

# Stardew Valley Cookbook

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PLAY





# Agenda for the Day



BACK◀



Introduction

Database Structure

Queries & Results

Conclusion & Future

# and

# Project

# Overview

Introduction



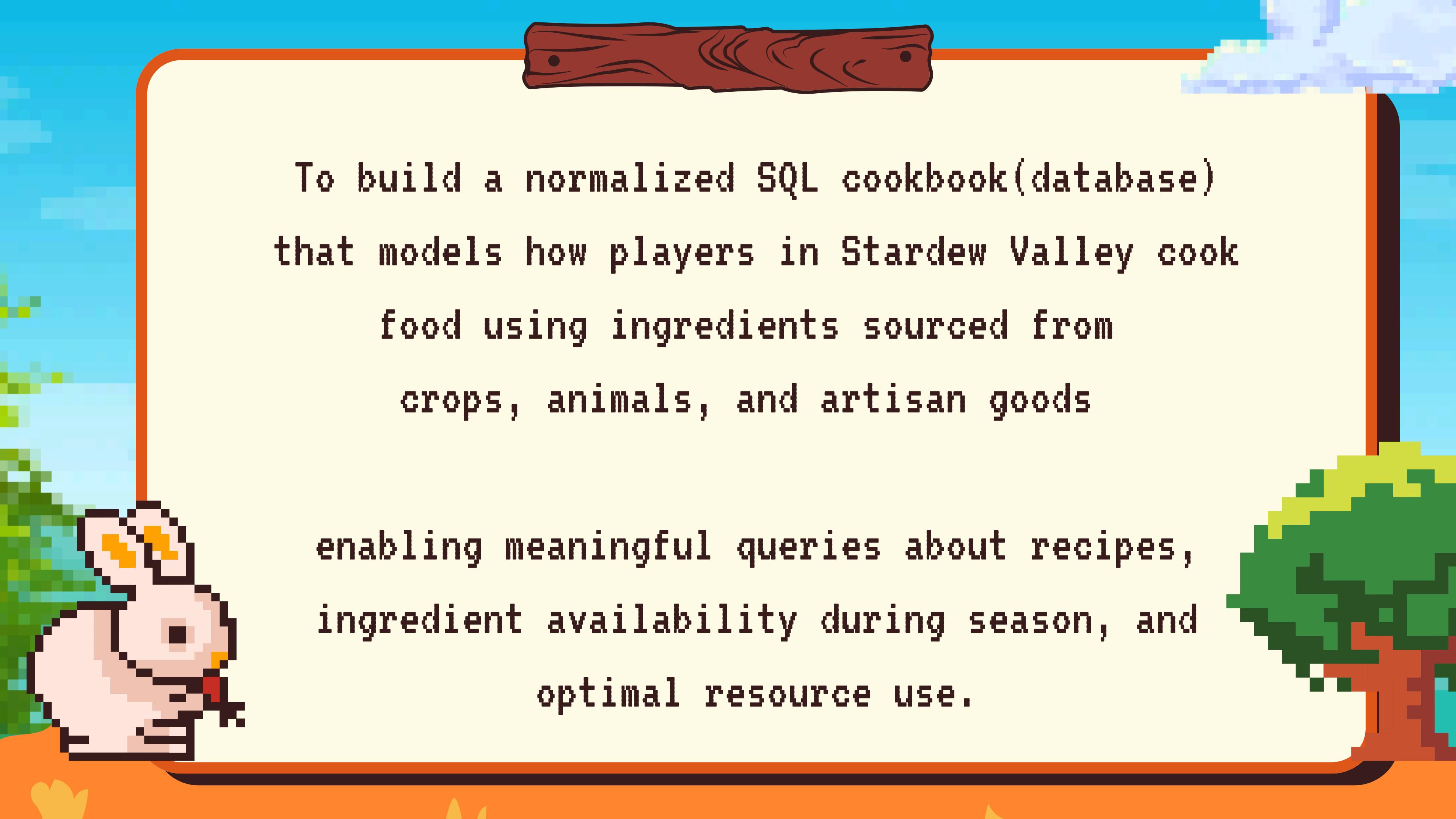
# Greetings from the barnyard!

Can you believe it? You just inherited  
your grandpa's old farm at Pelican Town!

Now it's up to you to turn it into  
something amazing.

