

# **COWLAMITY**

**A fun and humorous Tower Defense Mobile Game**

**Produced By:** Brain Case Games

**Potential Developer:** Geniteam

**Initial developement cost:** \$25,000

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# Game Concept

## *What Is this Game?*

Cowlamity is a fun pick up and play game for gamers of all skill levels. A secret war of ideology has been being waged in the rural community of Agerville. The player is a farmer who believes in free range animals, thus the animals on the players farm are happy. However, your rival believes in strict order and discipline on his farm. A land dispute that has been going on for decades has lead the rival farmer to sabotage the players efforts of selling milk, thus driving the players farm out of business. Sheep are used to try and steal milk before it can be processed or shipped, because sheep are the perfect soldiers. They ask no questions, do as instructed and try to conform as much as possible.

## *Why Will it be Awesome?*

## *Who's it for?*

### Genre

Cowlamity is best classified as a Tower Defense game.

### Platform

Android devices to start, iOS and Windows after.

### Engine

Unity is the engine used for development.

### Target Demographic

Our aim is to try and pull in all gamer types, from hardcore to casual.

### Device Details

- 16:9 ratio
-

# Game Mechanics (How the Game Works)

## *Core Gameplay*

The player tries to hold off waves of enemy attackers with various defenses. The main defensive structure is the upgradeable haystack. A hay bale launcher launches three bales of hay on a specified tile of the map. Each haystack gets a chicken with a slingshot placed on top that fires eggs. This disrupts the enemy's path, forcing them to find another way to the goal. The haystacks can be upgraded with weapons, and traps can also be set.

## *Movement*

### Enemy Movement

The enemy will always take the shortest path to the goal, and the exit(s). The entrances and exits vary from stage to stage. When an enemy is knocked out, they fall over and disappear. Their bodies do not impede the progress of the enemies behind them.

### Flying Unit Movement

Flying Units will not be obstructed by any objects. They are always on a predetermined path and will not alter from their course.

## *Bonus Levels*

### Weather

Some stages can be affected by weather, such as lightning and tornadoes. An icon will display for the player saying there is a tornado warning. The player then has time to try and hunker down his defenses or a tornado can do serious damage, leaving the player wide open to attack from the sheep.

### Alien Attack

Randomly in a stage, a black helicopter will fly on the screen. If the player is quick enough to tap it, it will open up a bonus level where an alien saucer will land in a field. The cows have to protect themselves from the invaders, or end up as a grisly experiment. The aliens will have special weapons and abilities, so the player must use his or her resources to their fullest extent to hold the aliens off.

## ***Reward Systems***

People like to feel their accomplishing something and being awarded for their efforts. The game will keep track of the players stats, and when a player reaches a certain milestone, or defeat certain enemy types in specific ways, they get extra income.

### **Awards list**

## ***Game Saving and Loading***

## ***Object Placement Rules***

Haystacks and structures can only be placed on flat surfaces with no obstructions or deformations. Certain traps can be placed on tiles with no obstructions. Mud pits can only be used on non-obstructed-, non-deformed surfaces as well.

## **Game Elements (Objects in the Game)**

### ***Resources***

#### **Money**

The player's farm generates income automatically at a steady rate throughout each stage. There are ways to increase income by building structures such as Grain silos. The income is then used to build, upgrade and maintain defenses and traps. The player also accumulates money by defeating enemies. Each sheep knocked out means wool the player automatically sells, providing a jump in income. The players starts with a **1000 dollars** for each stage. At the end of the stage, the remaining income not spent is given a multiplier, such as how many milk bottles are left, and that is the players score for the end of the stage.

**Money Generation:** \$5 every 1 second. There are 10 milk jugs per stage. As milk jugs are stolen, regeneration rate time increases by half a second per jug.

#### **Moonshine**

Can produce explosive weapons if a distillery is constructed. When a weapon or trap is upgraded with moonshine, there will be an animation of the animal drinking a jug of moonshine, and the high rise in alcohol content in the eggs and cow patties makes them explosive.

## ***Player Units***

### **Major Bull**

Major Bull commands your farms army and offers the players tips. He also has the special “Bull Rush” ability that can knock out an entire wave of attackers if used right.

### **Cow**

Creates cow patty mines/operates milk tanks/operates cowtapult

### **Bull Warrior**

Used in Bull rush From Bull Calf To Bull to fighting bull

### **Chicken**

Operates egg launchers

### **Hogs**

Build mud traps Speed increase/Level 2 upgrade

### **Cowtapult**

Long range weapon

### **Barn Cat**

Anti air unit

## ***Enemy Units***

### **Ewes**

Base unit weak and slow, but dangerous in numbers

**Hit Points:** 10

**Movement Speed:** 2

**Money Gained:** \$25 per unit defeated

### **Ram**

Mainline soldier stronger than the ewes, not as many.

**Hit Points:** 20

**Movement Speed:** 2

**Money Gained:** \$50 per unit defeated

### **Black sheep**

Elite stealth soldier unit hard for defenses to spot.

**Hit Points:** 15



**Movement Speed: 3**

**Money Gained: \$100 per unit defeated**

### Crows

Flying unit/scout steals jugs.

**Hit Points: 4**

**Movement Speed: 5**

**Money Gained: \$10 per unit defeated**

### Tractor

Light armored unit decent speed, hard to take down in numbers. Can carry two jugs at a time.

**Hit Points: 50**

**Movement Speed: 3**

**Money Gained: \$150 per unit defeated**

### Corn Thresher

Creates new paths in corn field levels/Medium armored unit fast as the tractor, but with better armor. Can carry three jugs at a time.

**Hit Points: 70**

**Movement Speed: 3**

**Money Gained: \$200 per unit defeated**

### Fox

Raider very fast and steals jugs.

**Hit Points: 6**

**Movement Speed: 5**

**Money Gained: \$50 per unit defeated**

### Combine

Heavy Assault Unit. Carries 5 jugs at a time.

**Hit Points: 120**

**Movement Speed: 1**

**Money Gained: \$300 per unit defeated**

## *Alien Units*

### Greys

Typical hivemind naked aliens coming in numbers.

## Leaders

Larger greys, that carry laser weapons.

