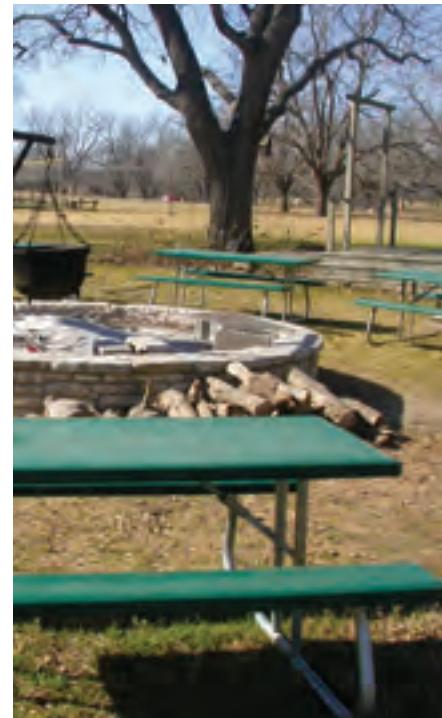
Option C – You assume the highest risk when you offer items like hamburgers that you make with raw meat. Your kitchen will have to meet strict health department regulations. But with a fully inspected kitchen you can add any hot or cold item you feel your customers might like including soup, sandwiches, home-baked cookies, pies, muffins, chili, fruit shortcake, etc.

Start with the low risk pre-packaged items then expand into medium and higher risk items as your business grows and you have the resources to meet the food and health regulations. Speak to your public health, dairy and/or meat inspector and Canadian Food Inspection Agency (CFIA) representative before offering any food. Make sure you address their concerns. No one wants a customer to get sick eating a food product at their farm. Such an incident is a liability issue and very stressful.

In Alberta, the minimum requirements for food safety education are outlined in section 31 of the *Public Health Act* Food Regulation. Individuals looking for recognized food safety courses have several options, including both on-line and in class formats. For online and classroom courses in your area, contact the local public health inspector with Alberta Health Services. For a full listing of courses you can contact the Environmental Public Health team at Alberta Health and Wellness at:

Health Protection Branch
Environmental Public Health
Alberta Health and Wellness
24th Floor, Telus Plaza North Tower
10025 Jasper Avenue
Edmonton, AB T5J 1S6
Telephone: 780-427-4518
Fax: 780-422-0914
www.albertahealthservices/eph.asp

You must provide places for people to sit down to eat. If you don't provide seating, they won't buy food. The seating could be outdoor picnic tables



or, for sun or wind protection, seating in a barn, tent or temporary gazebo.

Selling food offers an additional income stream:

- with pre-packaged foods (option A), budget an increase in gross sales of about 10 per cent
- with lower-risk items (option B), expect gross sales to increase up to 20 per cent
- with the full fledged kitchen (option C), expect to increase gross sales by 30 per cent

This maze calculator only budgets for low risk pre-packaged food products.

Attractions

Maze operators often add attractions to make their farm appeal to more age levels within a family and to give the family more reasons to stay at the farm. The longer customers stay the more likely they are to spend money on other attractions or food.

A rule of thumb used in the Alberta tourism industry is for every hour a person travels to your farm they want four hours of activities to feel they are getting value for their trip. Use this rule of thumb to decide how far from the farm it is realistic to spend your advertising budget.

The following are some ways to increase the “average sale per customer.”

Have wagon rides around the farm. Charge an additional fee, perhaps \$2/person for a ride. You can charge more for horse drawn wagon rides (e.g. \$3), but there is also increased



liability because horses have been known to bolt and personal injuries can result. Wagon design must reduce the chance of someone getting injured.

The safest design is to have railings all around the perimeter of the wagon with seats facing inward so no one can sit on the edge of the wagon with their feet hanging over the side. With out-facing seats:

- children can bounce off if the tractor hits a bump
- peoples' legs can be injured passing too close to an object like a tree or fence post
- someone may jump off prematurely and fall under the wheel of the wagon

A set of stairs at the back that is hinged so they fold up after everyone is on the wagon allows easy access to the wagon. At the end of the ride no

one can exit until the stairs are swung down.

Feature an enchanted barn or forest that depicts scenes from popular children's stories, or label trees, plants, farm equipment, or antiques from rural life and tell what they are used for. When well done this attraction can justify an admission fee of \$2/person.





Add a tricycle track (pedal karts) where visitors ride a path through and around obstacles. Depending on the length of the ride this attraction can justify a charge of \$1 to \$2/child.

Other possibilities include:

- “Gem Mining” where children pan for gems in a raised trough filled with sand and water. \$2/child or \$8/family.

- Pumpkin decorating. \$2/child.
- Pumpkin cannon. Air operated cannons can shoot pumpkins a fair distance. \$4/child.
- Campfire sites. \$1/person (\$50 minimum).
- Face painting. \$2/child.
- Hot dog picnic packages. \$4/person.
- A large sand box (e.g. 10' x 10') with child-sized shovels, rakes, pails, etc.
- Large straw piles. Children can jump in it and throw the straw around. Some farms put the straw under cover to keep it dry. Others make a “mountain” (pile) out of the large straw bales.