Grow crops, raise animals, cook up tasty  
meals, and become the heart of this cozy  
little town.





To build a normalized SQL cookbook(database) that models how players in Stardew Valley cook food using ingredients sourced from crops, animals, and artisan goods

enabling meaningful queries about recipes, ingredient availability during season, and optimal resource use.

# Database Structure



# Tables

ALL PRODUCTS ARE ASSUMED  
TO BE BEST QUALITY

FARMER LEVEL HAS NO  
EFFECT ON: PRICES, GROWTH  
TIME, YIELD



Category

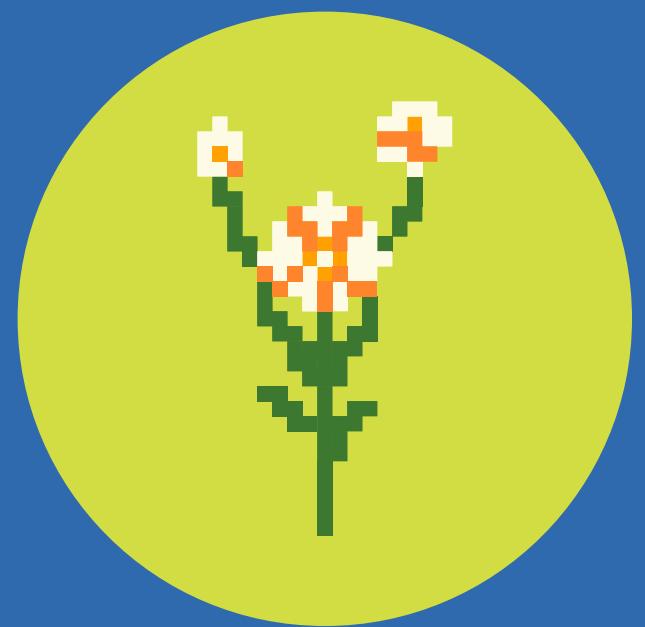
Product

Growth Cycle

Food

Recipe

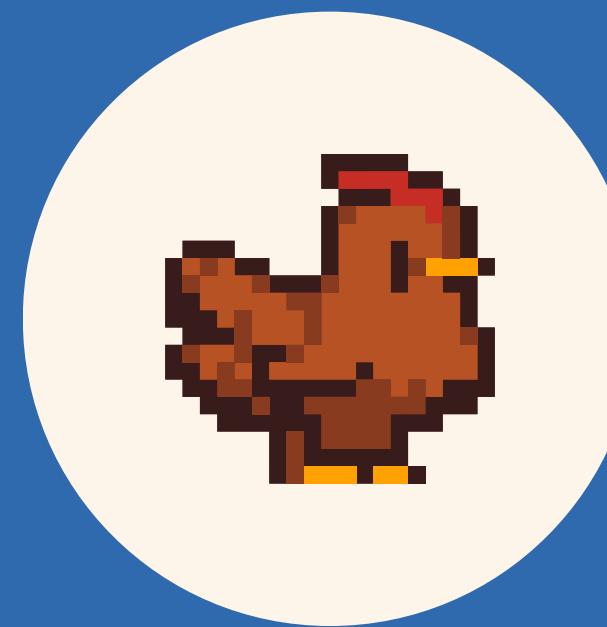