## Mindbenders

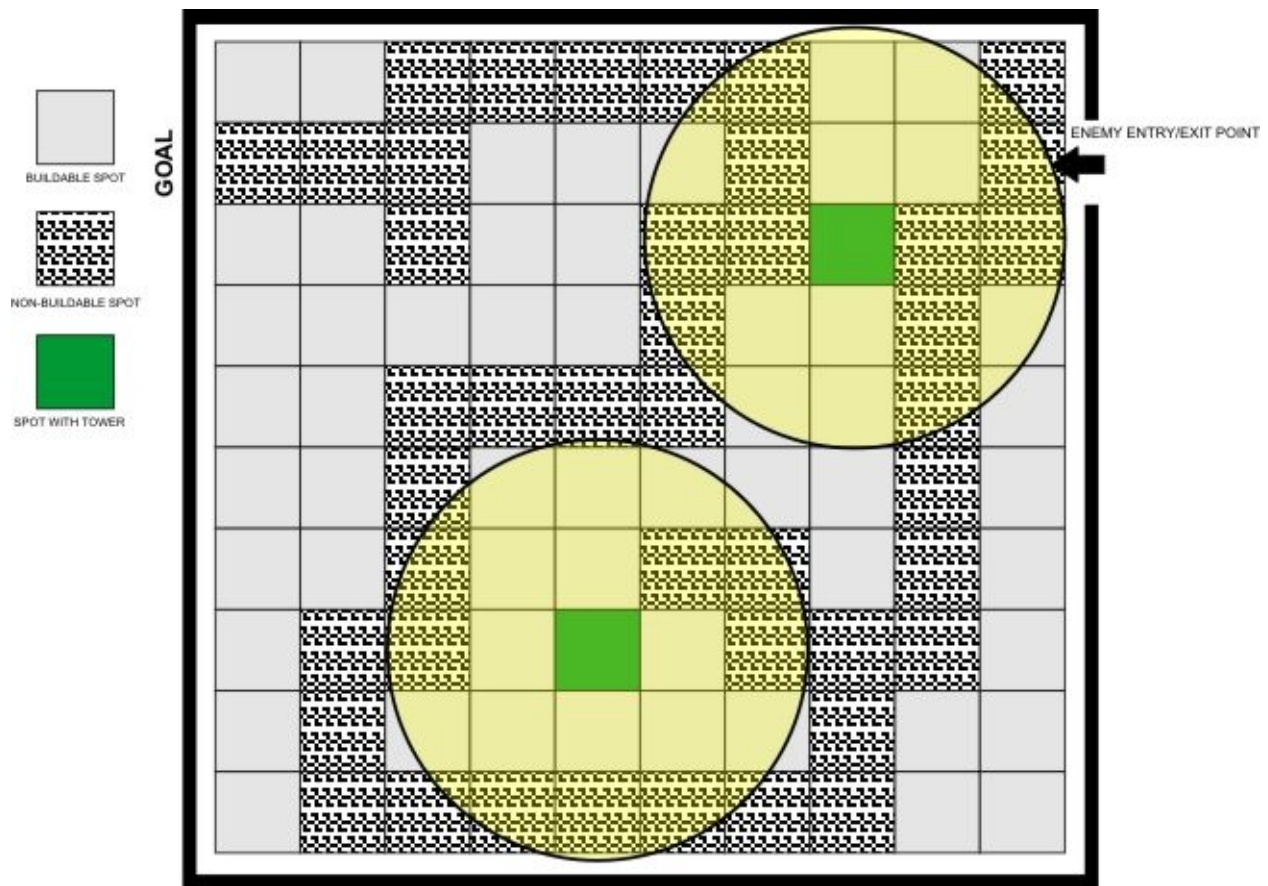
Aliens with telepathic powers and can paralyze animal controlled defenses.

## *Player Structures*

### Hay Stack

#### **Type: Egg Launcher**

A chicken with a slingshot fires eggs it lays at oncoming enemies. Can be upgraded to gatling sling shot.



EGG TOWER FIRING RADIUS: Shots should reach no more than two tiles out in any direction.

**DAMAGE:** 1 point per egg, 3 points per concussive egg

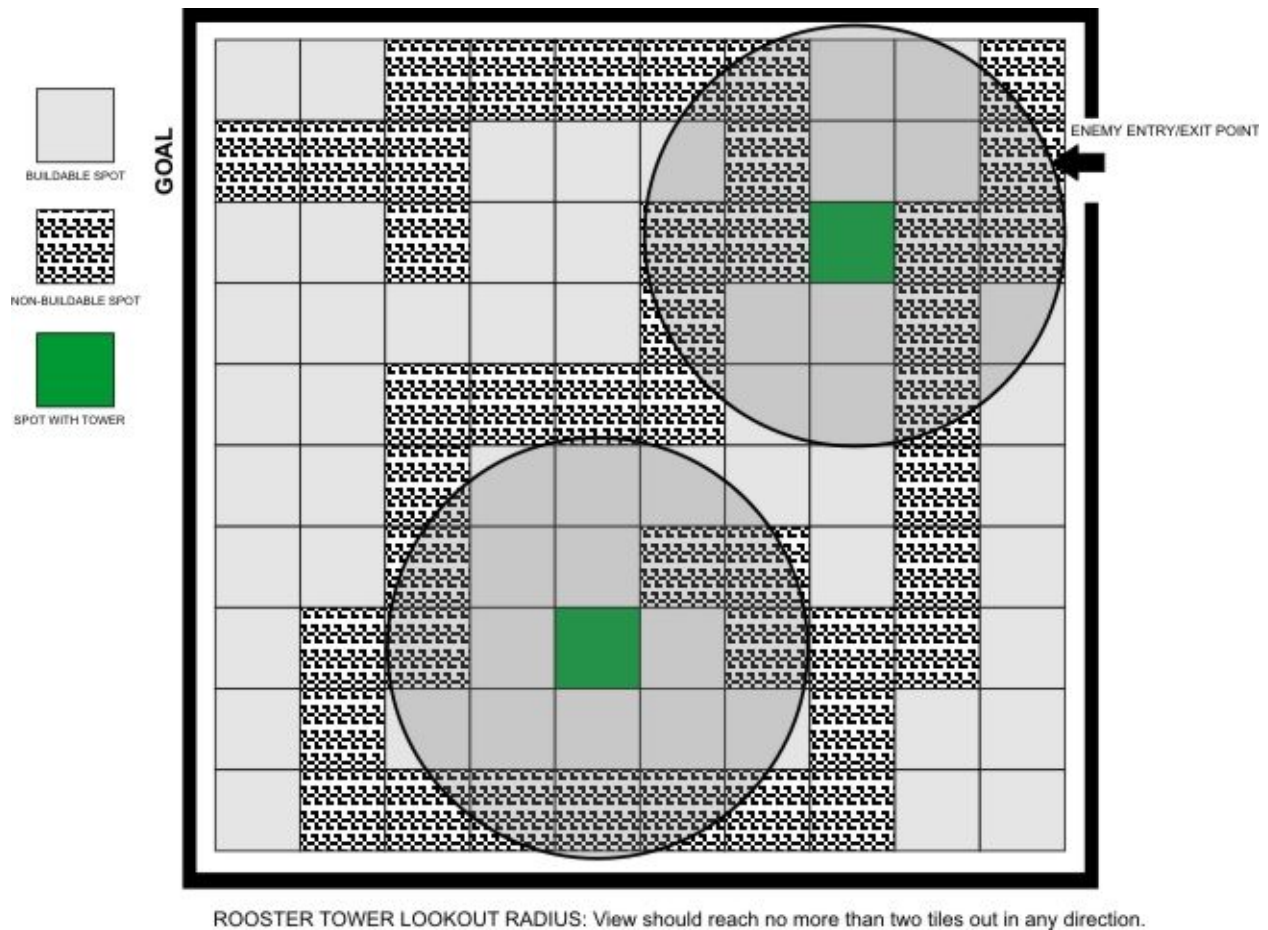
**RATE OF FIRE:** 1 egg every 1 second, 2 eggs every second with gatling upgrade