Ambience

These low cost ideas add visual appeal and are fun activities for the family to enjoy:

- Cartoon cut-out photo opportunities. At picture time children put their heads through the hole and they become the face of a character or animal. "How Tall this Fall" is a popular cut-out. Children stand beside a character that is holding a large board with gradations of



height marked up one side so it shows their height as their picture is taken. A "How Tall this Fall" picture can become an annual activity as the family tracks how much each child has grown from one year to the next. Many cut-outs can be used around the farm making it a colourful, fun place to be.

- Slides.
- Large checker board (10' x 10').
- Bury a tractor in the ground down to the transmission so children can easily climb on it. Build stairs with a railing at the back of the tractor to make it very safe for them to reach the tractor seat. Some farms also weld a metal plate between the rear wheel fender and the motor housing so a child can not fall forward through that hole.

- Puppet shows.
- Animal petting areas.

It is also common for farms to put their farm name on all these activities, so that when family members look at the pictures of the children having fun they are reminded where they had that wonderful day.

Charging Admission

There are two philosophies on admission:

1. Some operators believe that consumers are more likely to come if the advertised price is low. They will charge a fee to enter the maze, and then have separate fees for each major activity that has start up costs; for example, wagon ride, pedal cart, etc. Some farms fence their activity area and then charge a single fee for people to enter. In this case, the family pays one fee to enter the maze and another fee to enter the activity area.
2. Charge one fee that gives the consumer access to everything.

There are several advantages to option two.

Some family members opt to pay for their children to enjoy the activities while they themselves stay on the outside and watch. If you believe that one important reason for attracting



families to your farm is to give them quality family time, charging for individual activities may impede families spending time together.

Every time you require a fee or collect tickets you need staff to handle the transaction. Having ticket booths where families can buy a number of tickets for a predetermined amount, (e.g. 1 ticket for \$1 or 6 tickets for \$5 or 15 tickets for \$10) streamlines sales but you still need staff at each activity to collect tickets.

The more places you handle financial transactions the greater your risk of employee theft. A police officer at a workshop on security said that 50 per cent of non family employees will steal if given the chance. Even if it is half that, and you have four hired employees, there is a good chance one of them may be stealing from you. The fewer people handling cash the lower your risk of theft.

So how do you arrive at a fair single admission price? The answer is based on averages. Let us assume that a farm has the following priced attractions:

- corn maze - \$5.00
- wagon rides - \$2.00
- enchanted barn - \$2.00
- tricycle track - \$2.00

The corn maze is the main attraction. On average:

- 90 per cent of visitors will pay admission to the corn maze
- 25 per cent of these will also pay for one other activity, such as the wagon ride
- 15 per cent will also pay for a second activity, such as the enchanted barn
- 10 per cent will also pay for a third activity, such as the tricycle track

These combinations can be calculated into a single price as follows:

| | |
|-------------------------------|---------------|
| Corn maze – \$5.00 x 90% | = \$4.50 |
| Wagon rides – \$2.00 x 25% | = \$.50 |
| Enchanted barn – \$2.00 x 15% | = \$.30 |
| Tricycle track – \$2.00 x 10% | = \$.20 |
| Total | \$5.50 |

As such, any admission fee that is over \$5.50 will improve your income when compared to selling tickets on individual activities. One fee will also reduce the number of staff required and the number of people handling money.

Charging for Special Activities

Entertainment farms commonly charge a separate fee for activities that require costly inputs each time they are used or that can be monopolized by a few people. These separate fees could be eliminated if:

- Coupons are used allowing people to do a special activity once as part of their general admission. If they want to do the activity again they would pay an additional fee.

- Multiple visits to the same activity are allowed under the general admission, but visitors are required to go to the end of the line if they want to do the special activity again. On busy days, this may stop people from monopolizing certain activities.

With one overall admission price customers will be doing one or more activities. If one activity is really popular simply increase the size of that activity. As long as visitors are having fun, your goal of customer satisfaction has been attained.

Here are three examples of special activities where the customer is often charged a separate fee:

Pumpkin slingshot – Sell customers five miniature pumpkins (or tennis balls) for \$2. The customer loads them into a slingshot (mounted to 6" x 6" upright posts) and shoots them at a target. Both the mini pumpkins and tennis balls can be gathered and reused.

Feeding the goats – Children find goats fascinating. Goats like to climb and some farms build a series of progressively higher pathways for the goats to walk on. Then they offer



a small amount of animal feed for a fee (\$0.25 - \$1.00) so children can feed the goats. In some cases this is done by putting the purchased feed in a can fastened to a cable. Then, with the aid of pulleys, the food is transported up to a feeding station at the top of the pathway where the goat eats it. Some farms use gum-ball dispensers (called bulk vendors) that offer animal feed for \$0.25. Others sell ice cream cones full of animal feed (\$1.00) which the children can feed to the goats by hand. With all the concern about children coming into contact with the new potent strains of E.coli, it may not be a good idea to allow children to touch animals. Also, although goats have a reputation for not biting children, they are animals and accidents do happen.

