

Since this course was first given there has been a change of emphasis in the treatment of the material. At first most of the discussion was devoted to the earlier years, but now the last 75 years are accented. Mr. Edwards had mimeographed the syllabus and expects to talk and read according to the outline. The ultimate results should be the equivalent of a textbook.

The Table of Contents represents an outline of the course.

Under Generalities we shall consider whether history tends towards social psychology or cultural anthropology.

The Geographic Factors will show how agriculture is definitely tied up with geography.

Indigenous and Foreign Contributions to American Agriculture.

A study of these contributions shows that 4/7 of the value of farm crops were contributed by the Indians to the world. The English background of the colonists gave them a predilection for their own systems, which led to great trouble here. Americans looked to England for new techniques well down into the 19th century. Only in the field of mechanization did America forge ahead.

Colonial Agriculture represents a type of subsistence farming. In short the colonists did nothing toward raising cash crops. Generally speaking this was true until 1820-1830.

The early political movements were largely farmer movements—as for example those led by Washington, Jefferson, etc.

The Elements of the Agricultural Revolution were:

Public Land Policies since 1862.

Agrarian Settlement since 1850.

Farm Implements and Machinery.

Farmers and Political Activity...

Transportation since 1850.

Domestic and Foreign Markets since 1850.

### GENERALITIES

Barnes calls himself a historian, but he is a social psychologist. He writes with haste and his work shows the tendency.

Beard is called the Dean of American History. He has given us his own special interpretation and is very popular.

History comes from the Ionic Greek of the 6th century B. C. and means a search for knowledge in the widest sense of the word. It means inquiry and research, istorikas, and not narrative. Istapien (research man). When the two terms were brought together the concepts of modern history were united.

Herodotus was the father of history. He was a scientific investigator and also a narrator. He told of the circumnavigation of Africa. He related events of Asia Minor and ancient Egypt. However much criticism has been his lot, modern investigations have confirmed much of his accounts. He was a scientific explorer and he wanted to use the word history to apply to material gathered.

Aristotle used history to mean the literary product instead of the work that preceded it. His definition clung until after the Renaissance. History means investigation and literary presentation. It is a science, not in the sense of a laboratory science, but it demands analysis and synthesis. It is also an art.

History as a body of knowledge. It includes all that we can know about everything that man has ever done, or thought, or hoped. It covers every variety of human activity and every phase of life. Consequently the study of history must be limited. American agricultural history is but a part of the social and economic history of the United States, which in turn is but a part of the large history of the world.

History has been treated in various ways. Carlyle says history is a kind of glorified biography. Freeman says it is past politics. Macaulay says it is political movements. Wells' history is presented as a development of the sciences. Robinson gives us a sort of social history on the development of mind.

Each age writes its own histories. Constantly more is being learned about the past. For example the publication of the World War Documents caused much history to be rewritten. The excavations in Egypt did the same thing. Each generation writes its own history because it writes from its own point of view. As you get farther away from an event you come to have a broader viewpoint.

History as a method of inquiry. Historians knowledge is indirect, science is direct. The historian's knowledge comes second hand from evidences preserved from the past (the historians call these sources.) These may be inscriptions, books, letters, memoirs, implements, etc.—any record conscious or unconscious of past human life. The historian collects his evidence.

Next he must sift his evidence, weight, and evaluate it. A historians' criticisms are thoughtful, deliberate. It is a conscious process and while it may be necessary to have a technique to evaluate the validity of documents, most of the time you rely on just plain common sense.

History as a point of view. It is easier to experience than to explain. It implies a critical attitude towards the past. It demands imagination and sympathy, an ability to see other ages and other points of view. The historian attempts to understand the past rather than to judge it from their own point of view. His aim is not to prove right or wrong a particular way, but rather why certain systems came to be used, how they worked and why other systems supplanted them.

The concept of continuity and development is a contribution of history. No great change happens over night, but any change is very gradual. You can not divide history into periods with sharp lines of demarcation.