**COST:** \$150

**UPGRADE COST:** \$200

### Type:Rooster Perch

Rooster cries alarm when enemy spotted. Weapon range of towers increased by 1 tile in surrounding area a rooster perch is placed, can detect hidden enemies such as black sheep.



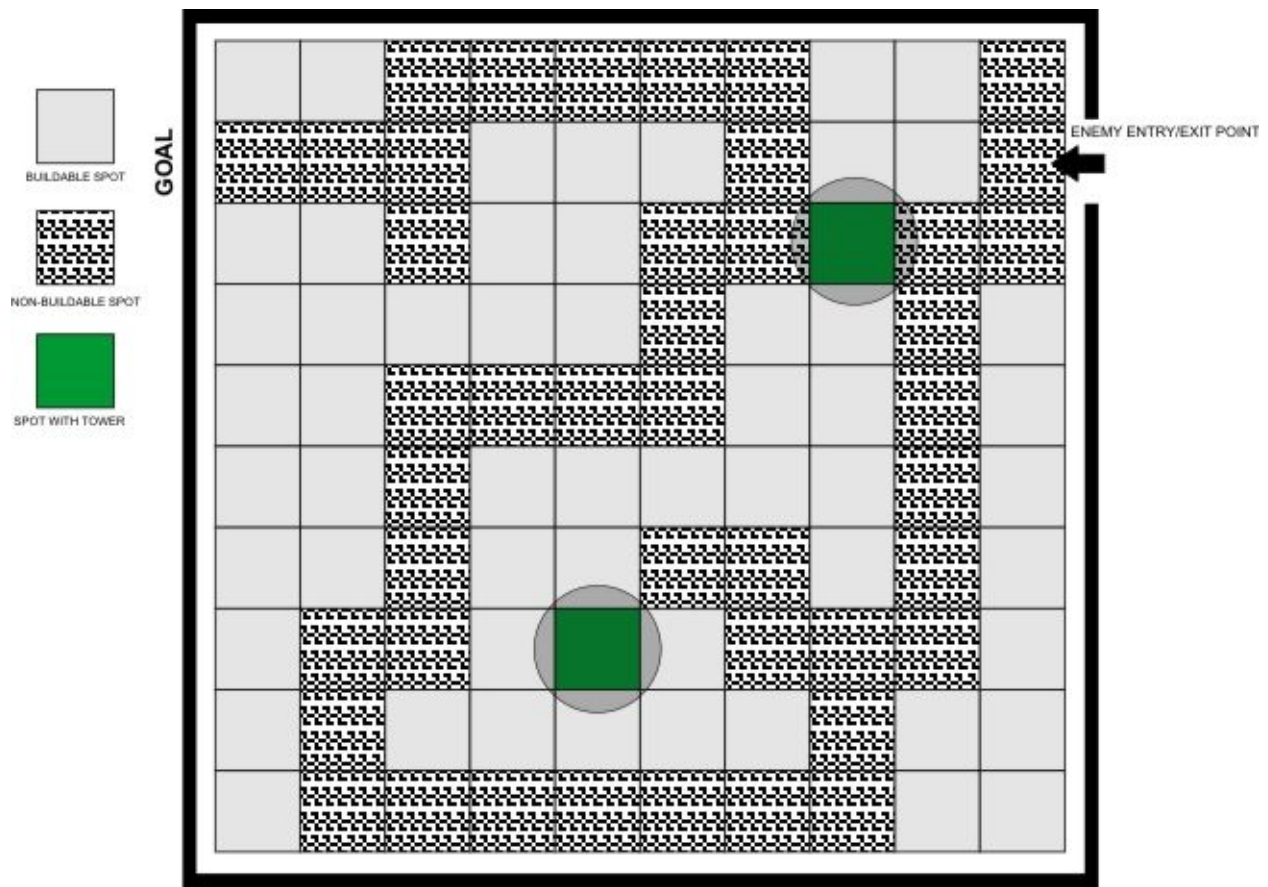
**DAMAGE:** 0

**RATE OF FIRE:** 1 alarm per black sheep

**COST:** \$300

**Type: Barn cat**

Anti-air unit. Snatches crows from flight path.



BARN CAT TOWER JUMP RADIUS: jumps can only occur when sir unit is directly above tower.