Make-your-own scarecrow – This is a nice family activity. The farm gets used clothing (shirts, pants, hats etc.) from Goodwill or Value Village, etc. These stores will often sell them by the pound after they have been unsuccessful selling them. The farm makes, or provides the tools to make, a head out of burlap, old pantyhose or a white plastic bag. Participants can glue or draw on eyes, ears, nose and mouth. The farm also provides straw to stuff the scarecrow and twine to be used as suspenders, to tie the two parts together. If the scarecrows are meant to stand up, a wooden cross can be provided or sold separately. This activity usually costs around \$15 - \$20 per scarecrow and does not lend itself to being lumped into the general admission fee.

Admission for Groups & Families

Do you give special consideration to groups of more than 15 or 20 people? A group rate will help attract cub or



brownie troops, church groups, day cares, etc. Offer a discount where everyone gets 20 to 25 per cent off if the group is over a certain number and they have made arrangements by contacting the farm before they arrive. A big advantage to enticing groups is that they may be interested in group attractions, such as renting a campfire (\$1/person, minimum \$50) or having a hotdog picnic package (\$4/person). So what you may lose on the lower admission, you can make up in the other services you offer.

Another consideration is giving a special rate for large families. If we look at Canadian demographics, each age group represents a percentage of the population. *The Corn Maze – Decision Making Tool* uses these demographics to predict what will happen to your revenue if you give different groups a special admission rate.

The calculator separates:

- the percentage of the population that each age group represents between ages 0 and 19

- families with more than two children
- seniors beginning at either age 60 or 65

So when you choose to give a specific price to a specific age group, the calculator can calculate how this will affect your gross revenue from admissions. For any of these groups that you don't use, the calculator automatically lumps them into the adult category and charges them the adult price.

Example:

You intend to attract 1,000 people to your maze. Let's assume that:

- children ages 0 to 4 are free
- children 5 to 12 are \$4.50
- seniors 60+ are \$6.50
- families are charged \$24.00
- everyone else is \$7.50

The calculator will then separate out:

- the 8.4 per cent of the population that are 0 to 4 yrs. old and attribute \$0 income from them
- the 14.5 per cent of the population that are 5 to 12 and show you the effect if they are charged \$4.50 each
- the 16 per cent of the population that are families with more than two children (it assumes these families average 5.5 people) and charge them \$24.00
- the 6.4 per cent of the population that are 60+ and the effect of charging them \$6.50 each
- the rest of the population (70.7 per cent) that will be charged the adult rate of \$7.50

Assuming you expect to attract 1000 people and charge these prices, the calculator will decide your gross income from admission fees for budgeting purposes as follows:

| | |
|---|---------------------|
| Children 0 – 4: Free | |
| $1,000 \times 8.4\% = 84 \times \0 | = \$ 0 |
| Children 5 – 12: \$4.50 | |
| $1,000 \times 14.5\% \times \4.50 | = \$ 652.50 |
| Families: \$24.00 | |
| $1,000 \times 16\% \times \$24.00 / 5.5$ | = \$ 698.18 |
| Seniors: \$6.50 | |
| $1,000 \times 6.4\% \times \6.50 | = \$ 416.00 |
| Adults: \$7.50 | |
| $1,000 \times 54.7\% \times \7.50 | = <u>\$4,102.50</u> |
| Total income from 1,000 admissions | = \$5,869.18 |

If, on the other hand, you had charged everyone entering the farm \$7.50, the total income from 1,000 admissions would = \$7,500. In this way the calculator uses demographics to show the impact of your pricing on revenue. You can easily go back and try different prices and see the impact on income.

The theory behind children up to age four being free is they may be too small to take advantage of many of the activities. Depending on the activities offered some farms only give free admission to children up to age two.

The thinking behind discounts for large families is to make it economically attractive for larger families to come. If the farm has a separate charge for several special activities or sells food, those families may well purchase some of these items for everyone in the family, which will improve the farm's overall gross sales. Also, the impact on your bottom line is small. Statistics Canada reports that in 2006 about 62 per cent of Canadian families have children.

Within that group, 17 per cent of those families have three or more children.

Something else to consider is that the larger family might not have come if they had to pay separate admission for everyone. They might have found another family activity to do and you would have lost all of the four paid admissions in the family price. Some farms offer \$1/person discounts to families over a certain size (e.g. five people). Others offer discounts for coupons the customers have printed off of the farm's website. There are lots of ways to determine price. We just want you to see how one system of discounting can impact your gross income.

give them 200 tickets and they would return to you unsold tickets and the money for the tickets sold. Usually you would give them the tickets at a discount (e.g. 15 per cent off). If the ticket buyers choose not to come to the farm, you still get the income from those sales.

Value-added Products

Other products that can be sold on site to help increase your average sale per customer include: jams, honey, cider, maple syrup, pickles, unpopped popcorn (still on the cob, or shelled popcorn), and produce such as squash, pumpkins, or potatoes that you can keep from one week to the next without a loss in quality, etc.

Corn Maze Design

There are maze design websites and companies. Some companies just sell a plan with instructions, while others offer a full package where they do the design, cut it out and help with the marketing and promotion. They may





also hold an annual workshop with other maze operators where you get the chance to share ideas and discuss solutions to problems you might be having. It all depends on how much you feel comfortable doing and what you want to delegate.

An aerial photograph of the maze's design is a critical component to your promotion.