What is the utility of history? This concept of continuity is extreme-

ly valuable. The process of change cannot be hurried up too much by revolution. Neither can you stop entirely developmental processes or you precipitate revolution. The conditions of today, alltho' different were shaped by those of yesterday. Today is the product of yesterday. To understand our problems, history gives us perspective. History is thus the perspective of the human race, as well as its memory.

Interpretation of American History (p. 10 of Outline).

The frontier interpretation has had a great deal of influence on American agricultural history. In the next place, that school of thought was the one under which Edwards was trained. This centers in the life and work of Turner. He was a geographer, sociologist, a historian, a social psychologist, etc. He was born on the edge of the frontier in 1861 at Portage, Wisc. He went to Johns Hopkins. At that time it was introducing European methods of study in the graduate school. He went there because it was an outstanding center of education. Wilson, for example was there. The mentor was Herbert Baxter Adams, who was an institutionalist. He advocated taking European history as American had been fully covered from his point of view. Turner took a violent reaction to this thought. He had prepared a paper on Indian trade; this he expanded and used it for his Ph. D. thesis. This was the beginning of his interpretation. July 1893 at a meeting of the American Historical Association, he presented a paper on the frontier. This was a most significant paper and greatly influenced historical thought and future studies. To 1910 Turner was at Wisconsin teaching, then he went to Harvard where he retired in 1924.

It is easier to feel and gradually comprehend, than to explain a school of thought such as that of the frontier interpretation of history. It is tied up with Turner's personality. He was very vivid and radiated new ideas. (A copy of Turner's essay has been given to us. Read it first and then the other essays relating to it about the frontier.) About 1927-28 people actually began to refute Turner's ideas. A great deal of the agricultural writings came from Wisconsin and Harvard.

There are two divisions: Sectionalism and Regionalism.

Is an older term than regionalism. It implies conflict. Turner wrote on sections and used the sectional interpretation.	This is just the opposite. It represents a unit and thus implies unity of thought movements, etc.
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(p. 11) There are various levels on the frontier. One to correspond to each type of individual found present as you advance from the very fringe to sparse settlements. There are economic conflicts between sections. Read Turner for this.

Regionalism is a term from the sociologist. The fountain head is Odum of South Carolina. It would not have made so much progress, if they had clung to sectionalism, for the wounds of the Civil War were still to recent.

Hacker attacked Turner, yet historically Turner was more accurate than Hacker. Because the early years were not characterized by class struggle, we have none of that until the late 90's.

Webb (p. 12) is the center of a great battle at present. He wrote a book on the Great Plains and now the Social Science Research Committee is taking it apart.

Social History (p. 13 in the outline)

Nowhere do we have a clear-cut presentation of what social history is. Benedict's anthropology presented the new methods. These have been taken up and amplified by various authors.

Economic History (p. 14)

Callender was a pioneer in the field of economic history. Gras on the other hand was much later--after the World War. He brought up the questions of whether economic history should be written by economists or historians. There was the shift from economists writing history to historians writing economic history. Gras was an economist, but Callender was a historian.

Read the essays on the subject of who should write economic history? Now we are facing the history of economic history and who should write it. When was it written by economists and when by historians? What was Turner's relationship to economic history? Who does Gras consider as the primary economic historian. We are now down to considering agricultural history.

Sectionalism implies a setting apart from something else. Physical geography, regional settlement of different peoples, and evolution of different types of people causes sectionalism. Starting from Turner we can see sectionalism developing from the beginning. It was different from the mother country. As the frontier migrated west, there were new lines of development. Culture was transported westward from older areas. Turner said the frontier was gone about 1870 and stabilization began, but the drought years set people wandering again. Urban centers began to grow. We tended to become more like Europe as we got older. Until recently we have always had the opportunity to begin over again.

