Agriculture in the White City

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Friday Footnote

As a member of my local FFA chapter I first got the chance to attend the National FFA Convention in Kansas City in the fall of 1979. Many chapters traveling to Kansas City visited cities such as Chicago and St. Louis. Chapters would often tour the Chicago Board of Trade or the Gateway Arch in St. Louis. Another stop was often the Museum of Science & Industry in Chicago. However, most FFA members never realized that when they toured the Museum of Science & Industry they were actually stepping back into history.

Figure 1: Museum of Science and Industry - Chicago

The building that houses the Museum of Science & Industry was actually a part of one of the largest and elaborate fairs ever held in the world. Many people have heard of "world's fairs" that were held on a regular basis years ago. World's fairs have been held in cities such as Paris, New York, Chicago, and Seattle. A list of some of the most notable world's fairs or expositions is in Table 1.

Table 1

Notable World's Fairs

World's Fair	Year	Location	Attraction
Exposition Universelle de Paris	1889	Paris	Eiffel Tower
World's Columbian Exposition	1892	Chicago	Ferris Wheel
Louisiana Purchase	1904	St. Louis	Radiophone – original radio
Century of Progress	1934-35	Chicago	Homes of Tomorrow exhibit
New York World's Fair	1939-1940	New York	Food Zone
Century 21 Exposition	1962	Seattle	Space Needle
Expo 74	1974	Spokane	IMAX theater

However, it was the 1892 *World's Columbian Exposition* in Chicago that is of most interest. The building that today houses the Museum of Science & Industry was originally the Palace of Fine Arts during the world's fair in 1892. But it is the emphasis and inclusion of agriculture in the *World's Columbian Exposition* that we will focus on.

America in 1892 was in the midst of the industrial revolution and was experiencing a dramatic change in business and industry. New technologies were being introduced every day. The *World's Columbian Exposition* would forever be remembered as the "White City" due to the introduction of alternating electric current. The Westinghouse Company won the contract to illuminate the fair, beating out General Electric. This battle will always be remembered as the war between Edison's direct current (DC) method from General Electric and Tesla's alternating current (AC) method from Westinghouse. The bright electric lights were shown on many massive white buildings throughout the fair, giving the fair its nickname "The White City." It is these buildings and the emphasis on agriculture that is presented below.

Figure 2: World Columbian Exhibition – Administration Building – White City

Agricultural Buildings

Buildings related to agriculture at the 1892 *World's Columbian Exposition* included agriculture, horticulture, fisheries, forestry, dairy, and the livestock pavilion. These buildings were all of varying sizes and costs. Table 2 shows the details of each building.

Table 2

Agriculture Related Buildings

Building	Size	Cost
Agriculture Building	800' x 500'	$618,000
Horticulture Building	1000' x 250'	$138,000
Fisheries	1100' x 200'	$225,000
Forestry Building	208' x 528'	$100,000
Dairy Building	200' x 100'	$30,000
Livestock Pavilion	280' x 440'	----

Agriculture Building

The Agriculture Building was located in a very prominent location along the Great Basin waterway and adjacent to the fair's Administration Building. The Agricultural Building was considered one of the "Great Buildings" at the fair due to their magnificent size and architectural design. The building had 500,000 square feet of exhibit space and included several ornate domes. The central dome of the building was 130 feet in diameter. The famed sculptor Agustus Saint-Gaudens created the Statue of Diana for the top of the main dome. Adjacent to the Agriculture Building was a 312' x 550' area for displaying the most modern agricultural implements.

Figure 3: Agriculture Building with Great Basin in foreground

Figure 4: Interior of Agriculture Building

Figure 5: Main Entrance to Agriculture Building

Exhibits in the Agriculture Building included:

Grains	Breads	Model Farm Buildings
Seeds	Biscuits	
Flowers	Starches	Farm Management Classes
Animals	Sugars	
Machinery	Syrups	Weather Stations
Tools	Malts	
Pests	Liquors	Land-Grant Universities
Pesticides	Meats	
Cocoa Mills	Dairy Products	Agricultural Experiment Stations
Chocolate Pavilions	Condensed Milk	
Breweries	Fruits & Vegetables	
Moonshiner's Cabin	Heinz pickles	Liberty Bell made of wheat, oats, and rye
Tobacco	Star hams & condensed meat pies	
Cork	Nuts	
	Farm Products by State	

Horticulture Building

The Horticulture Building was a prominent structure along the lagoon which faced the Wooded Island. It was 1,000' in length and 240' wide and was included in the list of "Great Buildings" at the fair. The central dome of the Horticulture Building was 180' in diameter and 114' high. The glass domes and end pavilions covered great palm trees, tree ferns, bamboos, and plants from far away tropical lands. The building was surrounded by elaborate gardens displaying the latest in horticultural plants. In addition to the building itself, it was surrounded by 19,200 sq. ft. of greenhouses that contained 500,000 pansies, 100,000 roses, and 1 million other flowers.

