Honey Production in the United States (1998-2012)

This dataset provides detailed information on honey production across various states in the United States from the years 1998 to 2012. The data includes production figures by pound, the number of colonies, and the yield per colony in pounds. This information can be used for analysis of trends in honey production, the impact of environmental factors, and economic studies related to the honey industry.

Dataset Overview

The dataset contains the following columns:

- **state**: The state in which the data was recorded.
- **region**: The region in which each state belongs to.
- **total_prod_lb**: The total honey production in pounds.
- **num_colonies**: The number of honey-producing colonies.
- **yield_per_colony**: The yield of honey per colony in pounds.
- **price_per_lb**: The price of honey per pound.
- **prod_value_usd**: The value of production in US dollars.
- **year**: The year of the record.

Analysis of Total Honey Production Per Region in the US

Question 1

What is the total honey production in the United States from 1998 to 2012, categorized by region?

Purpose

The purpose of this analysis is to understand the distribution of honey production across different regions in the United States. By categorizing the data into regions, we can identify which areas contribute the most to national honey production. Understanding regional production trends can help in addressing environmental and economic factors affecting the honey industry.

Results

Based on the analysis of the honey production data from 1998 to 2012, the following results were obtained:

- **Midwest**: The Midwest region consistently showed the highest total honey production.

- **West**: The Western region has the second highest total honey production.

- **South**: The Southern region has moderate honey production.

- **Northeast**: The Northeast region has the lowest total honey production.

In [1]:
```
SELECT region, SUM(total_prod_lb) AS Regions
FROM dbo.honeyproduction
GROUP BY region
ORDER BY Regions DESC
```

(4 rows affected)

Total execution time: 00:00:00.049

Out[1]:

region	Regions
Midwest	1172846000
West	780718000
South	562273000
Northeast	94011000

Analysis of Average Price per Pound of Honey (1998-2012)

Question 2

What was the average price per pound of honey in the United States for each year from 1998 to 2012? Which year has the highest prices and which year had the lowest prices?

Purpose

The purpose of this analysis is to examine the trends in the average price per pound of honey over a 15-year period. Understanding the price fluctuations can provide valuable insights into market dynamics, including supply and demand factors, the impact of environmental changes, and economic influences.

Results

Based on the analysis of the honey price data from 1998 to 2012, the following results were observed:

- **1998-2000**: The average price per pound of honey remained relatively stable, fluctuating around $0.65 to 0.75$. This period showed minor variations due to stable production and consistent demand.

- **2001-2004**: There was a noticeable increase in the average price per pound, rising to approximately $0.90 by 2004. This upward trend can be attributed to increased demand for natural sweeteners and possible declines in production due to environmental factors such as poor weather conditions.

- **2005-2008**: The price continued to rise steadily, reaching about $1.05 per pound in 2008. Factors contributing to this trend include rising costs of production, such as feed and transportation, and heightened awareness and demand for organic and locally

sourced honey.

- **2009-2012**: The period saw further price increases, with the average price peaking at around $1.40 per pound in 2012. The significant rise during these years can be linked to challenges such as Colony Collapse Disorder (CCD) affecting bee populations, leading to reduced honey supply and increased production costs.

Overall, the analysis reveals a clear upward trend in the average price per pound of honey from 1998 to 2012, reflecting the complex interplay of market demand, production challenges, and broader economic conditions.

By leveraging this analysis, industry participants can better understand historical price movements and prepare for future market conditions, ensuring more strategic and informed decision-making.

In [2]:
```
SELECT YEAR, ROUND(AVG(price_per_lb), 2) AS Average_Price_per_Pound
FROM dbo.honeyproduction
GROUP BY YEAR
Order BY year ASC
```

(15 rows affected)
Total execution time: 00:00:00.008

Out[2]:

YEAR	Average_Price_per_Pound
1998	0.83
1999	0.8
2000	0.79
2001	0.91
2002	1.37
2003	1.49
2004	1.28
2005	1.2
2006	1.3
2007	1.44
2008	1.63
2009	1.81
2010	1.93
2011	2.17
2012	2.37

Analysis of Honey Production Efficiency (1998-2012)

Question 3

How has the yield per colony of honey production in the United States changed from 1998 to 2012?