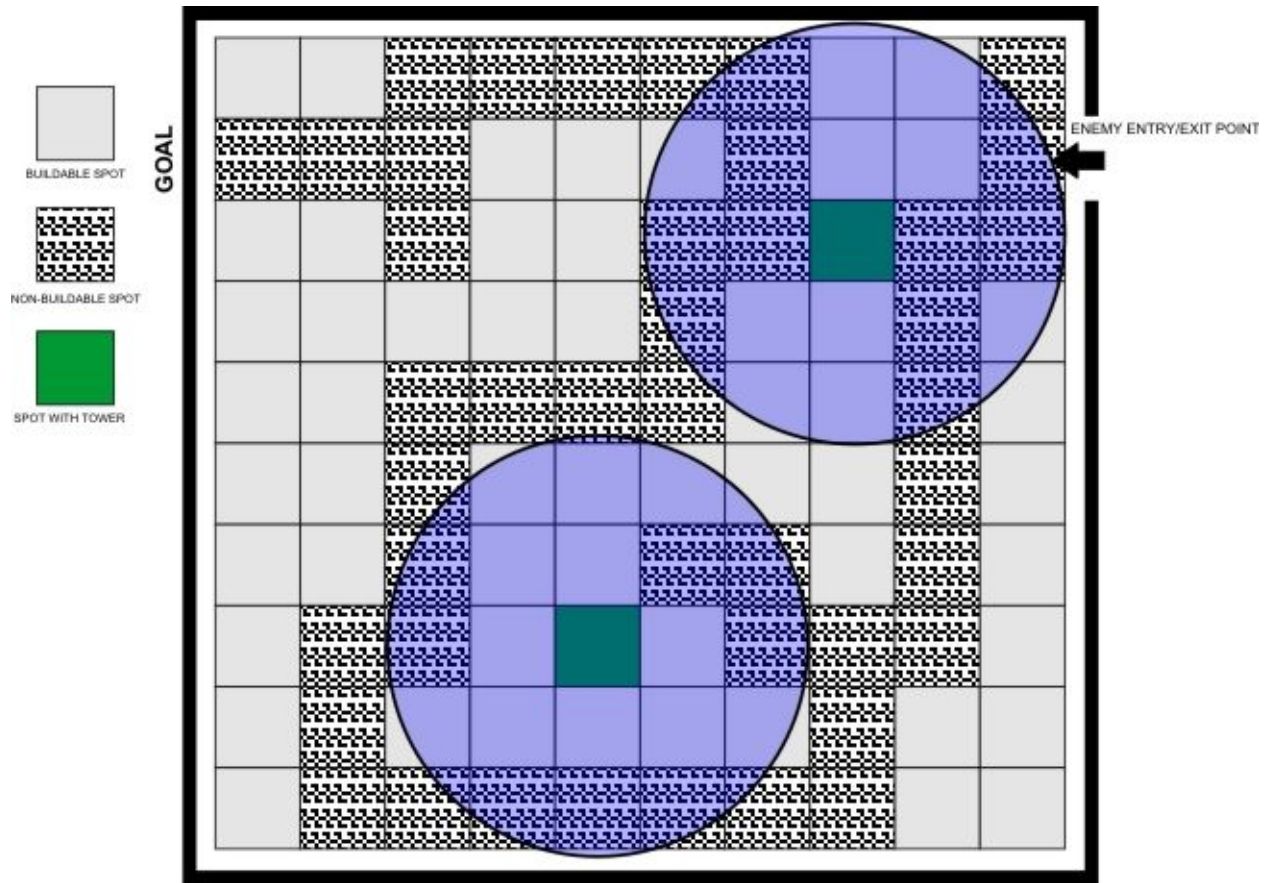
**DAMAGE:** Immediate death of crow

**RATE OF FIRE:** 1 jump per two second intervals when crows fly over.

**COST:** \$250

**Electric Fence Defense**

Tesla fence(needs electric windmills). Chains against multiple enemies.



ELECTRIC FENCE FIRING RADIUS: Shots should reach no more than two tiles out in any direction.

**DAMAGE:** First unit hit, 5 damage. Lose a point for every subsequent unit behind the first.

Upgrade does 10 points of damage.

**RATE OF FIRE:** Recharge rate, 1.5 seconds.

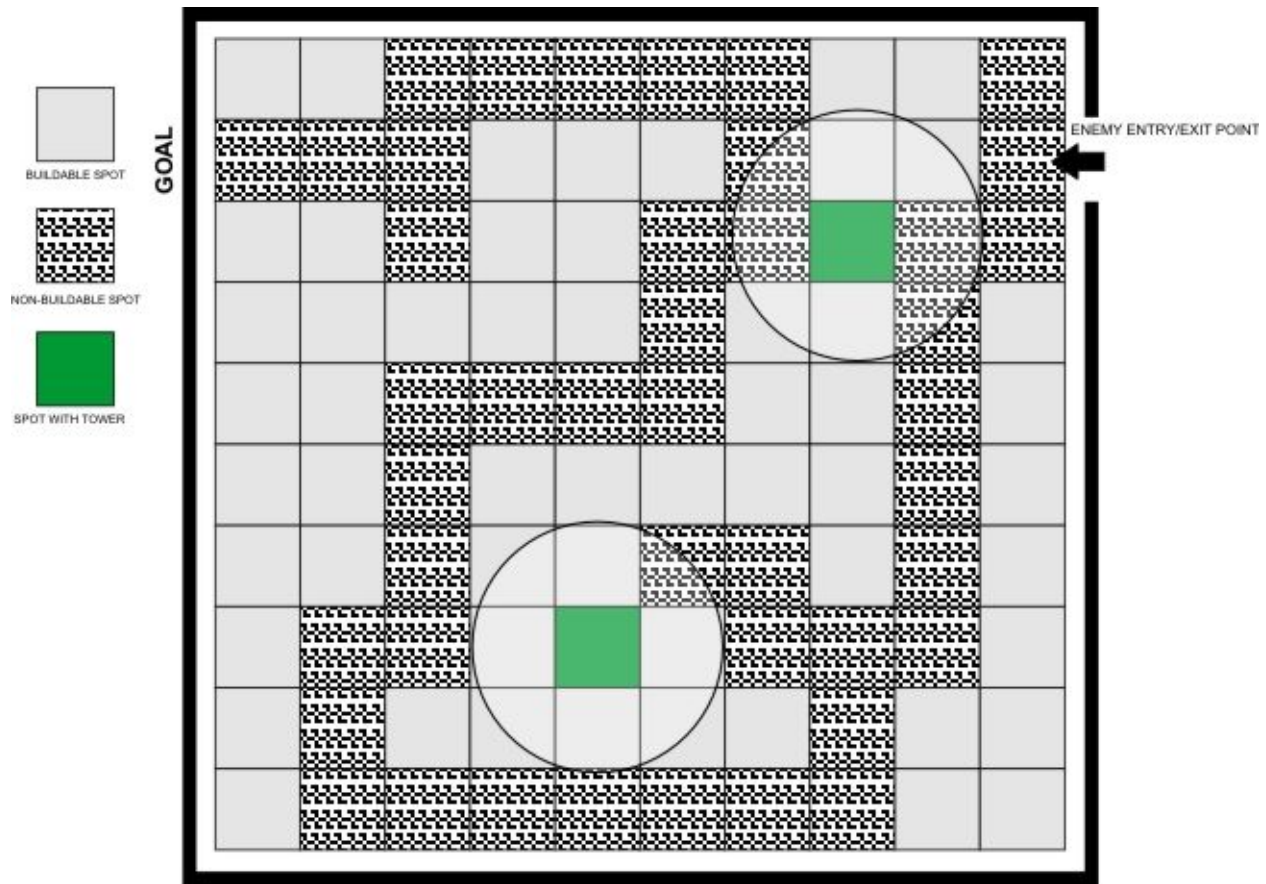
**COST:** \$400

**UPGRADE COST:** \$500



### Milk Tank

Blasts a forceful stream of milk upgrade to level 2 for a stronger stream



MILK TANK FIRING RADIUS: Stream should reach no more than one tile out in any direction.