The entrance included statuary such as "Awakening of the Flowers" which represented spring and "Sleep of the Flowers" which signified autumn. Inside the building were heroic statues of "Flora" and "Pomona," the goddess of fruit trees, gardens, and orchards. It also included an entire pavilion devoted to viticulture. Exhibits in the Horticulture Building included:

Japanese Garden	Bay laurels (Illinois)	Orchids
German Wine Cellar	Strawberries (Illinois)	Palms
Mexican Desert	Begonias (Indiana)	Snap dragons
Sparkling	40' Tree Fern (Australia)	Pansies
Champagnes	Watermelons (Mississippi & Georgia)	Roses
Spanish sherries	Model US Capital made from Canadian	Wines
Cherries, berries,	Thistles (New York)	Fruits
apples, peaches, pears,	Orchids & Ferns (New Jersey)	Flowers
& plums (Oregon)	Berries (Colorado)	Fresh, dried, & canned
Oranges	Grapes, Prunes, & Eggplant (Idaho)	Fruits and Vegetables

Figure 6: Horticulture Building with Wooded Island in foreground.

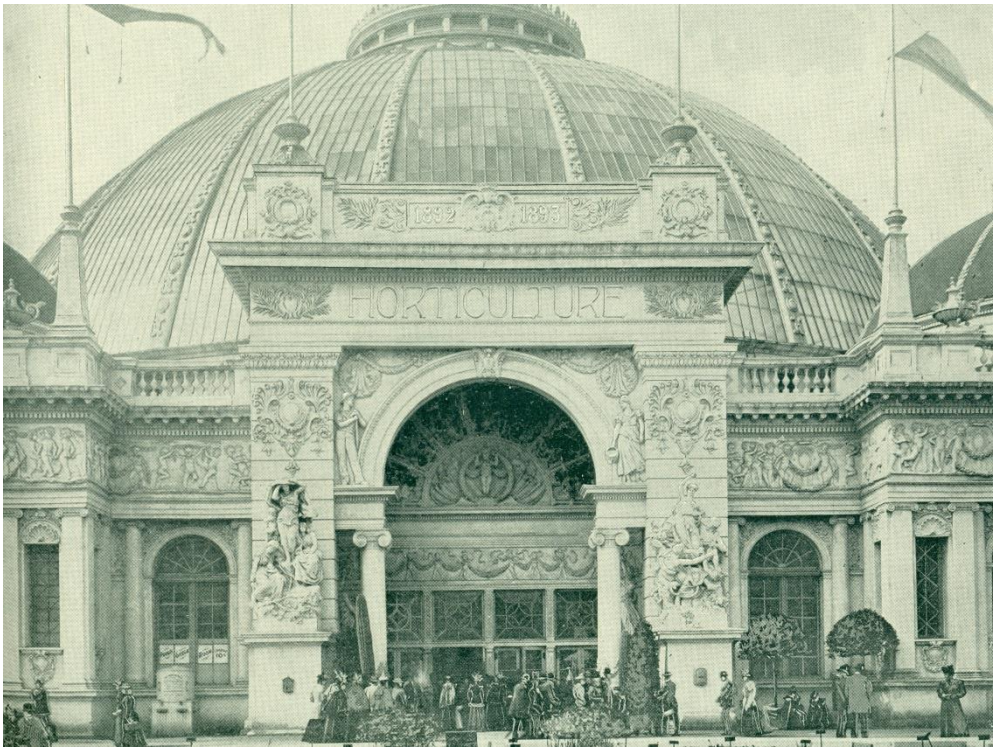

Figure 7: Main Entrance to Horticulture Building

Figure 8: Crystal Cave under central dome of Horticulture Building

Tower of Oranges

One of the most elaborate displays in the Horticulture Building was the Tower of Oranges. The tower was sponsored by the Southern California Fair Association and rose 35 feet tall and was 5 feet in diameter. It was topped by a stuffed eagle. Visitors could win a box of oranges by guessing the number of oranges in the display. It actually contained 14,000 oranges that were changed every three to four weeks.

