

Teacher Guide 3: The Life and Work of Frederick Watts

1. When did Frederick Watts live? Birth: **May 9, 1801** Death: **August 17, 1889**
2. How do you think he became interested in agriculture?
 - ***Watts spent two years on an uncle's farm in Erie County after graduating from Dickinson College and before attending law school.***
3. What else interested Watts? How do we know?
 - ***Law—went to law school, became a judge.***
 - ***Business—president of the Cumberland Valley Railroad and founder of Carlisle Gas and Water Company.***
 - ***Agricultural education—founded “The Farmers High School (became Penn State).”***
 - ***Forestry—as United States Agricultural Commissioner, began an official investigation of the condition of the nation's forests, leading to the creation of the forestry division of the United States Department of Agriculture.***
4. What invention did Frederick Watts demonstrate to an audience in Carlisle? What did the audience think of the invention? What farming work method was the invention designed to replace?
 - ***Watts demonstrated a mechanical reaper to harvest wheat.***
 - ***The audience called it “Watt's Folly.”***
 - ***A team of hard-working men with grain cradles.***
5. Watts was the first president of an organization dedicated to promoting scientific agriculture. What was it called?
 - ***Pennsylvania Agricultural Society***
6. What was one of the ways this organization fulfilled its mission and promoted scientific agriculture?
 - ***Holding fairs to demonstrate the benefits of improved farming.***
7. How did Watts advance agricultural education in Pennsylvania?
 - ***Experimental farm in Carlisle.***
 - ***Founder and president of the Pennsylvania Agricultural Society to promote scientific farming.***
 - ***Founded “the Farmers' High School” (later renamed The Pennsylvania Agricultural College and then Pennsylvania State University)***
 - ***Lobbied for Merrill Act and PA state legislative funding for agricultural education.***
8. Name one characteristic that made Frederick Watts' experimental farm more efficient.
 - ***Improvements on the form and function of the Pennsylvania bank barn***
 - ***Compact farm yard, efficient layout of home and farm buildings***
 - ***Hog pen open into the barnyard/ample supply of manure as fertilizer***
9. Watts introduced a Mediterranean winter wheat to farmers in Pennsylvania in order to avoid attacks on the grain by the dreaded Hessian fly. Why?
 - a. The Hessian fly did not like the taste of the Mediterranean winter wheat.
 - b. Mediterranean winter wheat matured and could be harvested before the Hessian fly became active.
 - c. The Hessian fly had never seen Mediterranean winter wheat before and didn't know it could eat it.
 - ***Answer: B***
10. In your own words, why was Frederick Watts so important to the history of agriculture?
 - ***Key ideas:***
 - ***Applied science and technology to farming***
 - ***Supported agricultural education***
 - ***Promoted efficiency of labor and materials***
 - ***Founded Pennsylvania Agricultural Society***
 - ***Founded Farmers' High School/Pennsylvania Agricultural College/Pennsylvania State University***