



THE BUTT-UGLY BUG

CONST FRICTION

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DESIGN DOCUMENT

VERSION 1.2

MAY 13, 2010

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# VERSION HISTORY

## Version 0.1 – April 9, 2009

- First version of the document. Template based on link noted in “Links” section
- Removed “Mods” and replaced a few sections are based on the template in *Game Design Workshop* by Tracy Fullerton.

## Version 0.2 – April 28, 2009

- Added Game Overview section
- Added Game Details section
- Added Feature Set section
- Added Camera section
- Added Game Characters section

## Version 1.0 – May 13, 2010

- Renamed files to reflect game concepts
- Added Leaf class
- Added Travel State for B'ugly
- Added seed class
- Added PlanterBox array
- Plants start randomly in garden, at random life stages
- Added Weed class
- Added Audience, Platform, and Marketing section
- Added The Game World section

## Version 1.1 – May 18, 2010

- Added to Art and Sound Sections
- Added Collision between Chaser and Fire Poo

Added button descriptions to control section

## Version 1.2 – May 24, 2010

- Modified Landing Speed to adjust gameplay
- Added Pause feature
- Added Intro animation
- Added Outro animation

# GAME OVERVIEW

## Game logline

A homely, flying insectoid prepares for a second chance at metamorphosis by tending a rough patch of land and trying to eat right this time around.

## Gameplay synopsis

B'ugly's first metamorphosis was a disaster. He came out looking butt-ugly because he ate too much of all the wrong plants. He is determined to redeem this utter failure by having a second go at it.

To ensure a better diet, he attempts to nurture proper food plants while keeping less desirable plants and carnivorous "Veggibal" weeds at bay.

This unique adventure balances mildly irreverent humor with challenging **cartoonish** gameplay by having the player help B'ugly encourage good plants to grow and discourage killer weeds and unhealthy food plants by strategically "placing" solid waste products (at the press of button B) that can be used as organic fertilizer or, alternatively, as unholy terror in their weaponized form.

The user will control B'ugly by **flying him to and fro**, using the left thumb stick, over his **garden area**. To maintain energy and create fertilizer, B'ugly can **land on and partake of the leaves** of healthful food plants (or, to a lesser degree, unhealthy food plants). He must be landed on a leaf to eat from it. In order to land on it he must have a velocity under one unit, and must have a downward component to that velocity. Once landed, the player can have B'ugly eat a leaf by pressing the A button. B'ugly's improved nutrition is always at risk by encroaching unhealthy plants. B'ugly can eat the unhealthy plants in emergencies to keep himself alive, but too much can **sap his green energy** store (represented by a life meter), cause re-propagation of these undesirable plants, and defeat his ultimate purpose of rebirth. These unhealthy plants give him a full health bar, but his energy decreases at a much faster rate.

As an additional menace, killer weeds often poach the good food plants and can also nibble on B'ugly if he is not careful, **draining his life force**. To push back the foe-liage and make more growing room for the good food plants, B'ugly can eat of the semi-rare red chili bush and **rain down fire on the bad plants from his back end**. He must take careful aim so as not to damage the desired healthy

plants. B'ugly's discharges contain proportional amounts of **seed types** in order to maintain the circle of life, so care must be taken to balance his diet so that he plants what is needed. Each poo contains one seed of the type of plant it came from, except the chili plant, this fiery poo's will contain 3 chili seeds.

B'ugly cannot eat the killer weeds, so he doesn't spread their seeds but if he doesn't eliminate them before they fully mature, they will launch the main head after B'ugly to try to get in one last bite. After they launch, they will explode and produce a scattering seed pod, they propagate like crazy. If the head of the killer weed bites B'ugly, not only will his health go down but 5 killer weed seeds will be dispersed, if B'ugly evades the killer weed head only 3 seeds will be dispersed.

The growth, propagation rates, and balance in number of the plants of the various types are crucial to B'ugly's goals of survival and transformation. The Player's **split-second decisions** in what and when to eat, and where and when to excrete are what determines the success of his quest.

## GAME DETAILS

### Description

[Give a bit longer description]

### Game genre?

Tower defense game.

### Is this single-player or multiplayer game?

Single-player

### Is this 2D or 3D?

2D

### Where does the game take place? (world)

B'ugly takes place in a fixed-width, side-scrolling garden area that takes up 2 to 3 screen widths. Not too wide to completely overwhelm the player, but wide enough to require the player to fly back and forth to maintain areas that are not always visible.

### What do I control? How many characters? Can I use vehicles?

The player controls one flying character that can excrete waste while flying and can land on plants to eat from them. Bugly is the only playable character.