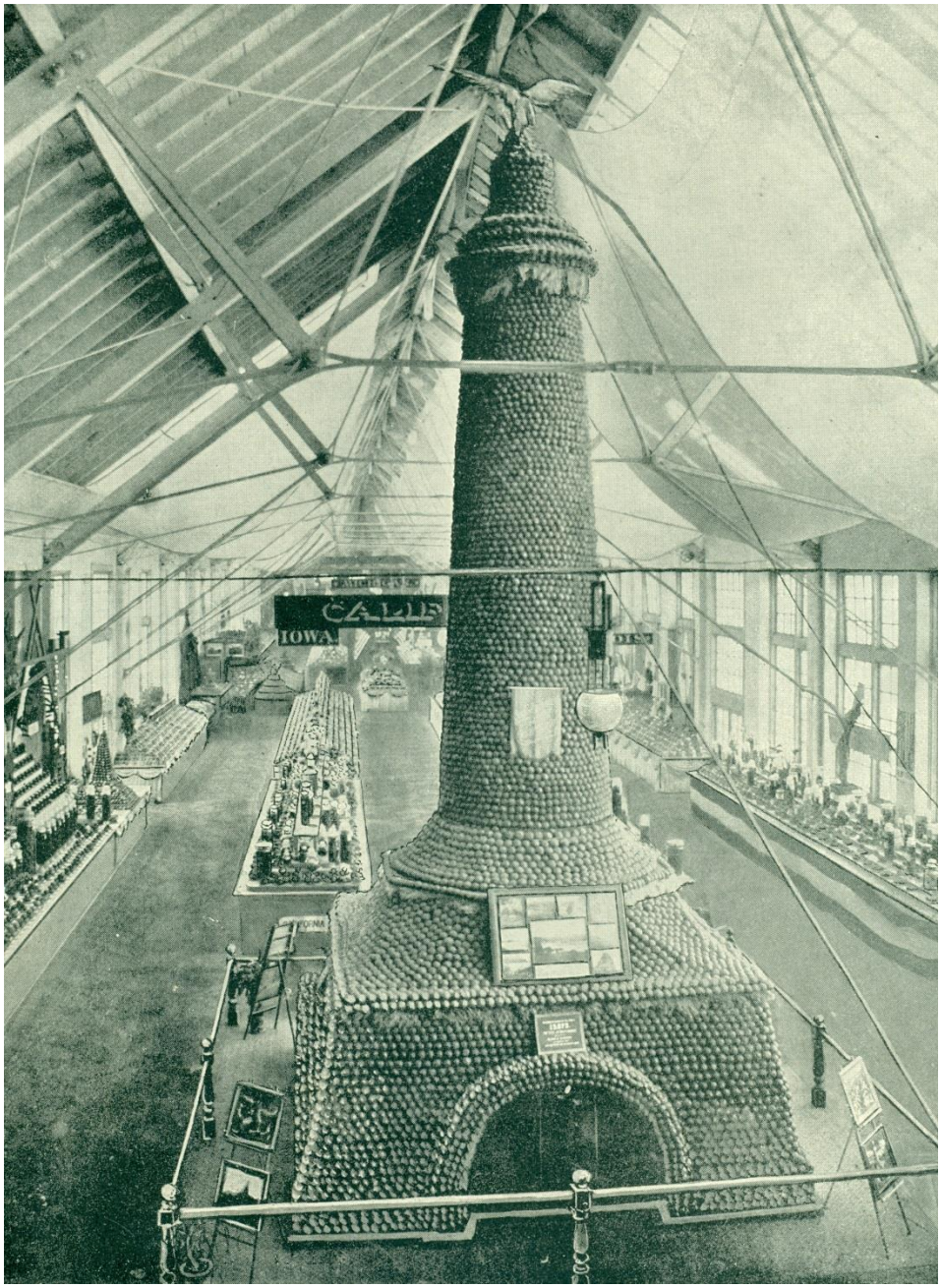

Figure 9: Tower of Oranges display in Horticulture Building

Fisheries Building

The Fisheries Building was located on the Lagoon, opposite the Horticulture Building. It was one of the smallest of the "Great Buildings" at the fair. It housed a grand display of marine plants and animals in the world. The building included 10 huge aquariums with a capacity of 140,000 gallons of water. The 3,000 square feet of surface area included every form of sea life known to man at the time.

While the building was mainly dedicated to sea life, it did include exhibits related to both sport fishing and "fish farming," the predecessor to today's aquaculture. Other exhibits included implements used for commercial fishing and the latest in fishing equipment.

Figure 10: Central section of Fisheries Building

Figure 11: Fisheries Building with lagoon in foreground.