# Category



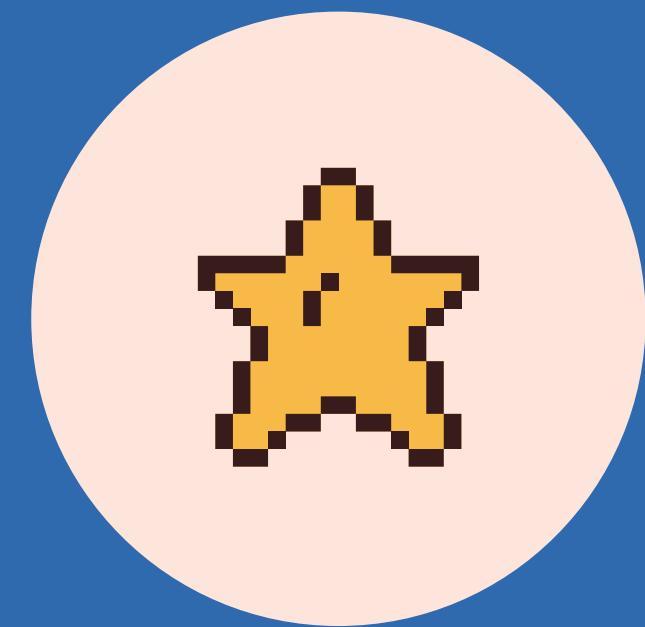
CROPS



FRUIT TREE



ANIMALS



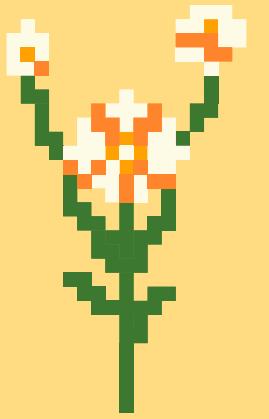
ARTISAN GOOD



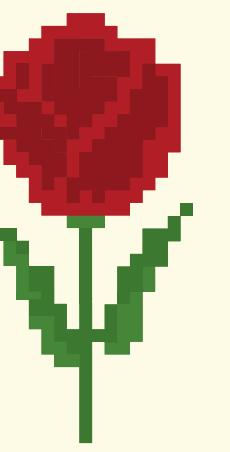
# Product



Contains  
all base Stardew  
Valley ingredients  
for cooking



Connects To  
Category  
Growth Cycle  
Recipe



Use Case  
track things like  
product names and  
prices



# Growth Cycle

2016

ANIMAL

SEASONS

FRUIT TREES

Base Year

Time to  
maturity

Spring: Jan-Mar,  
etc. Multi-season  
crops extended end  
dates

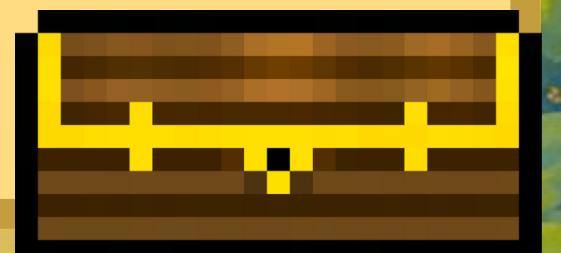
28 days to mature,  
1 fruit/day in  
season