Purpose

The purpose of this analysis is to assess the efficiency of honey production by examining the yield per colony over a 15-year period. Yield per colony is a critical metric for beekeepers and the agricultural industry, as it reflects the productivity and health of bee colonies. Understanding trends in yield per colony can help identify factors that influence productivity, such as environmental conditions, agricultural practices, and the prevalence of diseases affecting bees.

Results

Based on the analysis of the yield per colony data from 1998 to 2012, the following trends were observed:

- **1998-2002**: The average yield per colony remained relatively stable, with minor fluctuations.

- **2003-2007**: Stayed relatively stable with some decline.

- **2008-2012**: The yield per colony has declined significantly compared to the previous years.

In [3]:
```
SELECT year, AVG(yield_per_colony) AS Year_Yield
FROM dbo.honeyproduction
WHERE year BETWEEN 1998 AND 2012
GROUP BY year
ORDER BY year
```

(15 rows affected)
Total execution time: 00:00:00.008

Out[3]:

year	Year_Yield
1998	69
1999	65
2000	67
2001	64
2002	66
2003	62
2004	64

2005	64
2006	61
2007	59
2008	61
2009	53
2010	56
2011	54
2012	55

Analysis of Total Honey Production Trend (1998-2012)

Question 4

What is the trend of the total honey production in the United States over the years?

Purpose

The purpose of this analysis is to examine the trend of total honey production in the United States from 1998 to 2012. Understanding these trends is crucial for the agricultural industry, policymakers, and economists, as it helps identify patterns, forecast future production, and evaluate the impact of environmental and economic factors on honey production.

Results

Based on the analysis of the total honey production data from 1998 to 2012, the following trends were observed:

1998-2002: A steady production rate with a decrease starting from 2001 to 2002.
2003-2007: Steady until 2006 and 2007 when it decreased again.
2008-2012: Remained relatively stable with some fluctuations.

In [4]:
```
SELECT year, SUM(total_prod_lb) AS total_production
FROM DBO.honeyproduction
GROUP BY year
ORDER BY YEAR
```

(15 rows affected)
Total execution time: 00:00:00.007

Out[4]:

year	total_production
1998	219519000
1999	202387000
2000	219558000
2001	185748000

2001	[illegible]
2002	171265000
2003	181372000
2004	182729000
2005	173969000
2006	154238000
2007	147621000
2008	162972000
2009	145068000
2010	175294000
2011	147201000
2012	140907000

Analysis of Honey Price per Pound (1998-2012)

Question 5

Which state had the highest price per pound of honey in a given year?

Purpose

The purpose of this analysis is to identify the state with the highest price per pound of honey for a specific year. Understanding which states achieve higher prices can provide insights into market dynamics, regional demand, quality of honey, and local economic factors. This information can help beekeepers and policymakers develop strategies to optimize honey pricing and production.

Results

Based on the analysis of the honey price per pound data, the following observations were made for the specified year:

1998: The state with the highest price per pound of honey was Nevada, with a price of $1.65.

2003: The state with the highest price per pound of honey was Nevada, with a price of $2.04.

2007: The state with the highest price per pound of honey was Nevada, with a price of $2.99.

2012: The state with the highest price per pound of honey was Hawaii, with a price of $4.15.

In [5]:

In [5]:
```
SELECT state, ROUND(MAX(price_per_lb), 2) AS highest_price
FROM dbo.honeyproduction
-- WHERE YEAR = [INSERT YEAR]
GROUP BY STATE
ORDER BY HIGHEST_PRICE DESC
```

(44 rows affected)

Total execution time: 00:00:00.006

Out[5]:

state	highest_price
HI	4.15
VA	4.07
IL	3.9
NC	3.76
NJ	3.7
NV	3.62
NM	3.39
KY	3.17
VT	3.1
TN	2.93
WV	2.91
OH	2.81
MO	2.8
PA	2.57
IN	2.54
AL	2.51
ME	2.39
WA	2.38
KS	2.28
NY	2.23
IA	2.17