Forestry Building

The Forestry Building was patterned after the Forestry Building at the 1889 Paris Exposition and was located along the shores of Lake Michigan. The building used a colonnade of tree trunks to support a thatched roof. States and foreign countries all contributed various trees to the building. The building was built entirely out of wood without any nails or metal used. Exhibits in the Forestry Building included:

425 species of trees from the US	Natural Resources conservation methods
321 varieties of timber from Paraguay	Forest management plans
Pulp and paper exhibit from Chicago	Government forestry programs
Black Walnut log from North Carolina	Wood processing techniques and tools
Willow baskets from France	Logging equipment
Mahogany from Mexico	Furniture manufacturers from Grand Rapids, MI
Carved teak from the Middle East	Wainscoting from West Virginia
Petrified logs from Oregon	500 medicinal herbs from Ohio
Redwood wine tank from San Francisco	Logging camp from Michigan
Carved temples from Siam	State pavilions made from native woods

Figure 12: Forestry Building

Dairy Building

The Dairy Building was 200’ x 100’ and covered a half-acre. The building housed a Dairy School, displays on butter and other dairy products, and different breeds of dairy cows. Old world dairy techniques from European farmers were displayed along with newer, modern dairy methods used by eastern US dairy farmers.

Figure 13: Dairy Building

Livestock Pavilion

Livestock exhibits at the fair included horses, cattle, swine, sheep, camels, goats, and rabbits. Domestic animals such as dogs and cats were also exhibited as well as ferrets and other wild animals. It was estimated that it took two to three hours to see all the livestock exhibits.

The Livestock Pavilion included a 400' wide open arena encircled by 10 tiers of seats for 15,000 spectators.

Figure 14: Livestock Pavilion

Additional Agriculture Features

Cart-Horse Statue

In front of the Manufacturers and Liberal Arts Building stood the stature of a cart, or draught horse. It signified the relationship between man and horse, the nobility of labor, and tillage of the soil.

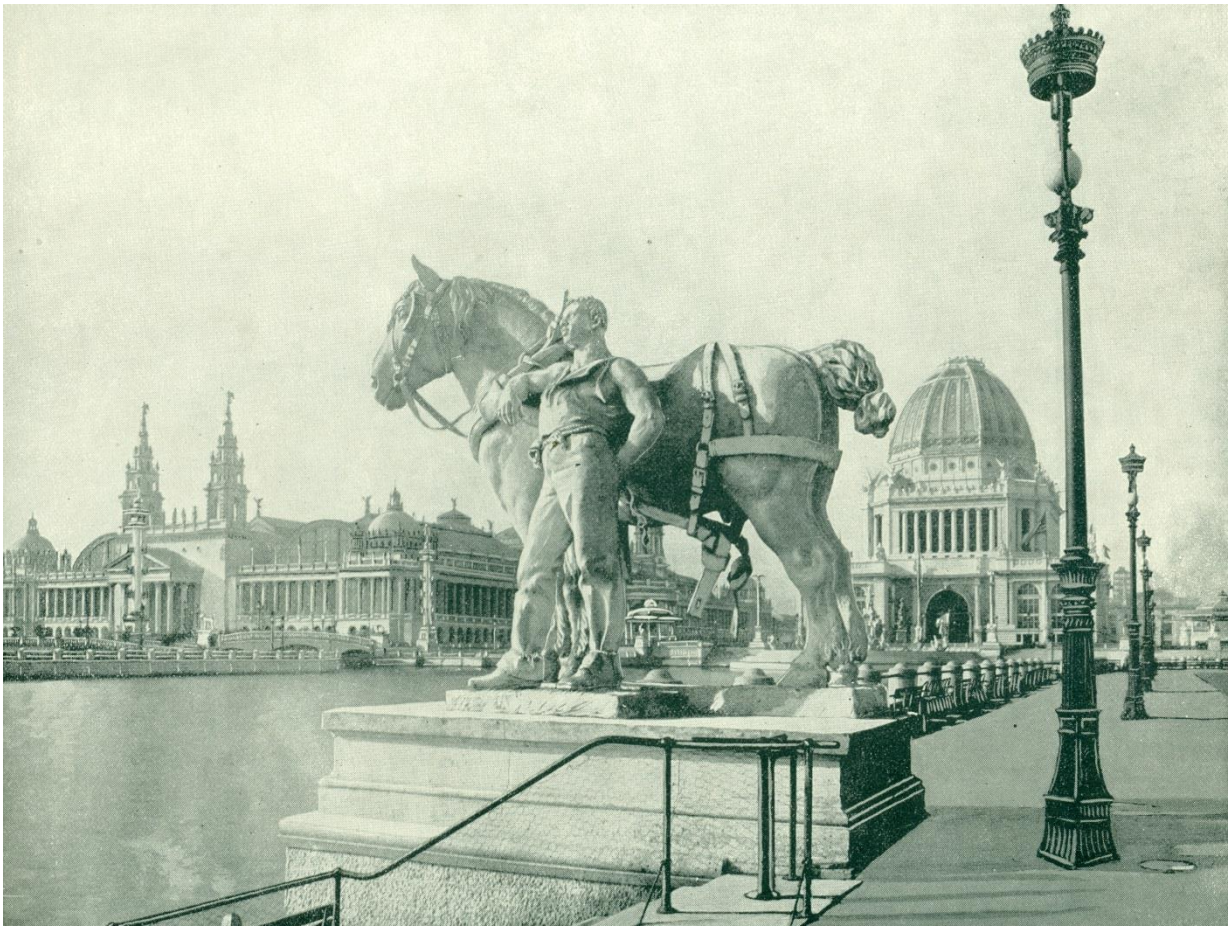

Figure 15: Cart Horse with man

Bull Statue

The massive bull statue stands in contrast to the graceful female statue next to it. This statue apparently had different titles including:

