

COWLAMITY

READ FIRST!

- Please respond to questions using the comment system. To do that, highlight the text you want to comment on, right click, and select comment. To see existing/resolved comments, click on the Comments button at the top.
- Don't delete anything until we get it into the Design Doc!!!

Million Grain Question?

- **Q: Why is the game fun?. What makes it fun?** *A: The fun will be in the humor and addictiveness of the game. Easy to understand gameplay and pick up and play style with little micromanagement will also go along way with many players.*

Level Ideas

What makes these levels unique aside from the theme. I know that there is a few things mentioned in the design doc but it's not clear enough.

Barnyard

- This should probably be just your standard level where the only challenges are to learn the enemy and player units. Each stage would be slightly different because the goal and enemy entry points would be different.
- Could have a lightning special attack. On top of the barn would be a lightning rod. The sky would get cloudy, when it does, the rod would begin to flicker. Clicking on it and then an enemy would zap the enemy. Maybe have a chicken on top of the barn doing a silly animation like he's directing the lightning by pointing like some wizard.

Orchard

- What are the different challenges in this level?
- How many stages?
- Idea for a stage- Have like 5 entry points that connect to 5 rows lined with apple trees. The enemies are forced to go down the row. Each row would be like 2 grids wide and would have buildable grids every 2 horizontal grids +/- 1 vertical grid so that if we filled an entire row with haystacks, it would cause the enemy to zig zag back and forth which

would slow him down.

- The apple trees could slowly grow fruit. Once the fruit is large enough, you could tap the tree and drop the fruit on an enemies head, causing a little bit of damage and a short stun.
- Flying enemies could land on trees, eat the fruit and regain some health.
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Cornfield

- What are the different challenges in this level?
- How many stages?
- Bonus Stage Idea: Ric mentioned it before but we could start with the whole stage being covered in corn stalks. An enemy combine (or two) would follow a predetermined path to clear way for the enemies to the goal. The enemies would be following this path even as the combine clears the way. The combine also uncovers build grids. You would somehow be able to temporarily stop or slow down the combine with the catapult. This would cause the enemies to stop behind it and your defenses would really be able to whoop on the enemy.

Pasture

- What are the different challenges in this level?
- How many stages?

Stables

- What are the different challenges in this level?
- How many stages?

Pumpkin Patch

- What are the different challenges in this level?
- How many stages?

- Cornfield-Enemy can make own paths through the corn with threshers
- Orchard-Enemy can climb over trees with ladders.

Other ideas

- When an enemy entry is out of view, we should display a mini view window of the entry for the user to see who is entering.

Gameplay Issues

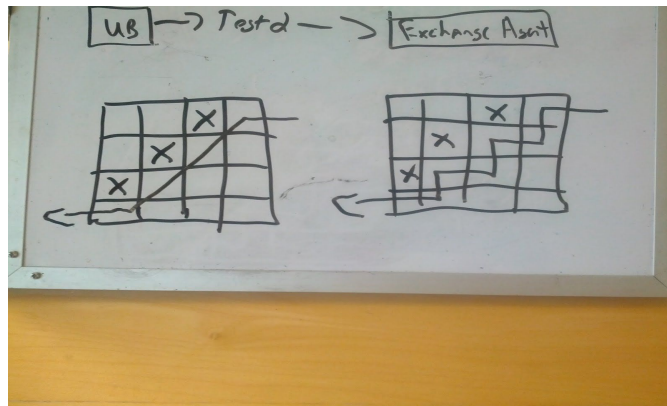
- **Q: Will there be time between each wave?. If so, start the time after the last enemy is killed or after the last enemy has spawned.** A: *There is a time between each wave,*

and I think it should be after the last enemy has spawned.