**DAMAGE:** 2 damage per second.

**RATE OF FIRE:** fires at target for 3 seconds. Upgrade fires for 4 damage per second

**COST:** \$200

**UPGRADE COST:** \$300

### Distillery

Create moonshine that's used for explosive weapons and traps. Provides moonshine upgrades for egg towers within immediate radius.

### Silo

Store food/increase resources

### Windmill

Increases resources/upgrades to electric windmill

## ***Player Weapons***

### **Egg Slingshot**

shoots eggs at enemies. 3 upgrade levels for increased rate of fire. Moonshine needed for concussion eggs.

### **Cow Patty Trap**

Concussive cow patty mines 2 upgrade levels for larger blast radius. Needs moonshine.

### **Rake Trap**

Place rakes on a path. Knocks out enemies/degrades after 5 uses.

### **Mud Pit**

Slows enemies down 3 upgrade levels for deeper mud

## ***Special Weapons***

### **Bull Rush**

Major Bull leads a charge of bulls crash through designated path, crushing enemies 2(?) minute cooldown.

### **Lightning Blast**

In weather event bonus levels, objects such as a weather vane can be directed to conduct lightning onto an enemy wave. At least a 1 minute cooldown between uses.

### **Sprinkler System**

Used in alien bonus levels, the alien waves are blasted with a spray of water, incapacitating them. This is a pop reference joke back to the movie Signs, which was set on a farm and where water was the aliens weakness. We can have an in-joke from major bull about hows it's weird that being so allergic to water would invade a planet that is mostly covered with it.

## Levels

### *Barnyard*

#### Description

A large, rustic barn houses a large shipment of milk. Mostly open space with a few hilly areas and fences all around, the player has many options to place defenses.

#### Stages

There are four stages. The front of the barn, the back of the barn, and both sides of the barn. Some stages have more than one entry and exit point for the sheep.

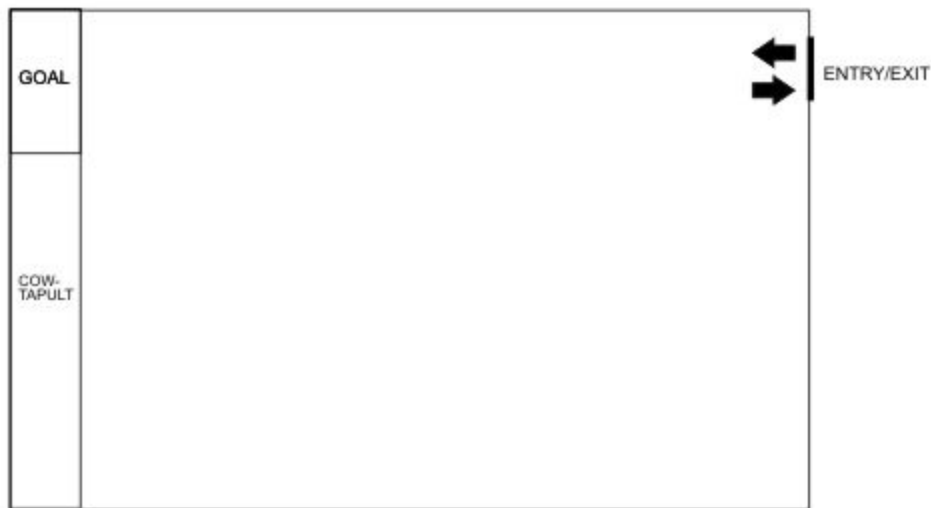
#### Challenges



## Level Walkthrough

### **STAGE 1**

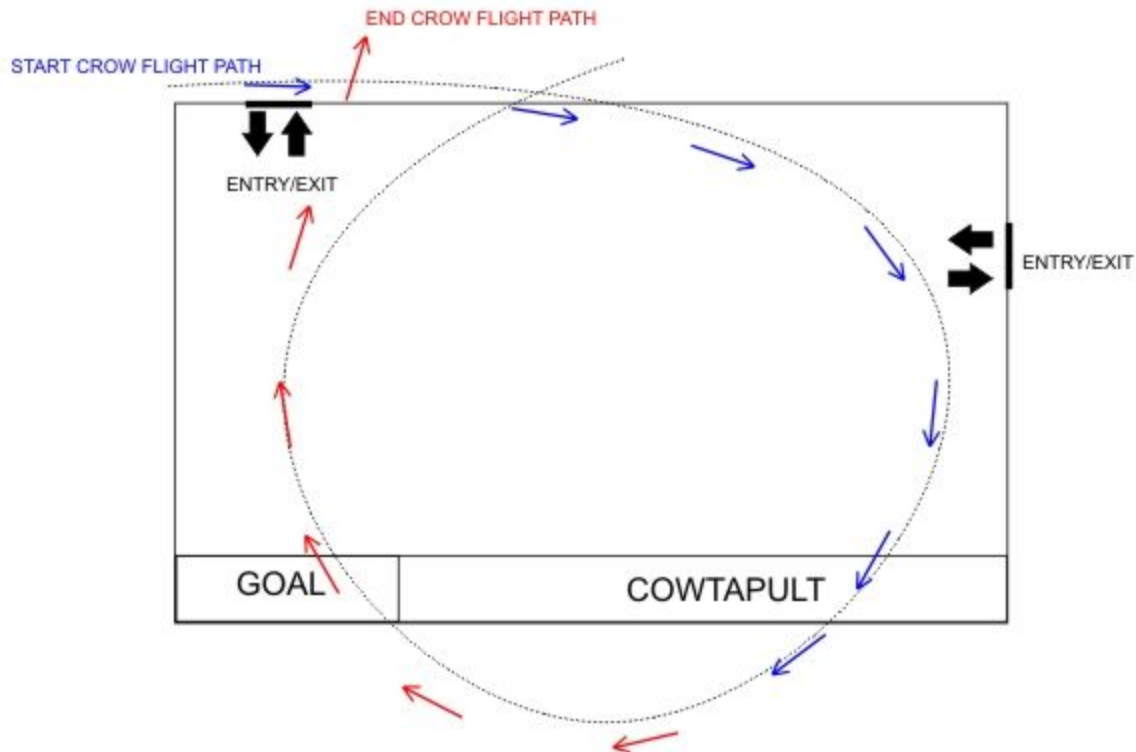
Beginner level where the player gets introduced to the basic mechanics of the game such as where to build and upgrading defenses. Major Bull will pop up and give the player tips. We should give the player the option to turn off the tips. There will be 10 waves to start in the first stage, mostly comprising of basic enemy types. There is only one entry and exit point at the far end of the stage from the goal. The player will start with \$1000.