- Bull with Maiden
- Statue of Plenty
- Native American Corn Goddess

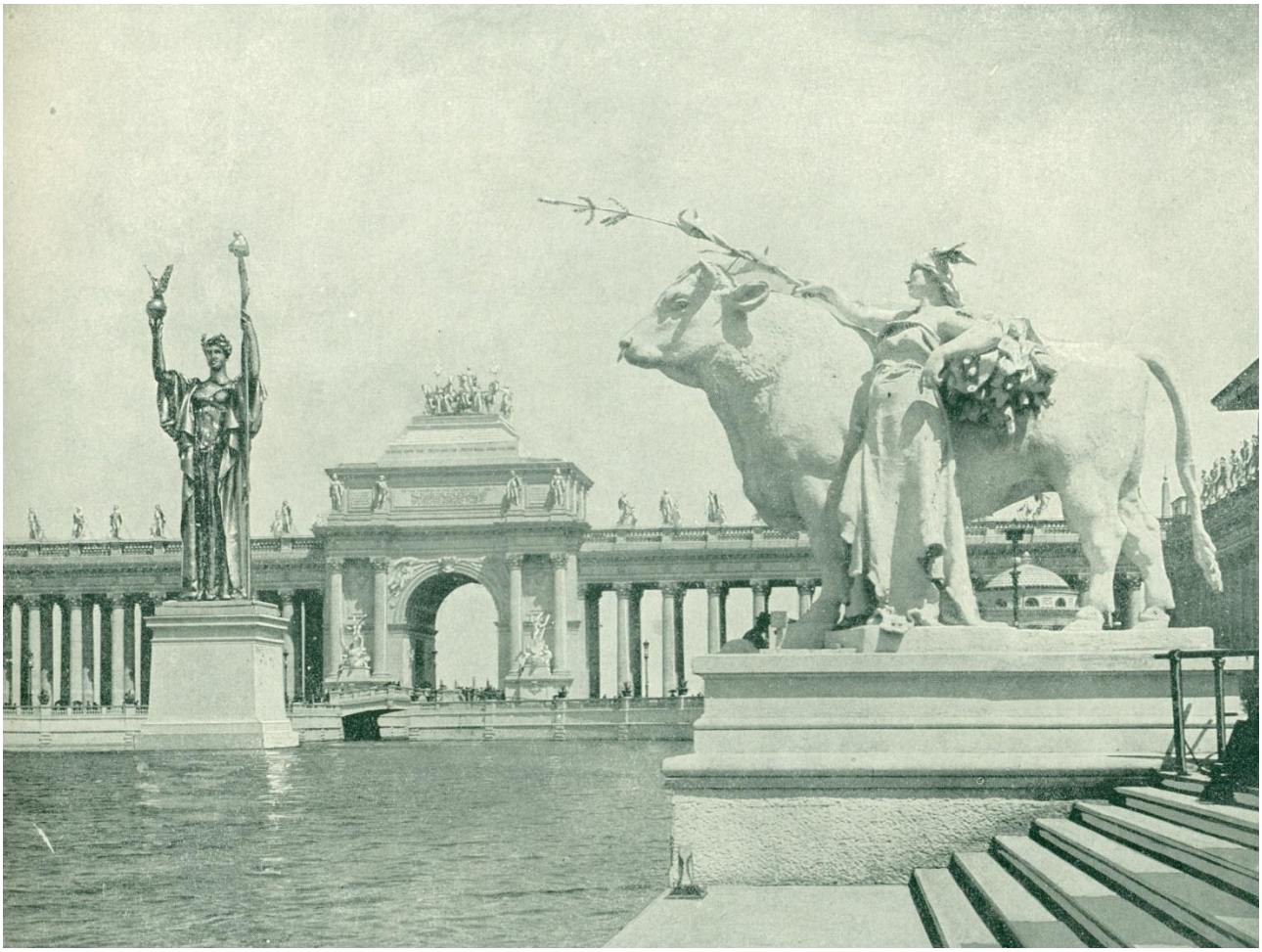

Figure 16: Bull with Maiden statue

Land Transportation

The statue of land transportation is represented by a female figure standing on the front of a locomotive and grasping a lever. On her left stands "Mechanical Industry" and on her right "Agriculture" both of which have been made prosperous by the aid of land transportation.