A good place to start the design process is to pick a theme. It is not uncommon for farms to partner with a group or charity and that may dictate your theme and influence your design. For example, if your community is building a new hospital and they need to raise funds they might agree to be a partner in the maze. The design (picture) of your maze could then be the outline, the name or a unique aspect of the new hospital.

Perhaps your community or school is celebrating a special anniversary and they agree to partner with you.

It is a good idea to select a number of different themes and then approach the organizations connected to each theme to see if any might be interested in being a partner in your maze. You may also find that you will receive a lot of local media publicity, plus you may have some unpaid volunteers to help when the maze is open for business. Naturally, in return you would be expected to give a portion of the gate receipts to the organization that you are featuring. Typically, farms might give 10 per cent of the admission fee to the organization or charity.

You can draw your design on a piece of graph paper, and then scan the design into a computer so the design can be cut into your field using GPS technology. The steps and approximate times to make the maze itself are:

- 10 minutes/acre to go around the field so the GPS can record the boundaries of the maze
- 2 hours/acre to lay out the maze in the field
- 2.5 hours/acre to cut out the maze (rototilling the paths)
- 1.5 hours/acre to spray herbicide on the pathways

So, with GPS and a rototiller, it takes about 6 hours/acre.

Using the lines on the graph paper, you can then transpose the grid onto the field using stakes. For example, if the design on the graph paper covers 30 lines on the page each way and you plant 150 rows of corn across the field, you can put a stake in at the end of every fifth row, and mark off a

similar spacing along the other three sides of the field. It will help to colour the top of the stakes so they are easily seen (yellow), then colour every fourth flag (20th row) a different colour (pink), so you can easily see where the stakes line up on each of the four sides of the field.

When the corn is newly emerged, take the design and walk the field marking the pathways using chalk, ("fieldstrip" – the chalky substance used to line baseball diamonds and football fields). Put the fieldstrip in an old antifreeze container and walk the path. Then come back and cut it out with a hoe or rototiller. If you do it when the corn is quite young, you can see the chalk line better and the corn comes out more easily.

A design can have 1 mile of paths in 10 acres or 2.5 miles of paths in 5 acres. The time needed to chalk, cut out, and maintain the maze will depend on how complicated your design is. If we take an average:

- placing stakes out around the field 20 minutes/acre
- chalking the field should take around 7 hours/acre
- cutting the design using hoes should take around 11 hours/acre
- spraying the pathways for weeds should take about 1.5 hours/acre each time

So, with a diagram, it takes about 20 hours/acre on average to create the paths, including staking and hoeing.

Design Recommendations (Rules of thumb to keep in mind):

The smaller the field, the less complex the design can be because you have fewer rows of corn in which to create your pattern. You can plant corn with row spacings from 20 to 36 inches depending on the flexibility of the planter used. Use a row seeder rather than a broadcast applicator. It's easier to cut out your design from straight rows. A John Deere Hoe Drill gives about 14 inches between rows, planting one way and seems to work quite well. Another option is to use a true corn planter. Rows with 30 inch spacing are common with populations of around 28,000 plants/acre. Most farms plant their maze going both ways which increases the plant population to 40,000 or so, making the maze denser. It also gives you row ends on all four sides of your field, which can make cutting the maze out much easier if you are not using GPS.

Silage corn can grow quite tall, but it has lower lignin content for better digestion by livestock. This makes the corn stalks less sturdy in the field than grain stalks. As such, grain corn is likely the better choice for a maze, but both types are used.

Check what varieties grow best in your area, but look for varieties that have good height, stalk strength, and a high stay-green rating. There is a website listed near the end of this document to help with corn varieties in the different areas of Alberta.

Make sure there are not too many dead ends. These can be a hazard if people need to get out quickly. Children are also more likely to damage the maze if they get frustrated by a lot of dead ends.

Design the maze so people have options (shortcuts) so they can

choose how long they take to walk the maze.

Consider designing a "mini maze" near the large maze for school tours and families with smaller children.

Children are more likely to create shortcuts through the maze if there are less than six to seven rows of corn between different paths.

Draw your design on an Excel spreadsheet with a grid as the background. Transfer your design onto a hand held GPS, so the GPS can show you where to cut the path.

Some people mark the path with fieldstrip before taking out the corn plants, to make sure they are following the design.

Count on hand hoeing or rototilling and herbiciding the path two or three times. Some people apply a residual herbicide that can usually give them full season control. See what works for you, keeping in mind that you will likely be rotating this corn field into some other crop next year and need to be concerned about herbicide residues being left in the soil. You can grow Roundup Ready corn, and then you can treat the paths with Roundup. But that can also create problems if the field last year grew Roundup Ready Canola, because you could have volunteer plants and the Roundup won't work. You will also need to apply a residual herbicide before planting the field to prevent general weed growth throughout the field.

You want the corn to stay green as late as possible in your season; so, if you are a 2,600 heat unit area, look for a variety that is rated approximately 300 heat units higher.

Cut the path when the corn is just nicely emerged, one to two inches high. You can use a rototiller, or hoe, but you couldn't mow the paths at this stage because the growing point would not be mowed off. You can mow if the plants are five to six inches high, enough that mowing would take the growing point out. But remember, the later you leave it the bigger the job becomes.