- **Q: Are we going to show an indicator as to when the next wave is arriving and if so, will it show what enemies will be spawning in advance.** *A: Yes, there should be some kind of indicator showing what enemy types are approaching.*
- **Q: Do enemies have to escape with the milk or is touching it enough for the player to lose?**
 - **If they have to escape, do they exit the same way they came in?** *A: Yes they escape with the milk (or other goal objectives), and the path they take will depend on the level.*
 - **What happens to the milk if you stop them from leaving?** *A: Tough one. We can have a character go pick it up. They will need to reach it before an enemy grabs it again.*
- **Q: Will there be multiple milk spawns per map or are they all located in the same area.** *A: I think we set up certain spots. Perhaps a broken down milk truck that needs repair for one level that the enemies try to steal the cargo before delivery. Other stages will have other goals such as Cider in the orchard level instead of milk.*
- **Q: When you kill an enemy, do you pick up the loot or does it get collected automatically.** *A: Automatically.*
- **Q: Do all enemies drop loot? Do they drop different amounts?** *A: The bigger and tougher the enemy, the more money the player gets for taking it down.*
- **Can you sell objects that you've placed?** *A: Sure. In fact players can tear down and sell hay towers if they need the resources to build in other preferable spots.*
- **Q: If we are going to have upgradable defenses, do we give the user the option to select which stats to upgrade?** *A: all upgrades will just have different levels that automatically improve defenses in certain specific ways. Usually 3 will be the highest upgrade level.*
- **Are we going to display the enemy/object health?** *If so, always display it near the object or only on mouseover? Maybe only do it on mouseover to clear up some clutter but have some other visible indicator as to how hurt the enemy is. Like go old school and show a few shades of red based on how hurt he is. 50% HP left - light red. 25% HP left - Med Red. 5% left - Red.*
- **We need to figure out the sizes of everything soon.** *For example, how big is a single grid going to be and how large the stages are going to be in grids. To add to this, we need to decide on how many grids a unit is going to take up. For example, should a haystack take up one grid, 4 grids, etc... The benefit to smaller grids is more flexibility to place objects.*
- **How are we going to select and place our units?** *We could do a long press on a grid to pop up a radial menu. Or click on the catapult to bring up a menu... But that might suck because the catapult will be moving all around. The long press might suck also because we won't know valid grids until we long press on it. That's a real crap way of finding out you can't build there. Maybe a swipe up from the bottom of the screen to open up an "IOS Folder" type menu where the whole game screen is shifted up a little bit. Then the bottom part of the screen would have your units. You would be able to scroll left and*

right using your finger. Once you select the unit, you'll be given a visual indicator on the map stating what grids would be valid for its placement. Then you just select the valid location and the menu closes. Or we keep the menu open and have the user swipe down to close it. Would be annoying to keep having to open up the menu when you want to place a few things down in a row. Maybe have an option for it by placing a lock button on the side of the menu to keep it from closing. Once you unlock it, it closes. Otherwise it closes after each placement automatically. **We will have the tiles shaded a different color than tiles that are not buildable.**

- Aside from the traps and Bull Rush, are the player's units required to be placed on haystacks? **Most.**
- For the Rake Trap, we would only be able to knock down one enemy at a time right? And would the enemy still be able to be attacked from player units? **The rake is consumable. 1-5 uses.**
- The Rake Trap and Mud Pit do similar things. One slows you down and the other knocks you out. However, the rake trap is limited to 5 uses I believe. Do we need both? If so, the rake would probably have to cost significantly less than the mud pit. Or if they are similar in cost, the rake would knock you out longer then it would take if the enemy was just walking over a mud pit. The later would probably be the best bet. On the other hand, the mud pit slows down everybody while the trap would only stop one person (I'm assuming...see previous bullet point).
- Question about enemy movement. Will they be able to move diagonally? Or do they just stick to the grid.



○ For Example...

- There's going to have to be placement rules so we can't box enemies in completely. There should always be a path from the entrance to the goal. We should be able to enable or disable placement following that. So if I mouseover a location, we'd check to see if that would block the flow from the entrance to the goal, if not, then enable. Otherwise disable. We would only need to run the pathfinding algorithm at the start of the level and then when an object is placed. For debugging, we should also indicate by a red tint or an "X" which grids won't be touched by an enemy due to how the player blocks up the level. Just to make sure it's running right.
- If a level has multiple entry points, what does the enemy do if they get the milk. Do they return to the same entry point they came in, go to the closest one, or go to the one with

the least amount of defences? I would think that they would go back to the one that they came from since it's something the player can anticipate. For example, the first wave comes out and I build a defense around the entry point that they came out of. It would be annoying if they came out, got past my defences, and exited out the way that didn't have any defenses. There'd be nothing I could do about it. **Depends on the level.**

- Should we display the grid? I think we should keep it clean and not display a grid.
 - On that note, on the stage mockup that Ric did, the haystacks are spread pretty far apart. Now, I don't mind that but it makes it look like a unit could go between the stacks even though they can't. Having the grid kind of indicates to the user that they will block the enemy because there's no grid between them. So if we went without a grid (or even if we did), we should connect the stacks together with something. Maybe small hay bales. Something that isn't going to block the users view of the field but indicate that this is a wall.
- Random Pathfinding thoughts.
 - At the start of the level, find and save the shortest path to the goal.
 - When placing a blocking unit...
 - First check against a list of invalid tiles that we will load with the level.
 - Then check if we are placing it on the shortest enemy path that we have previously determined.
 - If it's not on the path, it's valid.
 - If it is on the path, find the shortest path from the entrance to the exit.
 - If one exists, the unit can be placed.
 - If one doesn't, the unit can't be placed.
 - Should units target enemies with the milk over enemies without milk?