The West is a migrating thing, that has moved with the frontier. Ultimately the frontier passed, but it left its imprint. The west where ever it was thought of itself in terms of itself. The West has always been a debtor section. It was a debtor to the East. The West needed capital, it was always rural as contrasted with the East, which was urban and industrial. The West tended to be organized in terms of self-sufficient economic units--the family. In the East you have inherited wealth. The West believed in the rule of the majority, the East developed a fear of unchecked democracy. The West has been reckless, bouyant, wild, etc. The East looked more and more askance at innovation. The West possessed a fluidity that the East lacked. The majority of the people had lived in several other states before settlement. The East had people with a tendency to remain in the same place, same town, same house, etc.

The West had also always had an amount of cheap land. There is a connection between this and democracy. Cheap land was an encouragement to land speculation? The East could not capitalize on it. Moreover, cheap land called the laborers away from the East and they took up their own property. It afforded opportunity to oppressed labor. This would increase wages.

Some contend that the Civil War was a conflict between two westward moving types of labor. The safety-valve idea of labor moving to the west was strongly upheld by Schafer who worked in Wisconsin. Carter Goodrich wrote a refutation using Rhode Island as an example.

### Economic History as a field of Research.

More interest is being shown in ideas—who first worked on the field of economic history, the economists or the historians? The economists had the historical approach to the problems of economics. Hibbard of Wisconsin still has the approach, so did Taylor, the father of Agricultural Economics, who prepared manuals on methods of procedure in economic history. Callender deplored the fact that historians left economic history to economists. He felt that Turner had played a part in the attitude towards economic history.

### Agricultural History.

There are no printed references to agricultural history prior to 1904. Then the Carnegie Institute of Washington began to plan works on American Agriculture. From then on works appeared. Of course there was mention of agriculture by Eggleston, etc. The first American book on economics contained some work on agriculture. It is edited by Stevens.

In 1910 Wright mentions it in his preface to Wool-growing. In 1911 Taylor began to mention agriculture in historical research at Wisconsin. English books began to appear and they had considerable effect. In 1914 William J. Trimble read the Agrarian History of United States as a Subject of Historical Research, before a meeting of one of the historical societies. He published several brilliant essays in the next five years before his death. He delineated the field of agricultural history. In the next year L. B. Schmidt (1915) read a paper on Economic History of American Agriculture as a Field of Study. He was and is a pioneer in this field. It is a careful analysis of what should make up Economic History of Agriculture. Trimble was trained at Wisconsin under Turner, so no doubt was influenced by him. He later went to the University of North Dakota.

In 1919 several people of the Department organized the Agricultural History Society. The three main leaders were Rodney H. True (BPI) Lyman Carrier (BPI) and O. C. Stine (historian of BAE). At first by cooperative agreement with the American Historical Association its minutes and papers were published by them. Later this agreement fell by the way and in 1927 the society began its own quarterly "Agricultural History."

In 1920 Dr. Schafer began a series of historical studies in Wisconsin. A number of these articles are listed in the syllabus. Here he refers to the Doomsday Book of Wisconsin. He used Census manuscript schedules. He believed that intensive local history studies will lead to fairly safe generalizations of regions, sections, and the country at large. In 1920 more attention was paid to agricultural history in the various colleges and in Washington itself. In 1925 the first Carnegie Institute publication came out that had been outlined in 1904.

Stine first worked with O. E. Baker on an atlas of world agriculture. He next worked on the Atlas of American Agriculture which the Department was so long in completing. He presented the economic-geographic approach. A work by Carman and Tugwell is given, probably Carman did most of the work as Tugwell was in Washington during the preparation.

Edwards presented a paper on Middle Western Agricultural History as a field of Research. It is really a general delineation of the subject and was limited to the Middle West because it was presented before a sectional historical society. Schmidt emphasizes economics, Carman the social side, and Edwards sits on the fence.

Shall we consider American Agricultural History as a distinct field of research? For practical purposes we should have such a course, but actually it is not. History of American Agriculture was first born last May 1939.