For a typical path, if you planted 30 inch rows, you only need to take out one row of corn. That leaves a path that is 5 feet wide ($30'' \times 2 = 60''$), which is sufficient for the typical path. If you planted 14 inch rows, then you would need to take out three rows, leaving you a 56 inch walkway.

Often the design will include a tower or bridge at one point within the maze. It allows people to orient themselves and see where they are. They can also get a sense of where they have to go by looking at the maze map when standing on the high structure.

Remember safety when designing the maze. Although it is unlikely that a standing field of corn will burn, there is the chance that someone will have a health issue, or get lost and want to get out quickly. Plan to have exit paths marked with signs that show the way out of the maze on all four sides of the field.

There is a maze that installed posts with yellow gates (piece of 1" x 6" fastened to posts using a spring hinge). Once you found one of these, you could exit the field by going through this yellow gate and in the next path you came to, there would be another gate near by. Just by following those yellow gates the person would find their way out of the field.

Parking

You can park about 100 to 120 cars per acre if the space is properly organized and marked. Allow 20 feet of depth for the car to park and 25 foot aisles between the rows of parked cars. Mark the rows by tying ropes to posts, laying cedar logs on the ground (anchored by reinforcing rod), or using fieldstrip. The problem with fieldstrip is it can be ruined by rain. Space will not be used efficiently if it is not well delineated.

Make sure your choice for the parking lot is high and dry. Nothing will annoy city people more than getting their car all muddy, or even worse, stuck in a farm field. Also establish a good

A rule of thumb is to have enough parking to handle two per cent of your projected visitors over your season. So if you expect to have 10,000 visitors, you will need 200 parking spaces on your peak days.

On your busiest days, a farm that expects to have 10,000 visitors could have 1,200 people visit the maze over the day.

But they don't come all at the same time (noon until 3 p.m. are the peak times) and they won't all park nice and uniformly. So you would need about 200 parking spots or about two acres of parking.

This is assuming you have organized rows so people know where to park and you have parking spaces that are 20' deep and roadways between parking rows of 25 feet. If you don't designate where the nose of the car is to park, parking will be much less organized and the area will be used much less efficiently.



sod that will withstand a lot of traffic. One suggestion would be annual rye grass.

Required Equipment

Producing and running a corn maze requires equipment. Some of the following can be outsourced to avoid buying specialized equipment.

Maze production:

- corn planter or hoe drill seeder
- boom-type weed sprayer
- backpack weed sprayer (apply herbicide to the pathways)
- combine (if you plan to harvest the corn after the maze is done)
- tillage equipment (land preparation)
- fertilizer spreader (if you aren't having it custom applied)
- GPS system or flags to mark the field
- rototiller (some people use a walk behind rototiller, others use a small tractor with a tiller behind to cut and maintain the paths)

Because we are just budgeting to get you started, we'll budget for a walk-behind rototiller. Prices ranged from \$600 for the walk-behind to \$5,000 for the tractor mounted model. We will budget \$600 in the calculator, but you can change that in the summary.

Maze operation:

- Aerial photograph (this is very important for publicity).
- First aid kit.
- Emergency action plan (what staff are to do in the case of an emergency – heart attack, fire, lost child, etc. See *Managing Risk on Farms Open to the Public* in the links at the end.)





Advertising vs Publicity

Advertising is what you say about yourself through a paid flyer, newspaper ad, radio spot, etc.

Publicity is what other people say about you.

Examples of publicity include:

- a press release that results in an article in the paper
- holding a festival and having the local radio station comment on it
- hosting a media day at your farm that results in a magazine article about the experience
- loaning your tractor and wagon to the Santa Claus parade and having people see it and say nice things about you

Publicity carries more credibility with it because it is what others say about you. But it can also be harder to get than simply buying advertising. It's easy to place an ad in the paper; it's harder to get the paper to write an article on you for free. But if you work at it over time you can get very good at it. Some farms hire a PR (public relations) person to work for them. This person writes the press releases, lines up sponsors for the maze, and organizes press days, etc. to get some of that "free" publicity.

The best publicity comes via word of mouth. But that takes time to build. People have to come to the farm and enjoy themselves before they can go home and spread the word to their friends, neighbours and family. But over time this will be your best form of publicity. Bottom line is that the more you can do to ensure that people coming to your farm are having a good time, the less you will eventually have to spend on advertising.

- Tower or bridge (\$3,000 - \$5,000 each, depending on size, if home made, no labour. Calculator will budget \$4,000).
- Walkie-talkies or cell phones for staff to communicate.
- Sound system (some people use it on wagon rides to tell people a story along the ride).
- Megaphone (to communicate with people in the maze or around the activity area who are acting up or are lost). You can also have your phone number on your maze diagram so customers who get into trouble (health issue or get lost) can call you on their cell phone.
- Light (bamboo) poles with white flag attached. Give one to each group. If they get lost or have another problem, they hold up the white flag on a pole and signal for help. Or, on your map, put your phone number so customers can use their cell phones to call you.

