Ludum Dare #44 Submission
Documentation 0.0.0-a

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1   Overview

This document outlines the design for a Ludum Dare 44 submission. It is a 2D, single-player, multi-phased tower defense/strategy game to be written in Unity. Whereas the theme for this competition is *"Your life is currency,"* the player takes the role of a farmer[1] who extracts resources from a finite set of plants[2] on a fixed plot of land. Sacrificing a plant means gaining resources.

2   Terms & Definitions

- Field, aka Board - the two-dimensional grid representing the farmer's plot of land.

- Tile - an element accessible at a specific location on the Board.

- Pathogen - an adversarial creature whose objective is to infest tiles and crops, thus impleding the expansion of the farmer.

- Day Phase - An untimed phase of the game in which the player can make tactical and strategic decisions about which plants to sacrifice.

- Night Phase - A timed phase of the game in which the player must, *in real time*, ward off waves of invasions by the pathogen. Immediately after a Night Phase, there is a Dawn Phase, during which the player may plant new seeds for the day.

- Cycle - The period of in-game time spanned by the duration of one day and the following night.

- Extracted Resource Point (ERP) - The main currency of the game. This is the count of all "stored" crops, which have been sacrificed but have not been used. When a plant on the Field has been sacrificed, the living plant count is decremented and the ERP count is incremented. See "Return" for more about the effects of reaping crops.

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[1]don't back away just yet! Keep reading.
[2]plantlife, get it?

- Return - The numerical gains that the player receives (measured in seeds, water, and nutrients - more could be added in the future) when (s)he sacrifices a plant. Often the Return is a function of many variables, most prominently how long the plant had been alive when it was sacrificed.

More definitions may be added, sooner or later.

3 Specification

3.1 Victory & Loss Conditions

The game ends in victory when the player finishes X turns. Optionally, there will be a score displayed at the end based on how many resources the player gathered. The game ends in loss if the player loses all his/her plants on the Field.

These conditions will be checked at the end of every Night Phase.

3.2 Field Data Storage

With regard to the storage of Field data, multiple approaches were considered. Ultimately, for the purposes of the initial release, the developers decided to keep data global, rather than giving each Tile its own unique data.

This allows for global weather phenomena such as Rain, which affects the Return for plants extracted during the following days. The global data also allows for a fascinating new functionality: *dynamic difficulty calculation.* Put simply, the more resources the player controls, the more Pathogens will be spawned in the night to challenge the player.

3.3 The Day

The player will be able to harvest crops for ERPs. The amount of Return one gets is affected by the current Weather (which changes from day to day). When it rains, there will be a rain bonus - this formula will be tweaked and fine-tuned through testing.

3.4 The Night

During the Night sequence, a player may spend extracted resource points in order to deploy weapons in real-time, to stop the passage of the pathogens.

4 Credits

So far, the concept & design is exclusive to Jim, Vincent, and Ricky. It was designed on the night of April 26, 2019.