### Economic History as a Field of Research.(cont.)

#### Indigenous and Foreign Contributions

The main Indian contributions were not opposition to the white advance, but rather crops. Four-sevenths of the food crops raised in the United States today expressed in terms of farm values were domesticated and cultivated by the Indians. Maize (the English corn refers to cereals, wheat, rye, chiefly) was first. As the English had no other word for this new grain, they called it corn; the Americans have continued the distinction, but not the British. Corn's place of origin and its botanical place is pretty questionable. It is hard to find allied species today which points to a long history. It was probably first domesticated in Yucatan (Maya Empire). The Indians adapted corn to various climates and soils, thus developed many varieties. The first settlements passed through a great starving time when they tried to raise wheat. They failed in this and then had to turn to Indian agriculture. It took about ten years, generally speaking, for this transfer. As the white man went West he brushed aside the local adaptations of corn (the various varieties) and thus lost the specializations made by the Indians. Reed's yellow dent was an example of a cross between a small yellow corn and an Ohio variety.

Tobacco was used by the Indians who raised a bitter variety. John Rolfe, through his visit to the West Indies en route to America brought from there the seed from some choice varieties to Jamestown. This gave them the best variety for importing.

Potatoes were taken back from the Caribbean to Spain. The English pirates seized some of them from the Spanish. Raleigh planted his in Ireland as a botanical curiosity. Cromwell's armies pressing on Ireland forced the Irish to eat potatoes, as they were not destroyed by the army. The Thirty Years' War in Germany caused stress to be put on potatoes because an army could not take time to dig and carry them off.

Cotton.—The first to be raised was a sea island cotton. It could not be raised very far west. After the invention of the cotton gin by Whitney, another type (green seed, short staple) was developed. Some of our varieties were raised for centuries by the Indians of Mexico and the Southwest.

There were countless vegetables (peas, beans, squashes, etc.) contributed by the Indians. Read American Indian Contribution to Civilization. Do not attempt to remember all the items, but try to gain perspective and remember the main ones. Donald de Brandt, Origin and Distribution of New World Cultivated Plants in Agricultural History (date?)

Prior to Columbus sailors from Brittany had reached the Newfoundland Banks for fish. The English too may have reached the American coast without broadcasting the fact. White men had probably reached New England before the Pilgrim fathers. The savages had had a plague of smallpox which accounted for their reduced population. This kept them from killing off the whites on one hand, and explained why there is reason to believe the white men had been there previously on the other. Some of these English seamen had no doubt taken Indians back with them as curiosities. Squanto or his father were probably taken by the English and out of gratitude at having been returned, Squanto helped the Pilgrims. Read Samuel L. Morrison.

Did the English who came to Jamestown know anything about agriculture? Channing says that they really knew very little. Edwards asked Fussell about it. The result is an article entitled Agricultural Background of the Pilgrim Fathers.

Vavilov went to the high Andes of Peru to collect potatoes to use as seed, so that he might find a variety that could be produced within the Arctic Circle.

#### Comments on Bibliography:

There are 3 pages of references on American Indians—Article by Donald by Brandt.

Bulletin on Prehistoric agriculture is particularly good on corn.

Bruce—Economic history of Virginia in the 17th century. Has some chapters that are good for agriculture.

Currier has several chapters on agriculture. The man is an agronomist instead of a historian.

Davis writes popular stuff.

Grey has very good material on agriculture.

Holmes is a good old stand-by because the Cyclopaedia of American Agriculture is available.

Mason is another popular writer.

Spenden's article has a time chart which is of some interest. It appeared in the Geogr. Rev.

Vario is a popular writer.

Wissler is very good.

#### English Agricultural Practices.

These are the chief general works: Bibliography on the selected references on English Agriculture. Lord Ernle's work comes first "English Farming, Past and Present." It has gone through the fifth edition. Curtler is good but not long enough. Seeborn (Mrs.) "Evolution of the English farm" is a delightful and fairly reliable source. G. E. Fussell has done a great deal on phases of the history of English Agriculture. He wrote one work on the social and agrarian background of the Pilgrim Fathers (Not enough for distribution. Naomi Riches "Agricultural Revolution in Norfolk is

the first detailed account of this so-called revolution in the region where it started and developed. There is not much scope in treatment neither is there any evidence of profound comprehension. The authoress shows a definite lack of agricultural knowledge. Read and make book report.