- Picnic tables (important if you are selling food items).
- Refrigerated glass door cooler for cold drinks (\$1,400 - \$4,000 - calculator will budget \$2,000).
- Cut-outs – you can buy them or make your own (\$350 each, home made).
- Wristbands – when people pay admission, they get a wristband (some use a very visible neckband), so the staff know who can gain admission to the maze or play area. It is important to have several colours so people can't reuse them the next weekend.
- Portable washrooms (should likely start with two and work up as business grows). Quotes varied from \$75 each to \$150 each/month, so shop around.
- Hand washing station (\$400 to purchase).

Part of your publicity can be the design of the maze. Often farms decide on a theme and then create a design to match that theme. It might be that you link up with a charity that you want to support like Habitat for Humanity and then draw a maze that depicts a house being built. The best publicity for a themed maze is to take an aerial photo of the design and generate excitement by using it in your publicity, brochure and your paid advertising.

A popular advertising tool is a brochure or flyer. There are many kinds of brochures:

Full colour, three panel (8.5" x 11" unfolded) that you create and have professionally printed:

- \$600 for 1,000 flyers
- \$900 for 5,000
- \$1,500 for 10,000
- Postcards - \$250 for 2,500
- Black & white, 8.5" x 11" page with a map of the maze to hand out to customers, so they can orient themselves by comparing the map to the path – can be copied at any office supply store
 - \$0.05 each under 1,000
 - \$0.04 each over 1,000

What advertising and promotions are cost effective for you to use? Here is where partners can be very helpful. As an individual farm it may be difficult to get free publicity. But if you partner with a local charity they will often have media connections. The media wants to be seen as a supporter of local initiatives and charities so they are often more willing to give newspaper space and radio time to a worthwhile community cause.

There are other kinds of partners and sponsors as well. You can offer a sponsorship to a radio station.

How this commonly works is:

- the station gives you some free radio ads
- you include a print ad for the station in a flyer you produce and/or incorporate the radio station logo in your maze diagram

You could also take aspects of the radio station and incorporate it into a scavenger hunt or quiz that is solved by visitors as they find clues while going through the maze.

For example, a radio station gave the equivalent of \$3,000 in on-air advertising in exchange for getting their logo incorporated into the maze design. This is called "in-kind" partnering. The radio station didn't give the farm \$3,000, but it saved the farm from buying advertising time on that radio station. Both sides felt they gained benefits – a win-win situation.

Smaller sponsorships might include an ad for the station in your flyer for \$200 to \$300 worth of airtime, or using the station logo in some of your directional signs around the farm, such as directing visitors to the parking area.

Coupons or passes can be given to media, your sponsoring charity or fundraising organization that they in turn give away, thereby promoting your attraction. They can be an "admit one" or "one free admission with one paid adult admission" coupon.

If you have the time, sell advertising space if you are printing a flyer. You will need to know the cost of producing each panel in a flyer to ensure the the cost of the ad covers the extra printing costs and generates some profit.

One important consideration with flyers is distribution. Printing the flyer is just the first step. You also need to get it into the hands of that potential

customer. That can be done through:

- grocery store bulletin boards
- chamber of commerce kiosks
- hotels
- libraries
- tourist information facilities
- travel agencies
- a booth at the local fair
- any farmers' markets you attend

Offer trades with other tourist attractions. If they display your brochure, you'll display theirs at your farm.

A rule of thumb is that distribution costs are about 20 per cent of the printing cost.

You may deal with a farm supplier who also sells consumer products (for example, lawnmowers). Since you have a business relationship with them, they are more likely to want to support what you are doing, particularly if they see a financial benefit in it for them. You may be surprised at how many businesses you deal with that might fit into this category. If you buy a particular make of pickup truck every few years, that dealer may see a benefit to being a



sponsor so that he can park a vehicle at the farm on busy weekends.

Studies show that consumers need to hear an ad six times on radio before it registers with them. So, repetition is the key to success in advertising. And just because you played the ad six times on radio, doesn't mean people had the radio on each time. Six spots do not automatically translate into six impressions.

A 2005 Ontario study of the farm direct industry indicated that:

- Word-of-mouth is the best marketing tool followed by signs. Consumers have to be able to find your farm.
- Curb appeal is third. Customers are drawn in while driving by, because the farm looked attractive, interesting and fun. Curb appeal is critical in attracting customers if your farm is located on a well travelled road. If your farm has such a visible location consider spending up to 50 per cent of your advertising budget just improving the appearance of your property to potential consumers driving by.
- Newspaper advertising is fourth followed by school tours. The benefit of school tours is they can be an income source as well as a promotional vehicle. Alberta Agriculture has another calculator that deals just with school tours and offers a backgrounder and budget calculator.
- Consumers are becoming more and more comfortable using the internet to get the information they need to decide where to spend their family time. There are farm operations that say that internet (e-newsletters with coupons on their website) is their second best method of advertising. If you are not comfortable with designing a website, hire a professional or a

high school student who is. A basic website is surprisingly economical. Farms reported that they pay between \$2,000 and \$5,000 for a basic website (our budget puts the cost at \$2,500). The annual cost to update the site also varies widely, but \$800 is a realistic figure.

Often, maze operations encourage sponsors who advertise in their farm flyer to take admission tickets on consignment. Some sponsors believe the more people who come to the maze, the greater their company exposure. As such, they may even subsidize the price of a ticket for employees, volunteers or customers.