Figure 17: Land Transportation statue with Agriculture on her right

Earth

A female figure holding a crown of pearls and precious stones represents Earth. It was one of four "element" statues that represented Earth, Water, Fire, and Air.

On her left is a strong man breaking rock to procure raw materials. On her right is a youth carrying fruit, flowers, and grain: agricultural products which come from the earth.

Figure 18: Earth statue

Illinois Prairie Farm

The Illinois State Building included a picture of an ideal Illinois prairie farm. The artwork was made completely out of different colored grasses, grains, and other raw vegetable material. The frame was made of ears of corn. The farmhouse, barns and livestock sheds were made with corn husks and seeds.

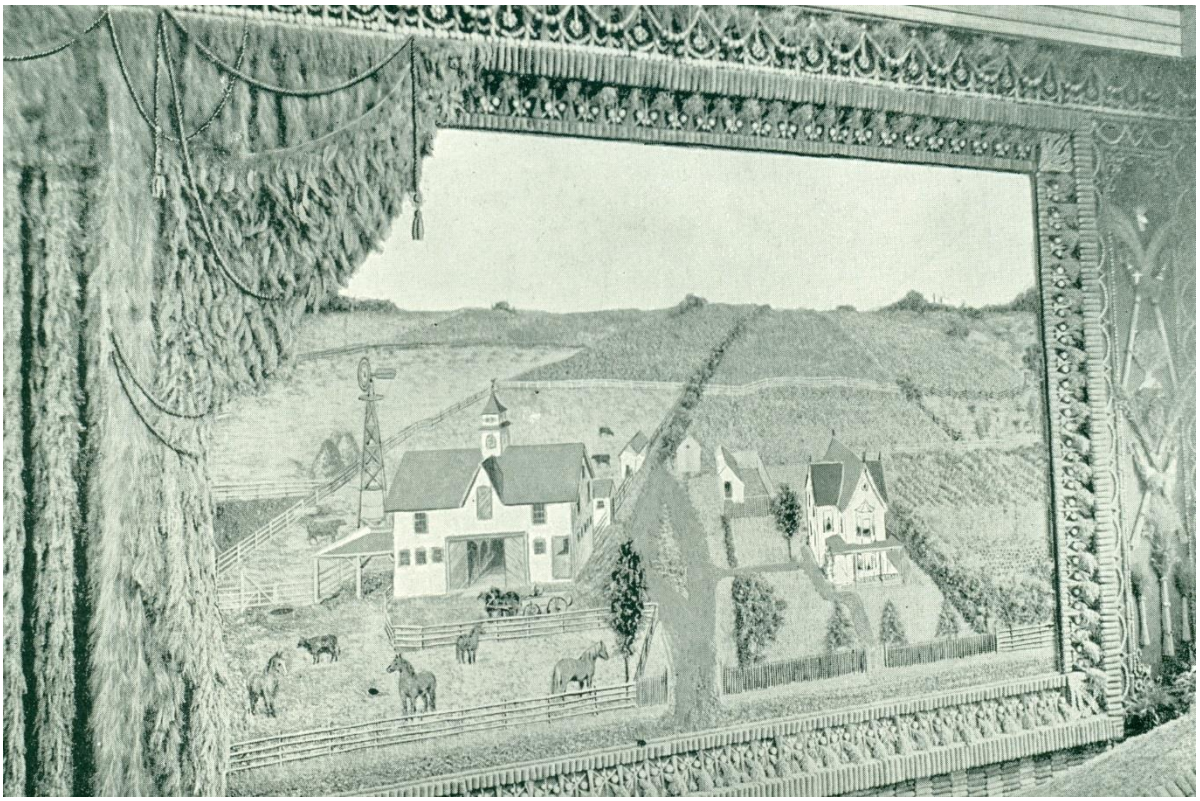

Figure 19: Illinois Prairie Farm display in Illinois State Building

Windmill Display

Adjacent to the Agricultural Building was a massive display of the latest windmill technology. The display included traditional Dutch windmills and the latest American designed steel and iron windmills. The windmills allowed rural farmers to have access to water for their farm, livestock, and home before rural electric cooperatives brought power to rural areas across the country.