### English Agricultural Contribution to America.

These contributions are important because the chief settlers were English. Did they know agriculture in the 17th century? After all England was primarily rural. The industrial revolution had not produced profound change. The settlers knew farming although they may not have been professional farmers. They tried to raise English crops by English methods, and they didn't succeed. They had to bring their own livestock for the Indians had none but the dog. Livestock was precarious venture as the crossing of the Atlantic was difficult and the animals were not easily acclimated. The settlers were forced to adopt Indian agriculture to keep from starving to death; thus they were able to survive.

The manorial system in England was outmoded and had decayed in England. The open field system was giving way to enclosure. The new world contributed to quickening of economic conditions in England. Commerce and pirates flourished. Trade and war all raised prices. They all brought to England new plants (potatoes, tomatoes, tobacco, corn, etc.)

Between 1750-60 there was an agricultural revolution in England whose basic ingredient was improved methods of agriculture to increase production. There was a direct influence from Low Dutch to the counties of England. There was pressure in Holland for improvement of land due to the industrial revolution. In the 17th century while England was in Civil War many of the lower nobility went to the Lowlands, where they observed the state of agriculture and the methods pursued. There was a definite contribution. Sir Richard Weston introduced red clover. In the 18th century the agricultural revolution came up in England. It started in Norfolk with Arthur Young as its chief instigator with Sir John Sinclair in Scotland.

In 1701 Jethro Tull began to use a drill in planting wheat and other crops. He cultivated crops with a plough drawn by horses —or horse-hoeing husbandry. This resulted in an increase of productivity. He wrote "Horse-hoeing Husbandry." He spread the idea of thorough and deep pulverization of the soil, and did away with fallow. He asserted that rotations were unnecessary if you followed his methods. He is the first big name, yet he has been discredited by historians.

Lord "Turnip" Townshend evolved in 1730 the Norfolk system, whose essential features were the use of turnips the the rotation of crops. He began experiments in Norfolk and emphasized marling for light, sandy soil. It is (marl) the compact remains of cretaceae. It checked the acidity of the soil. He used Tull's drill and horse-hoe. He developed a 4-year rotation consisting of turnips, barley, rye, and wheat.

Coke of Holkham (Norfolk) experimented in 1776. He spent much time and effort in reclaiming barren land. He used clover and turnips and developed a rotation. He kept sheep and specialized in Devon cattle. He won a world-wide reputation for his farming activities. He had annual sheep-shearings. He did much to improve agriculture in general. During the second half of the 18th century they raised agriculture in England to a noble and scientific venture.

Arthur Young was a great publicist. He spread the ideas which the other men developed. His travels in France is a classic as a picture of conditions on the even of the revolution. He traveled to escape his wife. He was not a successful farmer, but he was a mine of agricultural information. A leading light in the Board of Agriculture heinaugurated a series of county surveys. Each runs for 300-500 pages and also published the Annals of Agriculture.

There were men interested in livestock. Robert Blakewell who was interested in a breek known as longhorns, had considerable success. He ultimately specialized in sheep, the Leicesters, a breed that spread as a standard throughout the world. The Calling brothers improved short-horned cattle about 1770. Charles and Robert each took a common red calf to begin their herd and then bred in.

After the American Revolution there was a quickening of nationalism or national consciousness. That was expressed in every phase of American life. George Washington and Richard Parkinson, Thomas Jefferson and the rice of the Italina Piedmont which he imported sewed in the lining of his coat.

John Bushnell: The Potatoe. Get for Miss Olson

The Dutch West India Company settled Manhattan and around New York. They did not spread because they were primarily interested in trade. Their farming was chiefly for supplies for the trading posts. They went up the Hudson as far as Albany which they called New Orange. They created the patroon system, a recrudescence of medievalism. The feudal system on their holdings in America was an attempt to foist on the settlers a system that had died out early in the Netherlands. In return for bringing over a lot of immigrants you received a grant of land—16 miles long, along a river as far back as you cared to extend it. A number of grants were made in accordance with this system. These were limited to the Hudson and the country north to Albany. They held back colonization and settlement by using this system. The patroons acted as overlords, had forts, their own flags, etc. and taxed the boats going up the river. About 1676 the English sailed up the took Albany and brought it under the crown of England.

