

Hunter College - CUNY
Department of Geography
Nature of New York

Exercise 13: AGRICULTURE in NYS

REQUIRED 

Due date: **May 1, 2018**. Late submission will be penalized.

PURPOSE: This exercise compares the agricultural productivity between your three counties and with that of NYS.

INTRODUCTION:

You will compare the counties to the state averages, look at the county profiles, and assess the effect of the weather during this growing season on the counties' agricultural production. The **US Census of Agriculture** is conducted in years ending in a 2 and 7. The 2017 census began at the end of last year so use 2012 statistics unless more recent ones are available. Always document the date of statistical data. **When doing the county comparison against NYS, remember that statewide totals will always be larger. Your analysis will focus on "comparison" as a percent of the total and/or "location" as to the concentration of activity within the state.**

ASSIGNMENT: There are three parts to this exercise.

PART I. STATEWIDE COMPARISONS (comparing NYS to each of your 3 counties)

- Go to <http://www.agcensus.usda.gov> for the **US Dept. of Agriculture 2012 Census of Agriculture**.
- In the middle of the page, under "**FIND DATA BY**", click on "**State & County.**"
- Click on "**New York**" then click on "**County Profiles: State & County.**"
- Click on: "**Statewide Summary.**" **PRINT** the NYS statewide summary (2 pages).
- Click on each county selected and **PRINT** each county's summary (2 pages each).
- **Do the same for the 2007 census** using the direct link below. (**PRINT** the 2007 NYS state-wide summary plus summary pages for each one of your counties).
- ***This is for comparison purposes.***
- ***Keep the printed summaries for easy reference.***

CAUTION: The entire 2012 report is 635 PAGES long. **DO NOT HIT PRINT FOR THE ENTIRE REPORT. BE SELECTIVE** if you must print

The direct link for 2012 data is

http://www.agcensus.usda.gov/Publications/2012/Full_Report/Census_by_State/New_York/.

The direct link to the 2007 census data is:

http://www.agcensus.usda.gov/Publications/2007/Full_Report/Census_by_State/New_York/ .

ACTIVITY 1:

In CHART FORMAT compare the agricultural trends in each of your counties to the trends experienced by New York State between the 2002 and 2012 agricultural censuses. (The 2007 census summary has data from 2002.)

Study the statistics and do the following.

- A. Compare the percent of change for NYS and each of your counties in the following four areas:**

- Number of farms
- Land in farms
- Average size of farms
- Market value of products sold

B. From the pie graphs, compare the percentage of **Type of Land in Farms** for NYS and the 3 counties in 2007 and 2012.

C. From page 2 of the Summary, **list the top 5** ranking **VALUE OF SALES BY COMMODITY GROUP (\$1,000)** from the 2012 NYS summary and summaries for the 3 counties. (Rank by highest number, e.g. 54th place may be the highest for a county within NYS.)

D. Analyze the data. Discuss the similarities and differences between the four. If a county does not have an agricultural base or if the data cannot be disclosed, include that information in your statement. Bring in relevant information about each county's physical geography and historic circumstances. *(Remember statewide numbers are always much larger than county numbers unless that county is the only producer of the product.)*

PART II. COUNTY PROFILES (comparing your 3 counties to each other)

This is the link to a table for county comparisons using the **2012 census data**: http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/New_York/st36_2_001_001.pdf . The entire table is 16 pages long and consists of 2 sets of 8 pages each. Counties are listed alphabetically with New York State data in the first column followed by Albany County. A new set of categories begins on page 9 with NYS and Albany County.

The link for the same table in the **2007 AgCensus** is:

http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/New_York/st36_2_001_001.pdf

NOTE these handy tools:

The National Agricultural Statistical Service (NASS) CropScope is located at <http://nassgeodata.gmu.edu/CropScope/>. It allows you to zoom in on any agricultural area of the country and get local data.

- Click on the USA flag map to enter county data search parameters.
- This program will create graphs and pie charts by hitting those icons.

QUICKSTATS at <http://quickstats.nass.usda.gov/> provides mapped information at the state and county levels through a series of topical filters. You need to select "county level."

- After filtering the categories, click on the GET DATA button on the bottom of the page.
- Use the CLEAR button to start anew.
- ZOOM in on the state map to show county outlines and names.

ACTIVITY 2:

a) Select any four categories for your county whose name begins with the letter closest to the letter A. For example, if your counties are Suffolk, Nassau and Queens choose Nassau County as the lead county. *(Remember there are more categories beginning on page 9.)*

b) In CHART FORMAT compare those same 4 categories with the statistics for your 2 other counties and also for NYS using 2012 and 2007 census data. (FORMAT: Four columns (NYS + 3 counties) by eight rows (4 categories with 2012 data/4 categories with 2007 data.)

c) Analyze the data. Discuss the differences between the 3 counties and how they stand against NYS figures for the 4categories chosen over the course of the 2007

and 2012 censuses. You may augment your analysis with any mapped data from any source.

PART III. CROP WEATHER.