LThumbstick: Move/Fly

Button A: Eat Leaf (While landed)

Button B: Poop (While flying)

Back: Quit Game

### **What is the main focus?**

The main focus is to keep the growth balance of the garden in favor of healthful plants so that B'ugly can eat them and fill his green life meter, enabling him to metamorphose into a handsomer, healthier, happier bug.

### **How long the game lasts? Or how long game matches last?**

The game has 3 difficulty levels: Sung Blue (easy), Plain Brown (normal), and Green Hell (hard). The main difference in difficulty levels is the base growth rate of plants, with faster rates requiring faster decision-making by the player.

A game played with intent to win as quickly as possible might take from 1 minute to 3 minutes to win, depending on difficulty. If the game is played leisurely or if the player suffers and recovers from setbacks, it may take longer but the longer the game goes on, the less likely a win is.

### **Comparison**

Conker's Bad Fur Day: B'ugly's cartoonish toilet humor is more innocent and child-friendly, but is reminiscent of that of the Nintendo 64 3D platformer.

Plants vs. Zombies: While not directly inspired by this tower defense game, B'ugly shares its genre, a green thumb, and a penchant for slightly gross humor.

SimCity, Sims, etc.: The need to constantly maintain a balance of multiple factors in order to stave off degeneration into failure is a key feature of the Sim franchise and of B'ugly.

### **What is unique?**

B'ugly's inspiring story is an unprecedented composite of redemption, good eating habits, and the strategic use of poop to balance an ecosystem.

### **Why create this game?**

It is simple in concept and design, yet complex enough to pose an optimum level of challenge to developers and players without a lot of time to spare. It has a positive message, while being entertaining at a base level of humor. It is pleasing to look at

and natural to control. Because of all of these things, it is as fun and challenging to create as it will be to play.

## AUDIENCE, PLATFORM, AND MARKETING

### Target Audience

Bugly's target audience focuses on children, and those with a sense of humor. The game teaches children the value of eating healthy, while being funny and entertaining. The game also features fun sound effects, for pooping, firey poo-induced burnination, and more. Game critic Victor claims that the background music has "nothing annoying at all" about it.

### Platform

Bugly is a fun and funny game for audiences of all ages.

Bugly teaches kids the merits of eating healthy.

Bugly provides a basic introduction to ecosystems, by encouraging players to manage their garden. As the player grows more healthy food plants, and burns other less desirable plants their garden will become healthier until they win.

### Top Performers

Conker's Bad Fur Day, Plants vs Zombies, SimCity, Sims, Harvest Moon...

### Feature comparisons

Bugly will incorporate humor similar to that of Conker's Bad Fur Day. Bugly also encourages players to practice managing their garden, similar to harvest moon's farming/crop management.

## FEATURE SET

### General features

3 levels of difficulty can be chosen by the player before the start of the game.

B'ugly's flying is controlled by left thumbstick. Direction is on the X coordinate and height is aided with the Y coordinate while also being affected by "gravity."

Bugly will bite food plant leaves or chilis when the A button is pressed while he is landed on the plants.



Bugly will poop when the B button is pressed if the level is high enough in his "stool pool," visually displayed as a brown meter (or orange if he has recently eaten a chili) and is shown in parallel with his green life meter. This is similar to an ammo clip. B'ugly can have up to 3 poo's in his stool pool, if this meter is full for a certain amount of time all 3 poo's will be discharged wherever B'ugly happens to be.

### **Multiplayer features**

none

### **Level Editor**

none

### **Gameplay**

At the start of the game, B'ugly is perched atop a food plant in a garden, some of which is located off-screen and must be flown toward it in order to scroll it into view. The garden is semi-randomly planted with a proportioned assortment of various plant types and open mounds where new plants can take root. Among the plant types are healthful, or "good" food plants, unhealthful, or "bad" food plants, pepper plants, and killer weeds.

The goal is to eat enough good food plants to max out B'ugly's green life meter, shown horizontally above his head. B'ugly takes a bite of a plant when the player presses the A button while B'ugly is landed on the plant. If B'ugly eats all the edible items (leaves from food plants, or peppers from a pepper plant) off of a plant, the plant dies and an open mound remains (i.e. no plant growing in that location).

The green life meter's level decreases when B'ugly flies, so it may happen that B'ugly gets stranded somewhere without enough energy to fly to the nearest good food plant. In that case, it may be necessary to eat from a bad food plant. This temporarily boosts his energy level to the meter's maximum level, but it also speeds up his metabolism so that his energy level decreases rapidly, like a timer. B'ugly must eat some good food to restore a stable energy level before time runs out. If the green life meter runs out, the game is over and B'ugly collapses in a heap, making some grotesque, resigned sound. Though B'ugly's green life meter reaches a full level after eating bad food, B'ugly cannot achieve his game-winning, green life meter level by eating bad food plants. Eating bad food plants turns the health bar (a shade of green) from a vibrant, clear green to a pale, murky, more

sickly-looking brownish-green. Eating good food stops the negative effects of eating bad food. If the bad food meter level is lower than the good food meter level was upon eating the bad food, the new, lower level remains. If the bad food meter level is higher than the original good food level upon restoration by eating good food, the green life meter reverts to the original level, minus a small penalty for going off his diet.