The strongest group of tribes were the Iroquois Indians (the five and later six tribes welded together into a strong unit). They held the upper Hudson and Mohawk Valley. This fact with the patroon system presented settlement until after the American Revolution. Thus the best farming country was only learned of during the war. History of Agriculture in the State of New York by Hedrick. In spite of Hedrick's enthusiasm the Dutch did not contribute a great deal.

French Influences on agriculture in the Colonial Period.

Hirsch's article is limited to the Huguenots that came into the southern states. The revocation of the Edict of Nantes caused many of the commercial class to flee dirst to England and thence to America. They constituted a fairly wealthy class and because of this became influential merchants or else large planters. They brought in ameliorating features, they introduced many foods—vines, vegetables, silk culture, etc. There were also people in isolated groups along the Mississippi, such as St. Vincinnes, St. Genevieve, etc.

German Contributions to Colonial Agriculture.

It is more important than the surveys show. The German farmers were the

focal point for improved agriculture as far as the colonials knew it. Shyrock, R. S. "British vs. German" Miss. Hist. Rev. June 1939. The Gergkhe Article (p. 36 outline) substantiates these traditions in colonial agriculture.

German immigration divides itself into definite periods. The first came from the Rhine and from the Low countries. They began coming about 1686 in response to advertisements of William Penn. They were ready to come because of the devastation of the Thirty Years' War. They landed at Philadelphia and settled around Chester, where they had good land. Due to increased population they followed natural valleys through Pennsylvania, Virginia and into the Carolinas through the troughs. They took good care of livestock. Some Dutch landed in the Carolinas and spread west. The liberal, literate group in Germany left in 1830-48 to come to America because of the various revolutions. Another group that came in in 1880 were not so good. Faust is the best source for this study. Mainen bibliography.

#### Scandinavian Contributions (elements).

It is difficult to put your finger on their contributions. They came to escape a difficult land system. They easily assumed American economic ways. The Danes and the cooperative movement in America are very closely connected, or related. Dairy cooperatives (producer-cooperatives)

The Finns were relatively late in coming to this country. They were dominated by Russia and could not get out. In the 1880-90's they came in large numbers. They hunted similar topography, lakes, rocky, cut-over land. They brought successful consumer-cooperatives.

#### Spanish Contributions:

Whittaker paper doesn't touch the United States as we know it today. His article chiefly concerns South and Central America.

#### LAND POLICIES IN THE COLONIAL PERIOD.

The legislation and policy determine the rate, direction, and mode of land settlement. The Europeans did not know the New World during the Middle Ages. The Norsemen ca. 1000 came to Iceland and Greenland and probably explored Labrador. The Briton fishermen knew it too. Irish legends tell of priests coming here. But practically speaking the New World was not known until Columbus found it in 1492. Then came the Cabots, Italians, who claimed the land for England. Each discoverer claimed the land for his king, who was next to God. There were consequently overlapping claims.

Settlement then began in the New World by trading companies, who were urged to settle by large grants from the king. In the 13 English Colonies these were two distinct systems—the New England and the Southern. The New England policy prevailed after the revolution!

New England Land System; (Historical basis of National Land System of 1780's and influenced Canadian and Australian policies.)

New England settlements were organized as corporate bodies. Trading companies established these trading colonies. The granting of land by the crown to individuals was practically nil, except in case of Gorgas in Maine. The policy was democratic and far-sighted. The motive was not profit, but a methodical occupation of the land by the settlers for common good. Systematic development of resources, etc.

Granting of land to individuals was seldom done. Those grants represented a very small part of the total. In Massachusetts Bay Colony 100 grants to individuals, the majority of which were not above 250 acres were made. Most of them went to ministers, magistrates, school teachers, or other public servants. This also applied to people who set up saw mills, iron factories, salt works, and the like.