Don't overlook the value of local tourism groups. They are trying to promote your area and your activity will be one more attraction to draw tourists. Take a few brochures into the town office as well. Tourists aren't necessarily people from far away; they can be people from a neighbouring community who are looking for a family activity.

As a guideline, budget to spend at least 15 per cent of your projected income on advertising and promotion the first year. If you have partners who are in a position to provide you with some promotion at no cost to you, you may be able to get away with less. Don't go to all the work to build that great maze and then fail to tell everyone to come and see it.

Once you are established, a good rule of thumb is five per cent of gross sales spent on advertising and promotion.

Don't overlook local groups as potential visitors. Cubs, scouts, brownies, guides, church groups, birthday parties, and family reunions

are all looking for activities to do. They just need to know about your maze.

Controls

It is important to control traffic flow. When you only have 10 to 20 customers you may be able to keep track of who has paid and who hasn't. But on busy days, you need controls to ensure that everyone goes through the entrance and pays your admission fee before accessing the activities. This can be done in two ways:

- Use fencing to funnel everyone from the parking lot through a central entrance gate where they pay their admission and then have access to all the activities.
- Fence the activities area and the entrance to the maze and charge admission to enter those areas. Depending on the size of your activities area this approach may require less fencing.

If you have a roadside market where you sell fresh products or baked goods, you can avoid upsetting customers by placing the retail area outside the admissions area. That way, customers don't have to pay the



admission fee if they have only come for the roadside market.

Control is also important when dealing with money. If it is only family who handles cash, you could use something as simple as aprons with several pockets for bills and change. If hired staff handle the cash you need a tracking system. One option is to use a basic cash register. Cash registers are available at many office supply stores and discount box stores for as little as \$200.

An opening and closing inventory on the wristbands will tell you what your attendance is. Your cash register can likely be programmed so children, adults and seniors all have a different key. As such, you can run a "Z tape" (a summary of all transaction put through the cash register) at the end of the day and compare that to the wristband count. A hand stamp is cheaper than wristbands but it doesn't give you a way to track attendance and cash receipts.

Labour

In entertainment farming, labour will be your single greatest cost. It is important that you prepare a budget and be realistic on what your labour needs will be. Depending on how busy you are, you may need:

- a greeter who can also direct traffic
- someone to collect admissions and give out the maps of the maze
- a person in charge of food if you sell it
- a play area supervisor
- a floater to cover off in an emergency or when someone needs change, to go to lunch, use the washroom, etc.

First step is to decide what days of the week and hours of the day you



will be open. Be realistic as to what portion of this time can be covered by family labour.

Remember, if family members are busy before the maze was built, who is going to pick up the jobs they have to drop to work in the corn maze? Perhaps family members can cover a portion of the time needed to operate the maze but the rest will have to be hired.

Keep in mind that staff and family have to be scheduled so people know where they are supposed to be and when. There is also the potential issue of customer problems. So you will need a floater who can fill in if a child is lost, keys are locked in a car, or someone gets sick, etc.

Some farms recommend you have someone who can walk the maze or view the maze from a high vantage point (e.g. a tower) to ensure that damage is not being done, or watch for visitors who need help. Others don't have anyone walking the maze.

If you have retail sales you will need someone there to ensure that all

products leaving the retail area are paid for. Theft can rob you of much of the profit you planned to make.

Delegate your advertising and promotion. You may know a retired person who was in this field of employment and would like to help you out. There are independent public relations people who aren't that expensive but can get the media to promote your maze. They can also design your flyer. If you hire this job out you need to include it in the budget calculator at the end of this write-up. You will see under Labour, a subsection on Advertising & Promotion. On that line, estimate the hours of employment you expect the retired PR person will work, or the dollar value of the contract you sign with the PR business you hire to help.

Liability Insurance

Your general farm policy does not include liability coverage for on-farm retailing and entertainment. The insurance company assumes that on-farm traffic is primarily the farm supply company delivering fertilizer

and seed, etc. They need to know what you plan to do because they will have greater liability exposure on a farm that attracts thousands of visitors.

It is important that you discuss with your insurance company what you are doing. Better yet, bring your broker out to see what you are doing. Take pictures and send them to him. What you don't want to happen is for the insurance company to say, "I didn't know you were doing that! Your policy doesn't cover this kind of on-farm activity."

Your insurer will likely want to know:

- If you charge admission.
- What activities you offer.
- If you sell food.
- What your security measures are if a child were to get lost on your farm. In the *Corn Maze - Decision Making Tool*, we will budget \$300 for a \$2 million liability extension to your regular farm policy. But check with your insurance company to see what they would charge.