ARTISAN GOODS

Need new input each time  
Growth time = 1, no  
regrowth

MILL PRODUCTS

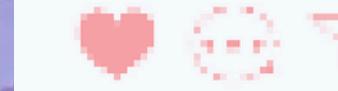
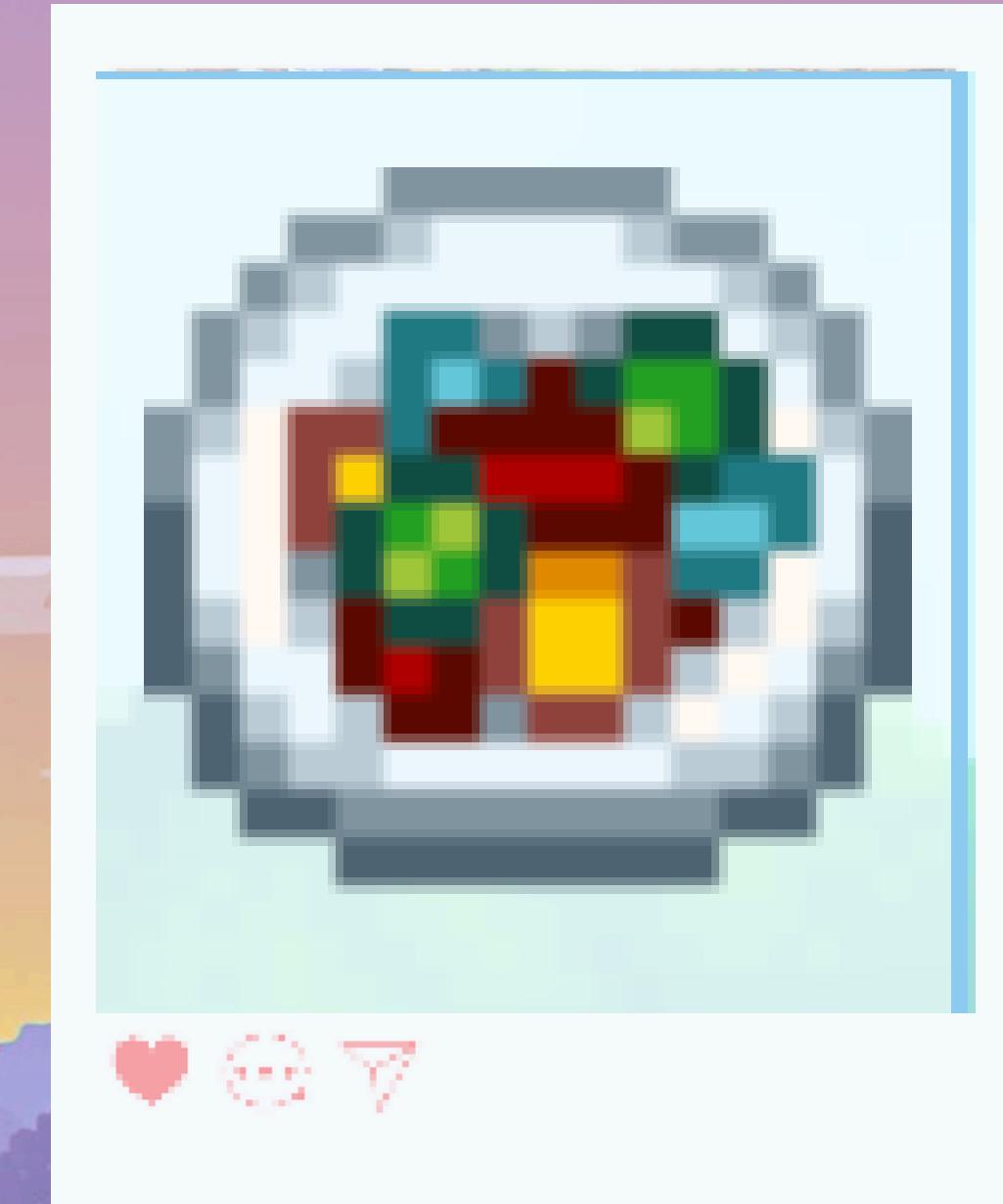
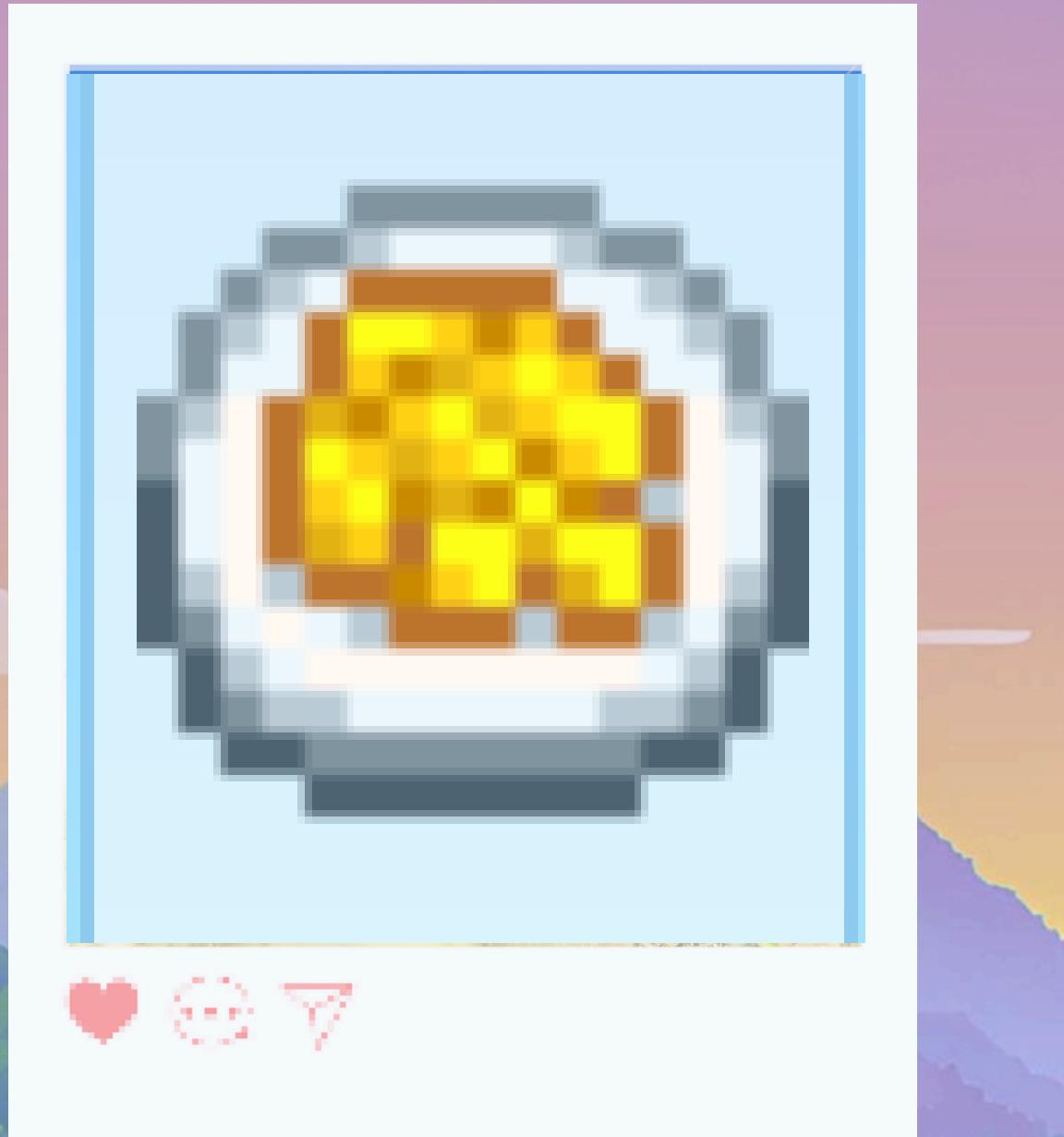
Mill capacity = 36  
Flour, Rice, Sugar