You had to act as a group to obtain land. Relatives thus acted as a group within the established group. The General Court (Legislative Body) was called upon to decide whether or not a new settlement should be founded. The meeting was of the Board of Directors of the original trading company which became in time the General Court, and its laws were used as the Constitution of the state of Massachusetts. A committee from the General Court reported on the proposed site and also on the character of the people going into the new settlement. If the report was favorable the group received a grant and were known as "Town Proprietors" or "Commoners". They were thus a quasi-corporation.

First they laid out the town at a suitable site in the grant. The central portion was set aside as a common (park). Around the commons were the important buildings—church, school, etc. Then on the streets the house lots were laid out. 1-6 acres in size was average. When the townsite was established the rest of the land was granted to individuals to farm. They did not use all the land at once, but only as much as could be cultivated. They tried to divide fairly in quantity and quality, with the result that you got strips and sectioning. It probably took three to four divisions to divide all the land. As a result each family had 5 or 6 strips of land. From the beginning there was a tendency to consolidate holdings—about 1750 exchange had progressed to where the people moved out of the towns to the fields. There was some discrimination made on the basis of money spent in the venture and personal ability.

Concentrations of land holdings came about through purchase, exchange, marriage, inheritance, enforced sale, etc. The town tried to put on severe restrictions to keep out undesirable people.

The committee in their effort to be fair split up the allotments into minute parcels. They were not separately fenced, but were hedged as a common whole. All holders thus had to raise the same crop, since the cattle were turned on the field. This practice may not have been limited to New England, but was no doubt carried where the New Englanders migrated. There were many paths that cut through the fields. They didn't know much about plowing techniques, crop rotations, etc. After the revolution the land held by Town Proprietors had practically disappeared.

Herbert Baxter Adams believed the New England systems were derived from the Teutonic tribes in Germany. It developed group action and compact social life. Facilitated idea of Biblical community in Puritan theocracy. It provided an effective method of distribution of land to farmers as they needed and were able to use it. Land speculation in southern New England was unknown. There was no place for it. The system afforded security of title. There was sure protection against overlapping surveys and title disputes.

In the early stages the middle states system of land tenure was quite complicated. The southern land system was different from the system of New England.

#### Southern Land Systems:

In England land ownership was the key to social, economic, and political importance, it was the measure of wealth. In the New World there was an abundance of free land and the first impulse was to establish hereditary estates, but the quantity of land available defeated this end. The idea of hereditary estates was to make profit on land from rent, but that was impossible here where there was so much land. Only a few locations were suitable for the procuring of rent. The manorial system gave way to the plantation, where slave labor took the place of rent.

There were three systems in the South, each with distinct social and economic ideas. (1) The manorial, (2) the town system, as in New England, and (3) the purely commercial. The last was the most important. The first two are quite ancient in origin and look to the past and ultimately prove unadaptable to conditions in the New World. The third was adapted to the times and was part and parcel of the commercial system.

The manorial system is best represented in the colony of Maryland. The Calverts or Lord Baltimore received a grant to be used as a refuge for Catholics. They attempted to colonize by introducing manors. In the earlier years they provided for extremely large holdings, first 1,000 and then 3,000 acres. In 1648 they attempted to standardize their procedure by giving 2,000 acres plus so much rent in sterling a year. After 14 years the rental was to be made in bushels of wheat. The system became more and more complicated. Under this scheme many tracts in Maryland came to be known as manors. By 1670 instructions were issued to set aside 6,000 acres for manors in every county, and so it ran.

The Baltimores had trouble in getting tenants. People squatted on the land and then there was trouble trying to move them. There were private manors other than those of the Baltimore family. A few of them were manors in the medieval sense. At St. Clements Manor there was a leet court which handled police court affairs. It regulated trade and marketing, gave fines, issued game laws, ordinances against loitering, etc. It served as a final court of appeal and reviewer of disputes in the domain. County courts eventually superseded these courts. Some historians imply that the manors persisted until plantations, but this does not seem to be accurate. Maryland soon became a colony of plantations scattered along Chesapeake Bay and Potomac River.