As B'ugly eats plants, his "stool pool" also fills up. The stool pool is shown underneath and parallel to the green life meter. The stool pool shows three notches, indicating that when the meter is filled to each notch, one more poo ball is ready for B'ugly to dispatch. The player can release a poo ball by pressing the B button while B'ugly is flying. If B'ugly is not relieved in time after the stool pool is full, the pool will purge at an inopportune moment (the next moment he is in flight after the time expires). B'ugly cannot eat more if his stool pool is full.

Each poo ball contains seeds from the plants he has been eating, which is depicted by the color of the poo shown in the stool pool. The number of seeds from each type of plant is proportional to the amount of each plant he has been eating. B'ugly's poo also acts as a fertilizer for plants. If plants have a sufficient amount of fertilizer available at their location, they will regenerate at their maximum rate as B'ugly eats them. Without any fertilizer, plants will die, either from being eaten up or by withering. When there is an open mound, a new plant will grow there if there is enough fertilizer. The type of the new plant is chosen at random from the seeds that are present at the location.

Competing with B'ugly for good food plants to eat are the killer weeds. If growing within reach of a good food plant, a killer weed can take bites of it. If B'ugly gets too close to a killer weed's Venus flytrap-like mouth, it can also take bites of B'ugly. With enough food and fertilizer, a killer weed can reach maturity. With insufficient food and fertilizer, a killer weed will go to seed. If a killer weed goes to seed or reaches maturity, the head detaches and chases B'ugly trying for one more big bite of him before it explodes. When the head explodes, killer weed seeds are scattered to the four winds. Mature heads contain more seeds and have a larger dispersion radius than heads gone to seed.

B'ugly can destroy killer weeds while they are growing by dropping weaponized poo on them. B'ugly weaponizes his poo by eating chili peppers that grow on pepper plants. Eating a pepper inserts a fireball into his poo queue. A well-aimed fireball

can eliminate even the hardiest of killer weeds. A poorly-aimed one may burn up important resources. Every fireball contains pepper plant seeds. If Bugly hits a chasing weed plant with a weaponized poo, the chaser/head will die and will not spread any seeds.

## THE GAME WORLD

### Overview

Bugly's world consists of Bugly's garden. The garden may scale in size depending on difficulty. Harder difficulties will force the player to travel further to eat the healthy food plants they need while evading evil weeds. The increased travel time may also allow more evil plants to reach maturity.

### Key locations

The garden will be divided into planter boxes of a set width. Each planter box will have the potential to grow a plant. The plants and planter boxes will be a set size. The world may scale depending on difficulty.

### Travel

The only travel that takes place in the game will be Bugly flying around his garden, landing on different plants, and evading evil weeds.

### Scale

Scale of the game is a normal world, from a bug's perspective. Bugly is the size of an average beetle, and the plants in his garden are the scale of sapling vegetables.

### Objects

Healthy Food Plants, Junk Food Plants, Evil Killer Weeds, Chaser

### Weather

Every day is a bright sunny paradise in Bugly's Garden!

### Day and Night

The sun never sets on Bugly's Garden!

### Time

Plants grow much faster in Bugly's garden than in the real world. Plants will generally reach maturity in around one minute...

**Water**

There is no water in Bugly's garden, and plants grow quickly under the bright sun...

**Other Elements**

[INSERT TEXT]

## CAMERA

**Overview**

The world is twice as wide as the screen, so the camera scrolls from side to side as B'ugly flies to either side of the screen. Scrolling occurs as B'ugly flies within 70% the width of the screen until the edge of the world is reached.

Bugly's life bar and stool pool are anchored in the top left corner of the camera.

## ART

**What kind of style will be used in the game?**

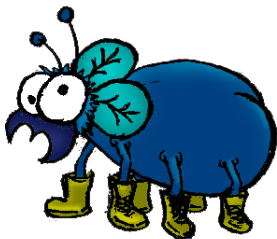
Cartoony Style, aimed at E-rated/available for kids. Game includes intro and outro used to develop the story.

**Scenery models**

Currently one Background, May Include Splash Screen with difficulty select...