- 1st wave-** 6 ewes
- 2nd wave-** 8 ewes
- 3rd wave-** 10 ewes
- 4th wave-** 6 ewes 4 rams
- 5th wave-** 4 ewes, 6 rams,
- 6th wave-** 10 rams
- 7th wave-** 10 ewes, 6 rams
- 8th wave-** 8 ewes, 8 rams
- 9th wave-** 6 ewes, 10 rams
- 10th wave-** 4 ewes, 12 rams

## STAGE 2

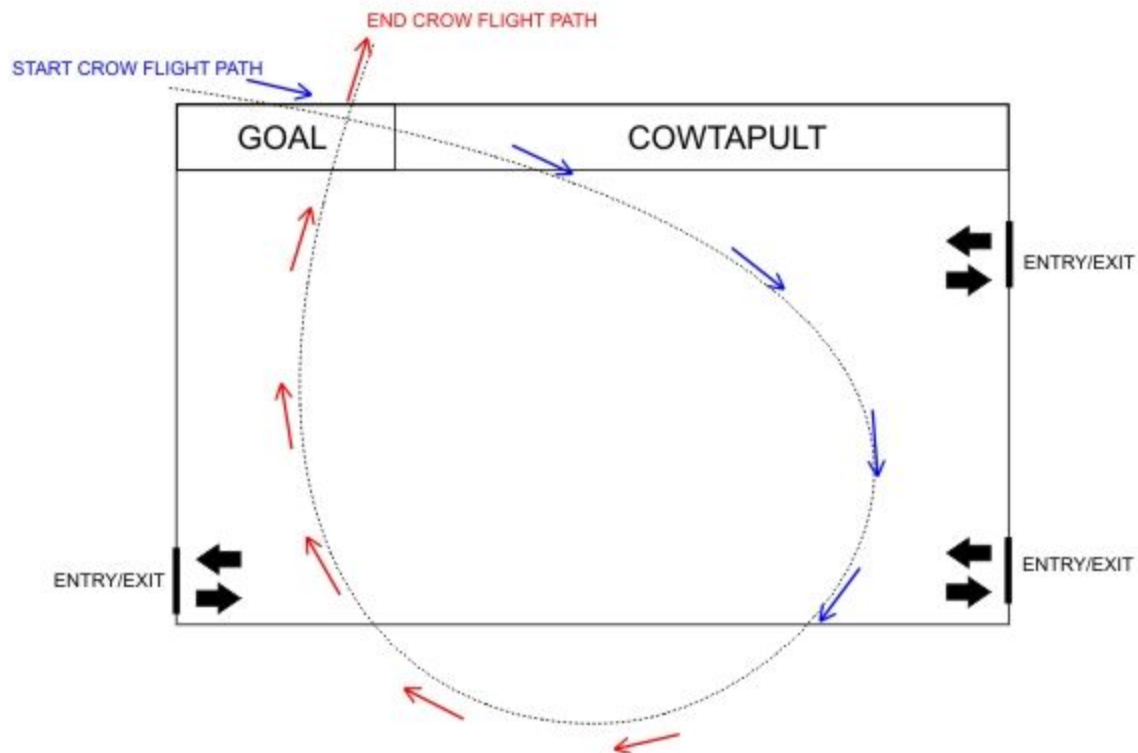
The player will be introduced to new defensive options such as traps, and anti-air towers. Crows will also be introduced and the player will be given tips by Major bull on how to defeat them by building the barn cat stack. Major Bull will also give tips on using rake traps. There will be two entry and exit points. One at the top far side opposite the goal, and one at the right.



- 1st wave-** 8 ewes
- 2nd wave-** 8 ewes, 2 rams
- 3rd wave-** 6 ewes, 4 rams
- 4th wave-** 6 ewes 4 rams, 6 crows
- 5th wave-** 10 ewes, 4 rams,
- 6th wave-** 8 ewes, 8 rams
- 7th wave-** 8 crows, 4 ewes, 4 rams
- 8th wave-** 6 ewes, 10 rams
- 9th wave-** 16 rams
- 10th wave-** 8 crows, 8 rams

### STAGE 3

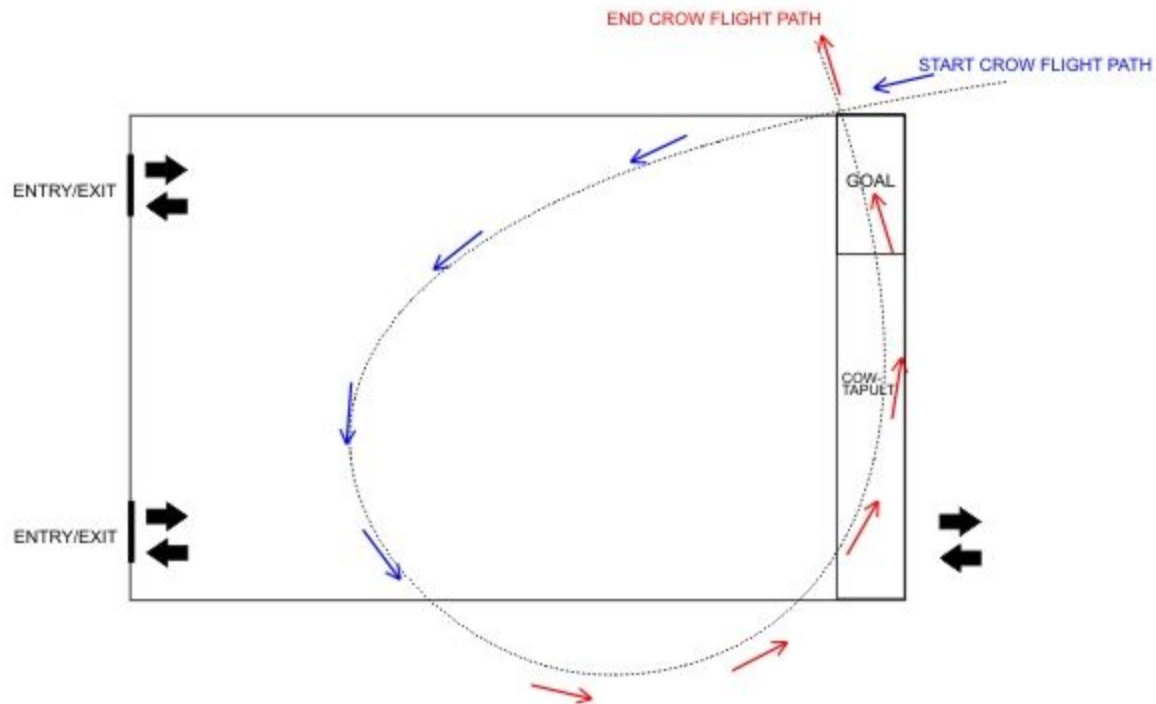
The player will be introduced to building structures, such as windmills, and electric fences. Black sheep will also be introduced and the player will be given tips by Major bull on how to defeat them by building the rooster perch stack. Major Bull will also give tips on creating mud pits. There will be three entry and exit points. Two at the far right side, and one at underneath the goal from the left.



