Entity Relationship Diagram

tblWeatherConditions

PK	weather_id
date	date
float	temperature
float	humidity
float	precipitation
FK	**location_id**

A bees location is integral. This table goes over factors of the locations. Including the state, the type of enviroment and the hive_id to help identify the hives.

The beehive table represents the beehives in total. Giving an:

ID
Numbers
Population
Age of the hive.
It gives greater detail into the hives themselves and is a main focus of the data.

tblBeekeeper

PK	beekeeper_id
FK	**hive_id**
string	name
int	assigned_hives

The beekeeper is an important part of hive health. Their skills and number of hives are shown here along with the name of the beekeeper and thke hive_id

The beekeeper is an important factor. Depending on their skill and number of hives can make a difference.

tblBeehive

PK	**hive_id**
int	hive_numbers
int	hive_population
date	hive_age

The beehive is the main factor, but its location is linked and is very important.

tblLocation

PK	location_id
string	enviroment_type
string	state
FK	**hive_id**

tblFlora

PK	flora_id
string	flora_type
string	bloom_period
FK	**location_id**

tblHiveInspection

PK	inspection_id
FK	**hive_id**
date	inspection_date
string	inspector_name
string	findings

The location is tied to the population, many factors play into bee health and the location can tie closely to this.

These are linked VIA hive_id. The location will play a part in the honey production. The bee population is also tied to t he honey produciton

tblBeePopulation

PK	population_id
FK	**hive_id**
int	hive_population
date	creation_date
string	state

tblHoneySales

PK	sale_id
FK	**production_id**
date	sale_date
int	quantity_sold
float	revenue

tblHoneyProduction

PK	**production_id**
FK	**hive_id**
Date	hive_date
int	honey_lbs

tblBeeSpecies

PK	species_id
string	species_name
string	characteristics

This table keeps track of the bee population and state so we can see where bees are doing the best.

The honey population table goes over the imporant details of honey and how much of it they have.

Relationships and Cardinality

1. **tblBeehive** to **tblHoneyProduction**: 1:N (One beehive can have multiple honey production records)
2. **tblBeehive** to **tblLocation**: 1:1 (Each beehive is located in one location)
3. **tblBeehive** to **tblBeekeeper**: 1:N (One beekeeper can manage multiple beehives)
4. **tblBeehive** to **tblBeePopulation**: 1:N (One beehive can have multiple population records over time)
5. **tblBeehive** to **tblHiveInspection**: 1:N (One beehive can have multiple inspections)
6. **tblLocation** to **tblFlora**: 1:N (One location can have multiple types of flora)
7. **tblHoneyProduction** to **tblHoneySales**: 1:N (One production record can have multiple sales)
8. **tblBeeSpecies** to **tblBeehive**: 1:N (One species can be associated with multiple beehives)
9. **tblWeatherConditions** to **tblLocation**: 1:N (One weather condition can affect multiple locations)
10. **tblFlora** to **tblHoneyProduction**: N:N (Multiple types of flora can contribute to honey production, and one honey production can involve multiple types of flora)