**Particle effects**

## GAME CHARACTERS

**Overview**

**Hero:** B'ugly is our protagonist. He is a homely-looking, flying insect with an oversized behind who realizes that his current, sad state is due to his poor choice of diet in his larval stage. He is determined to improve his lot in life by eating right and trying for a second chance at metamorphosis. Improving his nutritional habits

does not prove easy, as there are natural forces working against his plan. B'ugly must choose wisely what he eats and where he leaves his droppings so that optimal amounts of desired plants continue to grow while growth of undesired plants is muted. This story will be setup by a storyboard style intro animation.

### Character creation

B'ugly is presented as-is for control by the player, after a very brief cinematic of his back-story.

### Enemies and monsters



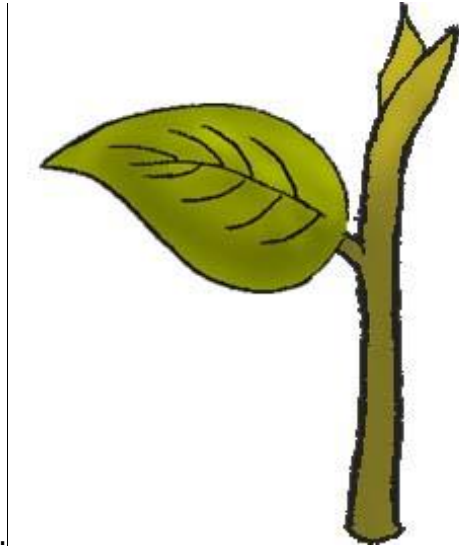
**Killer Weeds:** The primary enemies of B'ugly are killer weeds. These do not require a large amount of B'ugly's fertilizer to grow, but can grow and mature faster if planted in a well-fertilized mound. They will continue to grow toward maturity as long as they can reach and eat from good food plants with their Venus flytrap-like mouth-heads..



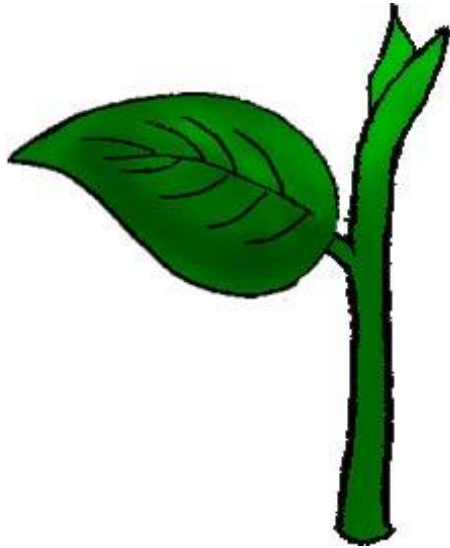
**Chaser & Weed Seeds:** When a killer weed goes to seed, its head detaches and flies after B'ugly trying to get one more bite before it expires by exploding and scattering killer weed seeds to the wind. and disappears leaving a free mound for new plant growth. Killer weeds can be defeated if B'ugly can manage to poo fire on them before they reach maturity



**Firey Chili Pepper:** When Bugly eats a firey chili he gains a weaponized fire-bomb poop. Fire poop will burn any plant it lands on to death instantly, including Killer Weeds! Fire poop can also destroy weed's Chaser heads if Bugly manages to shoot them out of the air. Frying a Chaser will cause it to spread no seeds.



**Unhealthy food plants:** These sickly, brown variants of the food plant alter B'ugly's metabolism. They do provide an initial burst of energy, which can be helpful in a pinch if he's running low, but they also cause him to burn his green energy store at a higher rate while flying, which is detrimental to his plan for an improved lifestyle.



**Good food plants:** Bugly's goal is to fill his life bar eating healthy good food plants. When Bugly fills his entire life bar from eating Good food plants Bugly the



player wins! On victory a storyboard style outro will play, where Bugly metamorphosis's into his handsome new healthier self!

## MUSIC AND SOUNDS EFFECTS

### Overview

Background music made by Sean, and interesting comments by Bugly to help users

### Music tracks

Original Background music track created by Sean Mc Callum.

### **Sound effects**

Landing/Takeoff, Chaser Chomp, Bugly Bite/Eat, Bugly's Hungry, Bugly's Full, Bugly's Gotta Go! Get Higher.

## **RESOURCES & LINKS**

### **Links to related resources**

Design document based on this template:

[HTTP://FORUMS.XNA.COM/FORUMS/T/229.ASPX](http://forums.xna.com/forums/t/229.aspx)

[HTTP://INDIEPATH.COM/PUBLIC/DESIGNDOCUMENTTEMPLATE01.DOC](http://indiepath.com/public/designdocumenttemplate01.doc)

A few sections of the document are based on the design template in this book:

Fullerton, Tracy. Game Design Workshop, 2<sup>nd</sup> Edition: Elsevier Inc, 2008.