- 1st wave-** 10 ewes
- 2nd wave-** 10 ewes, 2 rams
- 3rd wave-** 8 ewes, 6 rams
- 4th wave-** 10 crows
- 5th wave-** 12 ewes, 2 rams, 1 black sheep
- 6th wave-** 6 rams, 10 crows, 1 black sheep
- 7th wave-** 10 rams, 2 black sheep, 4 ewes
- 8th wave-** 4 rams, 10 crows, 2 black sheep
- 9th wave-** 4 black sheep, 12 rams
- 10th wave-** 12 crows, 4 rams
- 11th wave-** 4 black sheep, 12 rams, 4 ewes
- 12th wave-** 16 rams, 4 black sheep

#### STAGE 4

The player will be introduced to special weapons like the Bull Rush. The player will also learn about distilleries and how to upgrade concussive weapons and traps. New enemies will be introduced such as the speedy fox, and the heavier units like the tractors. There will be two entry and exit points. Two at the far left side, opposite the goal.



- 1st wave-** 10 ewes
- 2nd wave-** 8 ewes, 4 rams
- 3rd wave-** 8 ewes, 6 rams
- 4th wave-** 10 crows, 6 rams, 1 fox
- 5th wave-** 10 ewes, 2 rams, 2 black sheep
- 6th wave-** 4 rams, 2 foxes, 10 crows, 1 black sheep
- 7th wave-** 10 rams, 2 black sheep, 4 foxes
- 8th wave-** 4 rams, 10 crows, 4 black sheep, 1 tractor
- 9th wave-** 4 black sheep, 12 rams, 2 foxes
- 10th wave-** 10 crows, 4 rams, 2 foxes, 2 black sheep
- 11th wave-** 4 black sheep, 12 rams, 4 foxes
- 12th wave-** 16 rams, 4 black sheep, 2 tractors, 2 foxes

## ***Orchard***

### **Description**

A large cider mill is the enemy goal. Between the mill and the enemy is an apple orchard with rows of trees.

### **Stages**

### **Challenges**

Some stages offer sheep preset paths where the player cannot place defenses to block. Some trees have ladders which sheep can use to cross.

### **Level Walkthrough**

## ***Cornfield***

### **Description**

### **Stages**

### **Challenges**

A cornfield offers few defensible paths to start, but the sheep are also limited and have only one path to use to begin. However, once the corn threshers arrive, the enemy cuts through the rows of corn creating alternate paths, as well as new defensive options.

### **Level Walkthrough**

## ***Pasture***

### **Description**

A wide open area with many defensive options, but also multiple entrances and exits for enemies.

### **Stages**

### **Challenges**

### **Level Walkthrough**

## ***Stables***

### **Description**

**Stages**

**Challenges**

**Level Walkthrough**

## ***Pumpkin Patch***

**Description**

**Stages**

**Challenges**

**Level Walkthrough**

## ***Bonus Level***

**Description**

An alien saucer will land in a field. The cows have to protect themselves from the invaders, or end up as a grisly experiment.

**Stages**

**Challenges**

The aliens will have special weapons and abilities

**Level Walkthrough**

## **Artificial Intelligence**

### ***Ground Unit Pathfinding***

### ***Air Unit Pathfinding***

## **User Interface**

The main menu consist of a series of icons which are pressable(or clickable) by the player. The player press(or clicks) and holds to drag the selected item onto the playfield.

There is a menu toggle which switches the menu between various menu types.

DEFENSE TYPE: This menu shows the icons for towers and traps that can be built.

STRUCTURE TYPE: This menu type show the type of non defensive support structures that can be built.