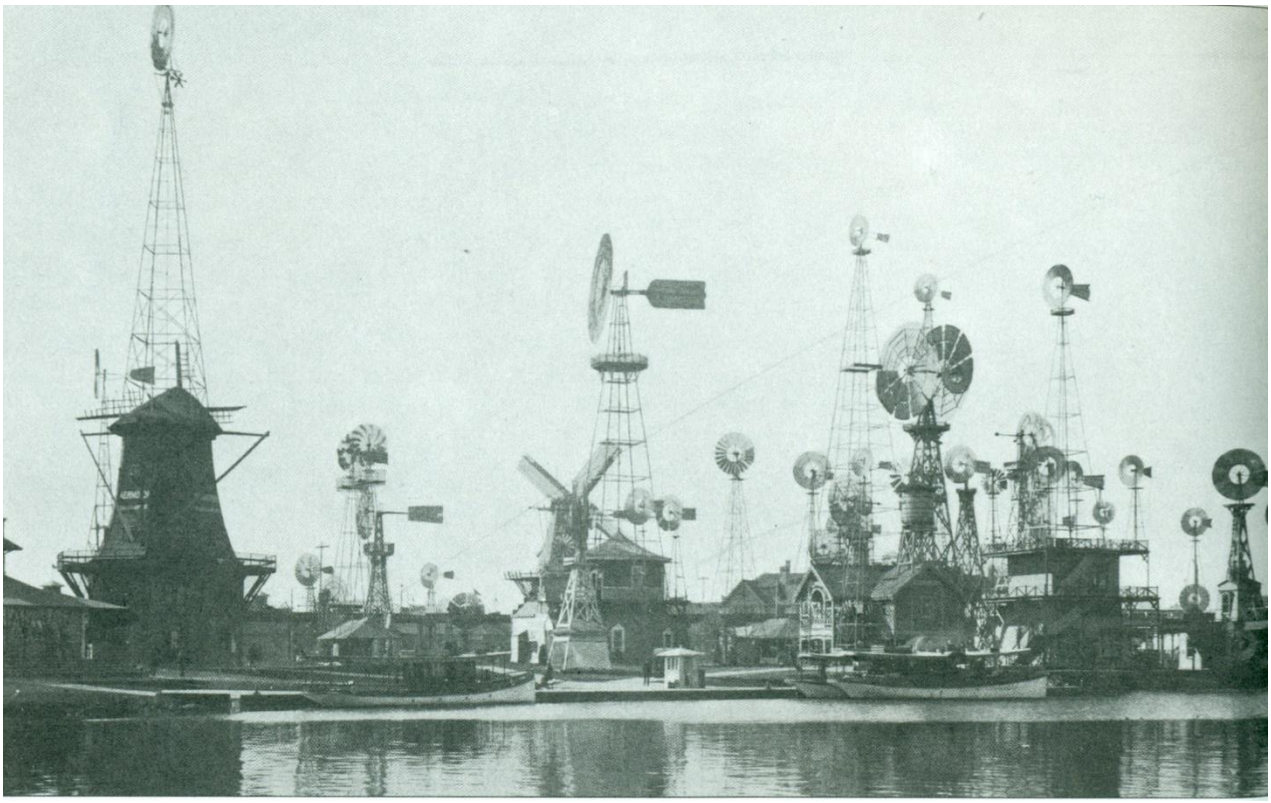

Figure 20: Windmill display adjacent to the Agriculture Building.

State and Foreign Countries

Most states and foreign countries erected buildings to showcase their history, culture, and industry. These displays often included samples of their trees, plants, animals, and agricultural products. The buildings were often surrounded by elaborate gardens that displayed horticultural plants from their respective locations.

Table 3

State and Foreign Country Displays related to Agriculture

State or Country	Display
Canada	3,500 samples of grain
Costa Rica	Beans, roots, leaves of tropical plants
Cuba	Tobacco
Guatemala	5,000 orchids, coffee exhibits
Sweden	Wood pulp products
California	127 year old palm tree, red wine fountain
Colorado	Pictures made from colored grain
Florida	Native gardens, cotton, sugar, rice, tobacco
Illinois	Women's Corn Kitchen – 100 ways to cook corn
Iowa	Palace made out of corn, dome decorated with different corns
Kentucky	Tobacco and distilling displays
Louisiana	Plantation life displays including rice and sugar
Maryland	Canning and oyster industries, working canned-goods operation
New Hampshire	Plow made and used by Daniel Webster
New York	Adirondack trees
Washington	20 foot tall wheat pyramid, 156 bushels of oats from one acre
Wisconsin	Logging displays