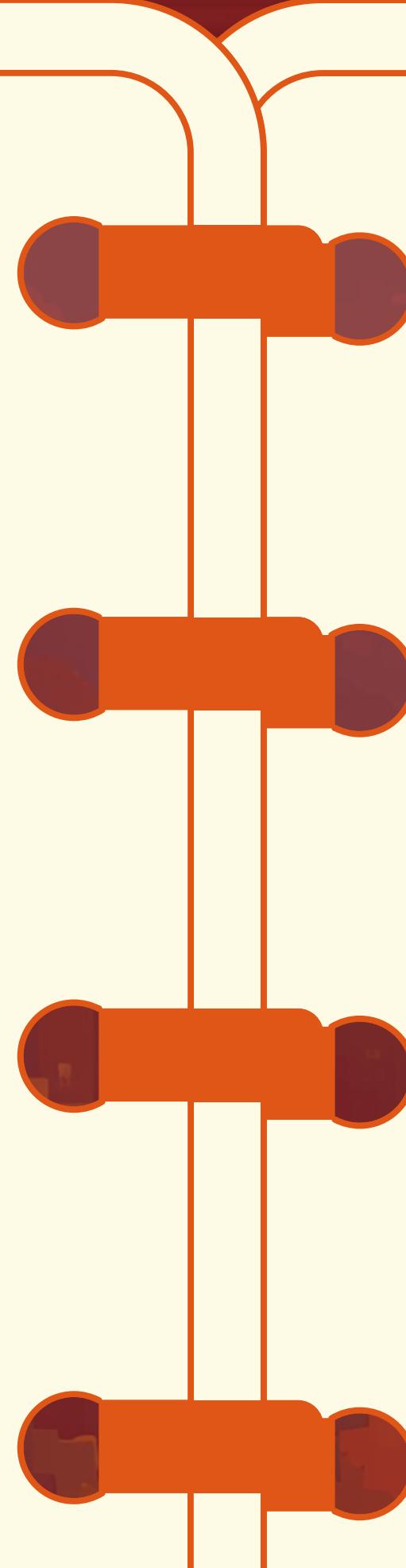
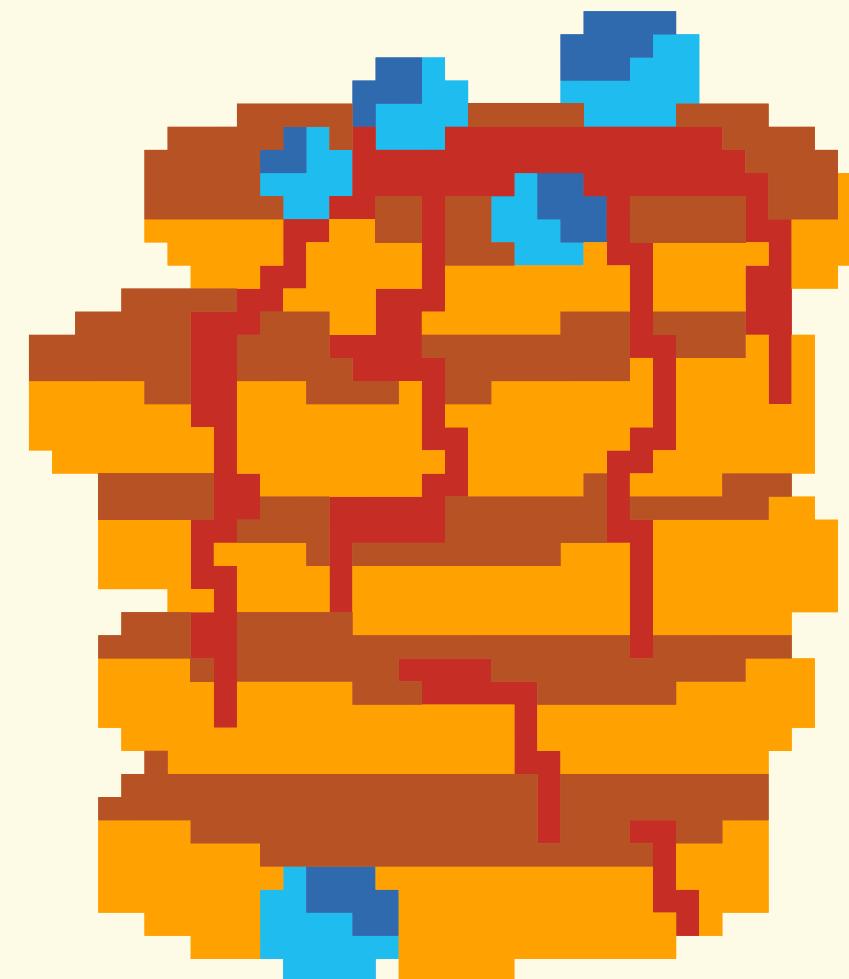
# Food