Growing season is a very important part of agriculture. The longer and warmer the growing season, the better it is for crops. Rainfall is best when it coincides with plant development, not at planting or harvesting. Local weather can be both beneficial and detrimental to the growing process. Where conditions are harsh farming may take the form of animal-raising and/ or tree crops. National Agricultural Statistical Service (NASS) issues weekly crop weather reports between April and November. Weather conditions (too wet; too dry; too cold; too warm) affect all stages of the agricultural process (crop planting, growing, harvesting; raising of poultry and livestock). Weather conditions will influence quality, yield and price.

Go to [www.nass.usda.gov/Statistics by State/New York](http://www.nass.usda.gov/Statistics_by_State/New_York). Under “**New York Publications and Press Releases**” scroll the box. Click “**Crop Progress and Condition.**” Use the **2017** calendar. The link is: [https://www.nass.usda.gov/Statistics by State/New York/Publications/Crop Progress & Condition/index.php](https://www.nass.usda.gov/Statistics_by_State/New_York/Publications/Crop_Progress_&_Condition/index.php)

ACTIVITY 3:

1. WEATHER CONDITIONS.

How did weather conditions in 2017 affect agriculture in NYS and in particular, agriculture in your counties? (Note: Not all counties will be mentioned in each report.)

Read the 2017 reports for April 30, June 25, August 20 and October 8.

a) From the four weekly reports, **summarize** any 2014 weather-related occurrences of significance and importance for each of the counties or regions where your counties are located.

b) **Compare similar dates for 2016.** Summarize how the two growing seasons compare to each other. Which was better for agricultural production? Include any specific problem or event of significance.

2. WEATHER NORMALS.

A) NOAA maintains data for average weather conditions of temperature and precipitation by weather station. Go to <https://www.ncdc.noaa.gov/climatenormals/clim20/state-pdf/ny.pdf> to view 1971-2000 charts. Scroll to **page 4** of the PDF to find the map number for the **name** of the weather station within each of your counties. If none exists, use the weather station closest to its borders. Starting on **page 5** of this PDF is a list of all weather stations by map number. Write down the weather station name and location. Weather station data begins on page 8 of the PDF.

>>>THIS IS A **442 PAGE** DOCUMENT. **DO NOT PRINT IT.**

For **1980-2010 charts** go to <https://www.ncdc.noaa.gov/cdo-web/datatools/normals>. Under **MONTHLY NORMALS** scroll the states list to New York and click. Find the weather stations for your counties. On the right side click “View Station Report”. There are 4 charts dealing with temperature, precipitation, snowfall and degree days for each weather station.

B) Go to <http://hurricane.ncdc.noaa.gov/cgi-bin/climatenormals/climatenormals.pl>. Click on “Monthly Station Climate Summaries (CLIM-20).” Using the station names from (A) above, select your stations. These are individual 6-page tables. **PRINT** the weather

summary table for each of your counties and keep it as a reference for your county presentation.

In **CHART FORMAT** do the following:

- a) List the **LATITUDE** of each station.
- b) List the **ELEVATION** of each station.
- c) List the 2 warmest months (**mean column**) for each station.
- d) List the 2 coldest months (**mean column**) for each station.
- e) List the 2 wettest (all types of precip) months (**mean column**) for each station.
- f) List the 2 driest months (**mean column**) for each station.
- g) List the month with the greatest amount of mean snowfall.
- h) **Discuss your findings** after reviewing the normal conditions of the three counties and noting if any county stands out as being significantly different from the others. **Does any climate control stand out as a major influence on this data?**

3. FREEZE/FROST DATA.

Get freeze/frost data for your county weather stations identified above from

https://www.ncdc.noaa.gov/climate_normals/clim20supp1/states/NY.pdf

Use the 28°F data line for questions 1, 2 and 3 below.

Use **CHART FORMAT** to compare the 3 counties.

- 1) What is the average **date** that your county would experience a 50% chance of a late frost? (spring freeze)?
- 2) What is the average **date** your county would experience a 50% of an early frost (fall freeze)?
- 3) What is the average **number of days** of the year that your county would experience a 50% chance of 28°F or lower temperature (freeze free period)?
- 4) **Yes or No:** Does agricultural productivity of each county (chief products and value) reflect the length of its growing season in the sense of hardy crops/non-weather dependent products versus delicate crops and weather-dependent products? **Explain this.**

OTHER LINKS. (This is for informational purposes only.)

Aspiring teachers check the NASS Kids Page and Educators' Corner.

[https://www.nass.usda.gov/Statistics by State/Louisiana/Publications/Kids Activity Book/complete.pdf](https://www.nass.usda.gov/Statistics_by_State/Louisiana/Publications/Kids_Activity_Book/complete.pdf)

and [www.nass.usda.gov/Education and Outreach](http://www.nass.usda.gov/Education_and_Outreach).

Lesson plans can be found at <http://www.agclassroom.org/ny/resources/lesson.htm>.

A coloring book is at <http://www.agriculture.ny.gov/ColorNY.pdf>.