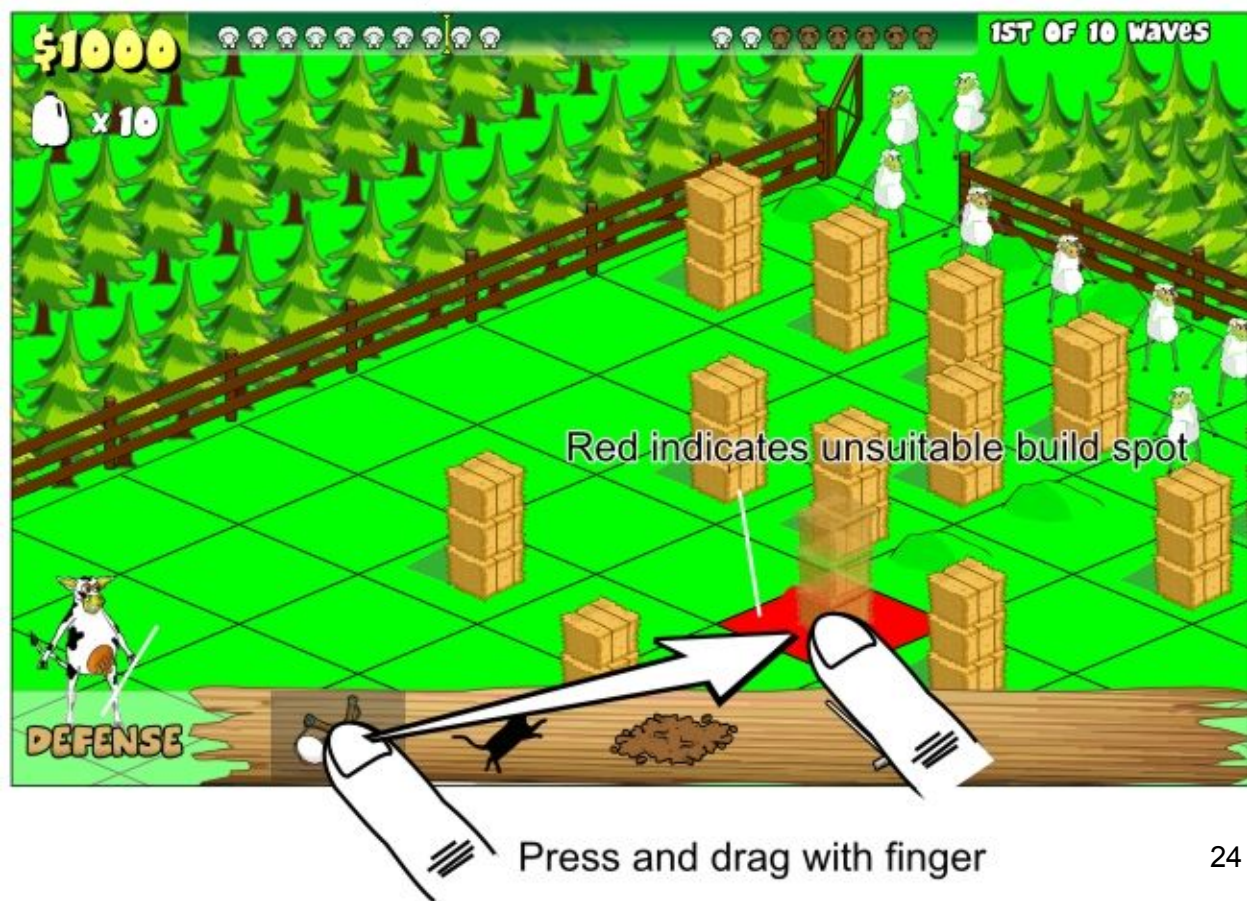
UPGRADE TYPE: This menu appears only when the player selects a tower to demolish or upgrade.

SPECIAL: Special weapon type menu such as the Bull Rush appears here.



The user interface consists of a click(press) and drag system where the player drags the tower and trap onto a specific tile on the playfield. Tiles where towers can be built will turn to a specific color such as yellow, indicating the tower can be built there, or trap layed. The tile will turn red if the tile is unsuitable for tower or trap placement.







**UPGRADING AND DEMOLITION:** The player will press on a pre-existing tower, which will in turn bring up the upgrade menu. The player then has the option to destroy that tower, making the tile available for building, or to upgrade the tower.

## **Game Menus**

### ***Main Menu***

Continue Game (If we detect a saved game)  
New Game  
Highscores  
Settings  
Credits

### ***Settings Menu***

Music Volume  
Sound Effects Volume

### ***Pause Menu***

Restart Level  
Return To Main Menu  
Exit Game

### ***Game Over Menu***

Restart Level  
Return To Main Menu  
Exit Game

## **Appendices**

### ***Appendix I. Story***

TODO

### ***Appendix II. Schedule***

**Purpose:** To break down the game progress into milestones so that we stay on the right track. We'll have meetings after a milestone has been complete to discuss the milestone that we have just finished and talk about the upcoming milestone. The game can be broken down to a few major sections:

1. **User Interface**
2. **Player Units**
3. **Enemy Units**

We have quite a few devs so there will be some overlap. Not really sure how we are going to space this out without stepping on toes. In addition to those areas, there are some minor ones:

1. **Game Structure (Menus, level loading, saving games, loading saved games, exiting, etc...)**
2. **Sound**
3. **Camera**
4. **Support and Debugging**
5. **Testing**
6. **Android Implementation**

#### **Milestone 1:**

- Placeholder background displayed.
- Grid overlay that can be toggled off and on.
- Have an enemy that can move from the left to the right side of the board when clicking on a grid on the same horizontal axis.
- Click on any grid and create a tower automatically.
- Create logging functionality so that everything can print out to a log/screen.

#### **Milestone 2:**

- Have an enemy move to a grid, avoiding any obstructions.
- Turrets will fire at enemies when in range.
- Enemy unit's health bar will be visible upon mouse over and will die if it reaches zero.
- Turrets that are placed will decrease the money count in the UI by 100.
- Towers will be able to be destroyed and will add 50 to the money count.

#### **Milestone 3:**

- Player Unit selection UI is implemented and creates the correct units.
- Multiple Enemy Units moving on the screen at once.
- Enemy Unit "Coming Up" UI is displayed showing the enemies that will be showing up on the map next.
- Various Enemy Units are featured each with their own stats based on their type.

#### **Milestone 4:**

- Added the ability to zoom the camera.
- Added the ability to pan the camera.
- Cowtapult functionality implemented.
- Enemy waves implemented.
- Win/Lose implemented where enemies take milk bottles and the milk bottle count decreases.
- Turret upgrades implemented.
- Game Menu, Pause Menu, and End of Stage Menu implemented.

#### **Milestone 5:**

- Running on Android Devices.
- Add Sounds.
- Stage 1 is complete.
- All UI is implemented.
- Game structure is complete.
- Most objects are in the game.

#### **Milestone 6:**

- Created Google Play Account
- Created Alpha/Beta Community on Google+.
- Level 1 is complete.
- Researched in game ads/micro transactions.

#### **Milestone 7 (Alpha):**

- Level 2 and 3 is complete.
- Implement ads/micro transactions.
- Google Play Games support implemented.

#### **Milestone 8 (Beta):**

- Playtested a lot.
- Bugs at an acceptable level.
- Art is complete.
- Sounds are complete.
- Amazon AppStore account created.

#### **Milestone 9 (Release):**

- Game is released to Google Play. Submitted to Amazon.
- Finished up any remaining bugs.

#### **Post-Release**

- Beer/Zima/Pepsi/Nyquil drunk in celebration.
- Post Mortem
- Discuss plans for DLC.

- Work on new bugs.

### ***Appendix III. Wish List***

This is a list of things that we would like to get in if we have the time.

1. Additional Levels. Pasture, Stables, and Pumpkin Patch
2. Additional Bonus Levels. Possibly one for each level.
- 3.

### ***Appendix IV. Google Play Games Support***

<https://developers.google.com/games/services/>

Achievements

Leaderboards

Cloud Save

### ***Appendix V. Amazon Appstore Support***