World's Columbian Exposition Grounds

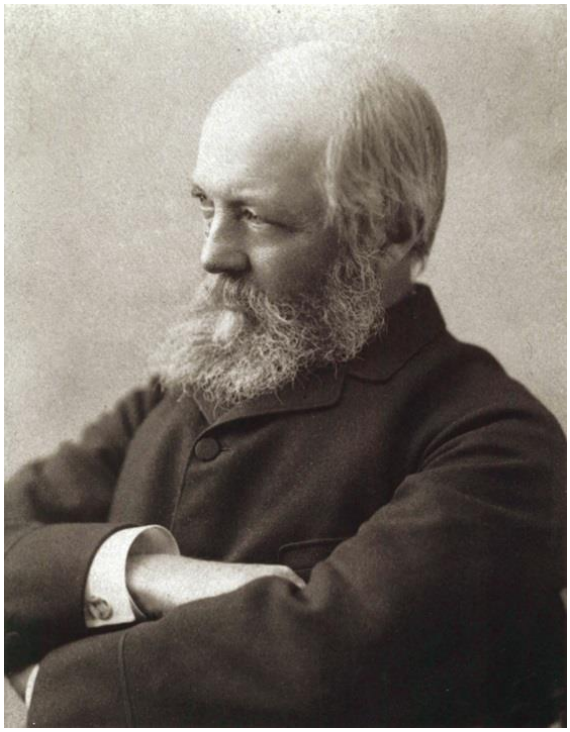

Figure 21: Frederick Law Olmstead

A major agricultural related component of the exposition was the land that it sat on. The Committee on Grounds and Buildings convinced world renowned landscape architect Frederick Law Olmstead to take on the task of designing the grounds.

The location selected for the fair was Jackson Park, along the shores of Lake Michigan, south of Chicago. Olmstead had the philosophy that the grounds surrounding the buildings should include lakes, lagoons, turf, flowers, shrubs, trees, fountains, statues, and other features *in unity of design* with the buildings.

Olmstead's vision for the grounds included "lagoons, canals, and great lawns all set against the cobalt-blue steepe of Lake Michigan" (Larson, 2003, p. 80).

Olmstead's plan included dredging an area to create a central lagoon surrounding a wooded island in the middle. The fair's Great Buildings would surround the lagoon, great basin, and north canal. Many of the plants that would be installed on the grounds were raised in the fair's greenhouses. Olmstead's team would plant 200,000 trees, aquatic plants, ferns, and 30,000 willow cuttings along the waterways.

Olmstead shared his concerns about the landscape when he wrote:

> "Let me remind you that the whole field of the Exposition has already come to be popularly called 'THE WHITE CITY'…I fear that against the clear blue sky and the blue lake, great towering masses of white, glistening in the clear, hot summer sunlight of Chicago, with the glare of the water that we are to have both within and without the Exposition grounds, will be overpowering. This makes it more important than ever to provide a counterbalance of dense, broad, luxuriant green bodies of foliage." (Larson, 2003, p. 196).

Olmstead transformed a desolate, treeless landscape of Jackson Park into a beautiful fairgrounds that included trees, flowers, wooded areas, lakes, lagoons, and canals. His work, not only at the *World's Columbian Exposition*, but in other areas of this country like New York's Central Park, will live on for generations to come.

Conclusions

The *World's Columbian Exposition* of 1893 was one of the largest and successful world's fair ever held. It introduced the world to a variety of new products and technology including the first major use of alternating electric current to illuminate buildings and homes.

The inclusion of agriculture in the exposition was also very impressive. The Great Buildings at the fair included Agriculture, Horticulture, Fisheries, and Forestry. The grounds were filled with trees, shrubs, flowering bulbs, gardens, and large grass areas. All of these features showed the importance of modern agriculture and horticulture to the citizens of the United States and the world. The *World's Columbian Exposition* was truly a celebration of agriculture!

Teaching Ideas:

1. Visit the Museum of Science and Industry in Chicago. The museum includes displays of technology including agriculture machinery throughout history. https://www.msichicago.org/

2. Research your state's participation in the *World' Columbian Exposition* of 1893. Determine if your state had a state building and what agriculture related products were displayed at the fair.

3. Find local, state, regional, and national agricultural fairs and expositions. Determine when they are held and if your chapter could visit one in your area. National agricultural expositions could include the Farm Progress Show (IN, IL, IA), the Farm Science Review (OH), or the World Ag Expos (Tulare, CA).

4. Obtain information from your state's department of agriculture on the leading agricultural products produced in your county, region, or state. Make a display or presentation to inform people of the importance of agriculture to your community and state.

5. Select a foreign country and research the agricultural goods produced in that part of the world. Determine how the agriculture products are produced, where and to whom are they marketed.

6. Research the life of Frederick Law Olmstead and the landscape architecture profession. Visit the website for the Frederick Law Olmstead National Historic Site at: https://www.npca.org/parks/frederick-law-olmsted-national-historic-site . Read the article: The Lay of the Land (Kirkwood, 2011) available at: https://www.npca.org/articles/1012-the-lay-of-the-land

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