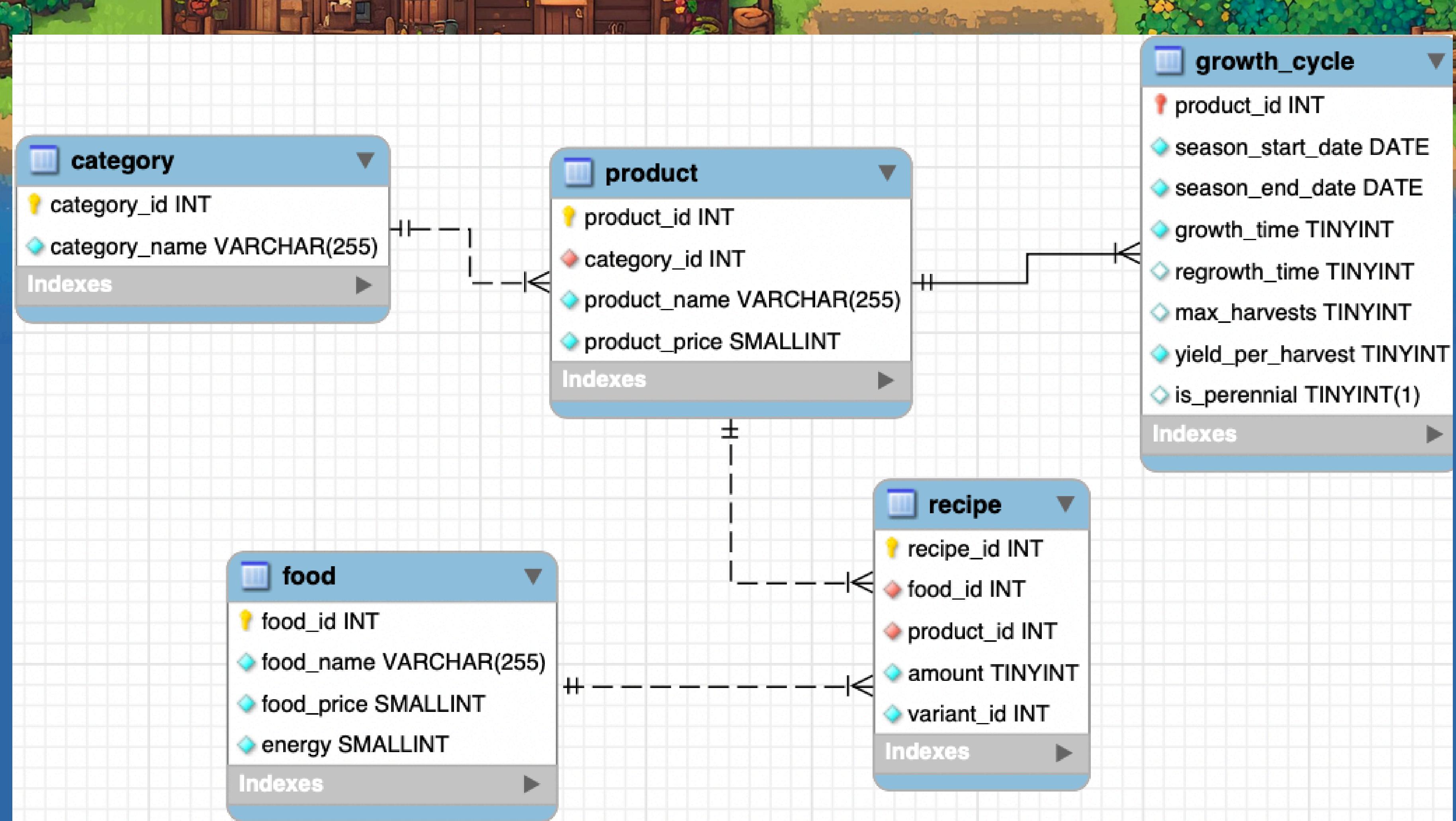
Final Cooked Dish in Stardew Valley



# Recipe



- Connects each cooked dish (food) to its ingredients (product)
- Stores how much of each ingredient is used
- Each row represents one version of a recipe
- Supports ingredient variants



# Queries and Results



## Query 1 - Which dishes restore the most energy per gold spent?

```
SELECT food_id, food_name, energy, food_price,  
       ROUND(energy / food_price, 2) AS energy_per_gold,  
       RANK() OVER (ORDER BY energy / food_price DESC) AS efficiency_rank  
FROM food  
ORDER BY efficiency_rank  
LIMIT 10;
```

	food_id	food_name	energy	food_price	energy_per_gold	efficiency_rank
▶	1	Fried Egg	50	35	1.43	1
	5	Vegetable Stew	165	120	1.38	2
	7	Bean Hotpot	125	100	1.25	3
	10	Pancakes	90	80	1.13	4
	8	Glazed Yams	200	200	1.00	5
	20	Eggplant Parmesan	175	200	0.88	6
	12	Bread	50	60	0.83	7
	22	Ice Cream	100	120	0.83	7
	2	Omelet	100	125	0.80	9
	9	Hashbrowns	90	120	0.75	10

## Query 2 - Which crops give the highest profit per day of growth?

```
SELECT p.product_name, p.product_price, g.growth_time,  
       DATEDIFF(g.season_end_date, g.season_start_date) AS season_length,  
       ROUND(p.product_price / g.growth_time, 2) AS profit_per_grow_day  
FROM product AS p  
INNER JOIN growth_cycle AS g ON p.product_id = g.product_id  
WHERE g.growth_time > 0  
ORDER BY profit_per_grow_day DESC  
LIMIT 10;
```

	product_name	product_price	growth_time	season_length	profit_per_grow_day
▶	sweet gem berry	6000	24	91	250.00
	cheese	230	1	365	230.00
	mayonnaise	190	1	365	190.00
	coffee	150	1	365	150.00
	starfruit	1500	13	90	115.38
	oil	100	1	365	100.00
	rice	100	1	365	100.00
	vinegar	100	1	365	100.00
	truffle	625	10	273	62.50
	red cabbage	520	9	90	57.78