UNITS

We have to balance out the units. For every type of offense that the enemy throws at the user, they must have the tools to counter it. I'm just going to list what we have written down in the doc already so that we can flush out what they all do, their upgrades, and how they match up.

Question!!...Will the units have an armor rating and hitpoints? If so, then units will have to have an attack rating so it would end up being something like... $\text{Hitpoints} = \text{Hitpoints} - (\text{attack damage} * (\text{attack rating} / \text{armor rating}))$. If we just stuck with hit points, then its pretty easy. $\text{Hit points} = \text{Hit points} - \text{attack damage}$.

Enhanced Version

- Enemy Units will have harder versions of themselves in the later stages. All of their stats will probably just be increased by a multiplier. We should probably keep the speed at their basic level though. Adding that might be a massive pain in the balls to the user.

These numbers are not finalized because this will be tweaked during testing. But they should give an idea of how the units will behave when compared to other units.

Speed ranking

- The speed of the unit.
- Scale of 1 - 10. 1 being the slowest.

Hit points

- The amount of damage before the unit dies
- Scale of 1 - 10. 1 being the lowest.

Money Dropped

- Amount of money the unit will drop when defeated.
- Scale of 1 - 10. 1 being the cheap fucks.

Unit Cost

- How much money the unit costs to build. Each upgrade must be listed also.
- Scale of 1 - 10. 1 being the least expensive.

Upgrades

- List the upgrades for each unit

Immune Enemy Units

- List any enemy units that are not affected by this player object.

Special Ability

- What does this unit do?

Enemy units

Ewes

- Unit Type
 - Ground unit
- Hit Points
- Speed
- Money
- Size
- Special Ability

Rams

- Unit Type
 - Ground unit
- Hit Points
- Speed
- Money
- Size
- Special Ability

Black Sheep

- Unit Type
 - Ground unit
- Hit Points
- Speed
- Money
- Size
- Special Ability

Crow

- Unit Type
 - Air unit
- Hit Points
- Speed
- Money
- Size
- Special Ability

I'm not sure what the fox ~~says~~ does.

Fox

- Unit Type
- Hit Points
- Speed
- Money
- Size
- Special Ability

I'm not sure how the tractors, combine, and corn thresher will work.

Player Defensive Units

Mud pit

- Unit Type
 - Ground unit
- Hit Points
 - None
- Speed
 - None
- Unit Cost
 - More than Rakes
- Size
 - 1 Grid
- Special Ability
 - When stepped on by Enemy Units, speed is slowed by ?.
- Immune Enemy Units
- Upgrades

Milk Tank

- Unit Type
 -
- Hit Points
 - None
- Speed
 - None
- Unit Cost
- Size
 -
- Special Ability
- Immune Enemy Units
- Upgrades

Rake Trap

- Unit Type
 - Ground Unit
- Hit Points
 - No HP, but only lasts for 5 uses.
- Speed
 - None, it's a rake FFS.
- Unit Cost
 - Less than mudpit
- Size
 - 1 Grid
- Special Ability
 - Knocks one enemy unit down at a time for some seconds.
 - If an enemy is already knocked down, the rake can't be used again until he gets

up.

- Immune Enemy Units
 - Tractors, Combines
- Upgrades

Cow Patty Trap

- Unit Type
- Hit Points
- Speed
- Unit Cost
- Size
- Special Ability
- Immune Enemy Units
- Upgrades

Egg Slingshot

- Unit Type
- Hit Points
- Speed
- Unit Cost
- Size
- Special Ability
- Immune Enemy Units
- Upgrades

Barn Cat

- Unit Type
 - Anti-Air
- Hit Points
- Speed
 - None
- Unit Cost
- Size
 - 1 Grid
- Special Ability
- Immune Enemy Units
- Upgrades

Player Support Units

Rooster Perch

- Unit Type

- Support
- Hit Points
- Speed
 - None
- Unit Cost
- Size
 - 1 Grid
- Special Ability
 - Increases weapon range.
 - Detects Black Sheep
- Immune Enemy Units
- Upgrades

Resource Units

Distillery

Windmill

Silo

Blocking Units

Fence - What's the benefit of having both fences and haystacks if they do the same thing?

Haystacks

Barnyard Walkthrough

The first level will be more of a training level for the player. It will take place on all four sides of the barn. Each side will be it's own stage. Major Bull will pop up to offer advice. There will be only one entrance and exit for the first couple stages for enemy waves. Two entrance and exit point for the last two stages of the level. The enemy goal is to reach the milk stored in the barn. At this point the player cannot do full upgrades, and not all traps are available. Some things need to be unlocked in later levels.

The barnyard is on the bottom left of the screen. The enemy entrance is on the top right. There are some hills in the level which make it impossible for me to build structures on. The game starts and the timeline at the bottom of the screen shows that I have 3 ewes about to attack me about 5 seconds apart...To be continued.