- Corn Mazes America, Janesville, WI: http://www.cornmazesamerica.com/predesigned_mazes.htm
- The Amazing Maize Maze Co., Hummelstown, PA: <http://www.americanmaze.com>
- Martens Farm – Design Kits, Inman KS: <http://www.123farmworks.com/cormazadesign.htm>
- MazePlay, Firth, ID: <http://www.mazeplay.com/index.php>
- Precision Mazes, Lee's Summit, MO: <http://precisionmazes.com>
- Adrian Fisher Mazes Ltd., Dorset, UK: http://www.adrianfisherdesign.com/live_site
- Saunders Farm – more than just a corn maze: <http://www.saundersfarm.com>
- The Garden Maze – a permanent attraction (consists of 1500 trees), Luray Caverns VA: <http://www.thegardenmaze.com>

Production Information

Alberta Corn Committee – have variety trials from several locations around Alberta: <http://www.albertacorn.com>

Seeding Rate Calculator – will calculate the amount of seed you need for planting corn and what different pieces of equipment cost to operate. We did not get into this in detail since planting corn is only a small part of operating a maze (we worked on the thumb rule that it costs about \$200/ac. to plant corn): <http://www.agric.gov.ab.ca/app19/calc/crop/otherseedcalculator.jsp>

Ironsearch: The Equipment Authority – this is one source of used farm equipment. You will no doubt have more local sources:
<http://www.ironsearch.com>

Custom Rates Survey Summary 2011 – summary of equipment costs and custom rates in Alberta (Alberta Agriculture and Rural Development): <http://www.agriculture.alberta.ca> and search for Custom Rates Survey

Helpful Websites and Resources

Maze Design Companies

Here are some businesses that design mazes. Some will also help with marketing. You can also get some ideas on what they offer their customers beyond a maze.

- Hugh McPherson, Maize Quest, New Park, PA. – a GPS game that fits the same market demographics but a bit older: <http://www.mazecatalog.com/producttour/index.shtml>



Machinery Cost Comparison Calculator – designed to help budget the cost and repairs of farm equipment (Ontario Ministry of Agriculture, Food and Rural Affairs): <http://www.omafra.gov.on.ca> and search for Machinery Cost Calculator

Continuing Education

The North American Farmers Direct Marketing Conference is a good source of information for on-farm entertainment and school tours at: <http://www.nafdma.com>

Population Demographics

Statistics Canada – family size in Canada: <http://www40.statcan.gc.ca/I01/cst01/famil50a.htm> and <http://www40.statcan.gc.ca/I01/cst01/demo10a.htm>

On-line Registration Sources

These are providers of programs that offer online registration.

AgPro Marketing in Madera CA, sell online reservation software for field trips and special events: <http://www.agprobobookit.com>

Maize Quest of New Park, PA, has an online reservation program called BookMy Groups: <http://www.bookmygroups.com> as well as corn maze games, designs, attractions and audio safety products: <http://www.mazefunpark.com>

Safety Resources

Managing Risk on Farms Open to the Public - this is a publication on how to improve safety on the farm: <http://www.omafra.gov.on.ca/english/busdev/facts/06-087.htm>

Hand washing poster: <http://www.health.alberta.ca/health-info/influenza.html>. Scroll down the page and under Influenza Poster choose Hand Washing Sign – Do Bugs Need Drugs.

Marketing Food Safely Manual: <http://www1.agric.gov.ab.ca/deptdocs.nsf/all/explore13314>

Equipment Supplier Websites

Rototillers

Lowe's, USA: <http://www.lowes.com>

Home Depot, CAN: <http://www.homedepot.ca>

Used Cash Registers

EBay: <http://www.ebay.com>

New Cash Registers

Costco: <http://www.costco.ca>
Office Depot: <http://www.officedepot.ca>

Cash Aprons

Fox Fabrique: <http://www.foxfabrique.com/aprons.html>

Apron Store <http://apronstore.com/waistaprons.htm>

Loudhailers

Forest City Surplus Canada, ON: <http://www.fcsurplus.ca> → Audio & Video → Public Address Equipment

Animal Feed Dispensers

Oak Manufacturing, CA: <http://www.oakmfg.com>

SmartVending.com, USA: <http://www.smartvending.com>

Hand Washing Stations

Rama Plastics, Orillia, ON: <http://www.ramaplastics.ca>

Quadel industries, Oregon, USA: <http://www.quadel.net>

All Safety Products, Lakewood, CA: <http://www.all-safety-products.com>

Display Cases

Refrigerated display case, Crown Food Equipment Calgary and Lethbridge, AB, carries new and used refrigerated display cases: <http://www.crownfoodequipment.com/index.html>

Wristbands for Admission to Activities Area or Maze

National Ticket Co. Paxino, PA: <http://www.nationalticket.com/wristbands>

GLK Promotional Products – London, ON: <http://www.glkwristbands.com>

First Aid Kits

Home Depot: <http://www.homedepot.ca> → search for First Aid Kits.

Activities

Pedal karts and excavators – Skelter Sales & Service, St. Thomas, ON: <http://www.pedalgokarts.ca>

Wooden activities - S & W Swings Sets, New Haven, IN: <http://sandswingset.com>

Cut-out Decoration

Signs of the Season, Rensselaer, IN: <http://www.signsoftheseasons.com>

Inflatables

Aeroideas Party Inflatables,
Newmarket ON: <http://aeroinflatables.com>

Note:

The “Projected Income” and “Projected Expenses” you will come up with when filling out the *Corn Maze – Decision Making Tool* are not a guarantee of what your income and expenses will be, but rather projections based on experiences supplied by four farms that presently have a corn maze on their farm. Your personal results may be quite different.

Now that you have the background information, proceed to the questionnaire and fill it in to create your own budget for building and operating a corn maze.

The mentioning of certain companies or websites in this publication does not constitute an endorsement or suggest that they are in any way superior to others.