## Query 3 - Which ingredients are used in the most recipes?

```
SELECT p.product_name, COUNT(DISTINCT r.food_id) AS recipe_count  
FROM product AS p  
INNER JOIN recipe AS r ON p.product_id = r.product_id  
GROUP BY p.product_id, p.product_name  
ORDER BY recipe_count DESC  
LIMIT 10;
```

	product_name	recipe_count
▶	sugar	11
	wheat flour	10
	goat milk	7
	cow milk	7
	chicken egg	7
	duck egg	7
	tomato	4
	pumpkin	3
	cheese	3
	vinegar	3

## Query 4 - Which cooked dishes have the highest profit margin?

```
WITH recipe_profits AS (
    SELECT f.food_id, f.food_name, f.food_price,
           SUM(p.product_price * r.amount) AS total_ingredient_cost,
           (f.food_price - SUM(p.product_price * r.amount)) AS profit
      FROM food AS f
     INNER JOIN recipe AS r ON f.food_id = r.food_id
     INNER JOIN product AS p ON r.product_id = p.product_id
   GROUP BY f.food_id, f.food_name, f.food_price
)
SELECT food_name, food_price, total_ingredient_cost, profit,
       RANK() OVER (ORDER BY profit DESC) AS profit_rank
  FROM recipe_profits
 ORDER BY profit DESC
LIMIT 10;
```

food_name	food_price	total_ingredient_cost	profit	profit_rank
Bread	60	50	10	1
Tortilla	75	100	-25	2
Cranberry Sauce	175	200	-25	2
Eggplant Parmesan	200	240	-40	4
Spaghetti	120	170	-50	5
Bean Hotpot	100	160	-60	6
Radish Salad	300	380	-80	7
Pizza	300	400	-100	8
Fried Egg	35	145	-110	9
Pepper Poppers	200	310	-110	9

## Query 5 - What are the full ingredient lists for every dish variant?

```
SELECT f.food_id, f.food_name, r.variant_id AS recipe_variant,  
       GROUP_CONCAT(CONCAT(p.product_name, ' (' , r.amount, ')')) ORDER BY p.product_name SEPARATOR ', ' ) AS ingredients  
FROM recipe AS r  
INNER JOIN food AS f ON r.food_id = f.food_id  
INNER JOIN product AS p ON r.product_id = p.product_id  
GROUP BY f.food_id, f.food_name, r.variant_id  
ORDER BY f.food_id, r.variant_id;
```

food_id	food_name	recipe_variant	ingredients
1	Fried Egg	1	chicken egg (1)
1	Fried Egg	2	duck egg (1)
2	Omelet	1	chicken egg (1), cow milk (1)
2	Omelet	2	chicken egg (1), goat milk (1)
2	Omelet	3	cow milk (1), duck egg (1)
2	Omelet	4	duck egg (1), goat milk (1)
3	Cheese Cauliflower	1	cauliflower (1), cheese (1)
4	Parsnip Soup	1	cow milk (1), parsnip (1), vinegar (1)
4	Parsnip Soup	2	goat milk (1), parsnip (1), vinegar (1)
5	Vegetable Stew	1	beet (1), tomato (1)
6	Pizza	1	cheese (1), tomato (1), wheat flour ...
7	Bean Hotpot	1	green bean (1), green bean (1)
8	Glazed Yams	1	sugar (1), yam (1)
9	Hashbrowns	1	oil (1), potato (1)
10	Pancakes	1	chicken egg (1), wheat flour (1)

# Conclusion and Future Enhancement



Most cooked foods in Stardew Valley are best used for restoring energy, not for selling. The most profitable crops are those with the highest gold per day of growth. Ingredients used in many recipes are worth prioritizing when planting or storing. With this database, players can make smarter choices and get the most out of every season.

Future updates could recommend the best crops to plant based on current market prices, remind players about upcoming birthdays and festivals, and help manage what to cook or sell each season. The database could also track inventory automatically and suggest efficient ways to use ingredients, ensuring nothing goes to waste. With these features, Stardew Valley farmers could save time, boost profits, and enjoy a smoother, more rewarding farm life.

## Conclusions

## Future Enhancement





Tip

**Being a Farmer is more  
profitable than being a cook  
in Pelican Town**





# So, it's time to head back to the fields!

EXIT

**Thanks for listening!**

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