The Northern neck of Virginia between the Potomac and Rappahannock is a stretch of land that went through a similar development. Lord Fairfax eventually got most of it. He dominated its development and consequently that section had the manorial system. The land was leased and quit rents were collected from the farmers—or the attempt to collect was made.

In South Carolina there was an attempt to complicate the distribution of land. John Locke was called upon to draft a model government. It was to be a "grand model", the equivalent of a constitution. It was an aristocratic hierarchy based on land ownership. At the head was a Palatine, the oldest proprietor, and the others were to have equally grand titles.

There were to be 4 seignories, 4 baronies, 4 precincts. Landgrafs were appointed and each had 12,000 acres. This aristocratic tendency took up land in large amounts and encouraged speculation. The grants covered all of South Carolina.

In Pennsylvania William Penn practically set up the same thing. He got this enormous tract through the crown. He advertised for colonists. Penn and his family tried to hold the land and only lease it to the farmers, but in the end were defeated.

The town or village system in the South was tried in the earlier years as a basis of settlement in all the southern colonies. There was a particular interest in developing commercial centers and rural communities. Jamestown was a compact military outpost, a trading center. Attempts were made to establish towns in Virginia and also on the frontier. William Byrd I got a large tract in and around the falls of the James River where Richmond now stands. It was to be developed as a town. Byrd was to build a fort and maintain armed men. Virginia tried to establish town communities in 1701 which they turned over to definite race groups. Carolina and Georgia tried to do the same thing. There were French communities along the Mississippi.

(Read the article on quit-rents by W. W. Bond. Know what quit rents are, what the object was and what happened.) It is an annual charge of an invariable amount throughout the life time of the grant. The crown could reserve a share of the mineral resources. The Virginia quit rent was 2 shillings per 100 acres. The collection, however, was extremely difficult.

The commercial system is tied up with head rights. A head right is the acquiring of a share in the company establishing a colony by adventuring some person to the New World. You were due a head right if you imported others into the colony. In the 17th century the principal method of acquiring land was by head right. You might get as your share 50-100 acres. Eventually the Secretary of the Colony came to sell head rights after slaves were brought in under the system. Great chaos resulted for every one could claim his 50 acres where he pleased and it may or may not have been surveyed, especially later were they remiss. When the rights were transferred to the Secretary of the Colony, they were called Treasury Rights. Kentucky and Tennessee were developed along this way. Treasury Rights began in 1699. It was a revival of a legal right to purchase stock and invest money in the Virginia Company. The value of the land was reckoned at the current rate for head rights.—5 shillings per acre. The Treasury Rights were just recognition of what had been going on and legalized the practice.

#### THE ROLE OF AGRICULTURE IN THE COLONIAL PERIOD.

To characterize a period covering two centuries is difficult, but general characterizations stand out. Nine tenths of the people in New England were engaged in Agriculture. In the South, the percentage was higher. The plantation system was the cause of that. In the small-scale English colonial farm, many traits were developed that became characteristic of Americas. The mania for joining organizations came in before 1925. The American farmer was a jack of all trades--hunter, trapper, fisher, sailor, etc. He had versatility and superficially clever mind, though not especially thorough. The farmer was occupied with the practical things of life. The colonial farmer was extremely self reliant--intensely individualistic. He was forever optimistic because he had no past and no present (worldly goods), so he looked to the future. He had a narrow outlook that tended towards extreme provincialism. Lack of roads was a sufficient cause. He lacked an interest in the aesthetics and the philosophical.

He had no appreciation of his environment. There was no speculation except in the realms of theology. He had a profound and abiding faith in work of some sort--preferably manual labor. That general idea comes down to recent times.

Field Crops in the Colonial Period. The first attempts could hardly be called agriculture. The earliest settlements--Plymouth, subsisted on animals and natural fruits. The English found berries that they could use, such as blackberries, raspberries, gooseberries, strawberries, and cranberries. Strawberries were noted especially around Narragansett Bay. Wild cherries, grapes, crab apples, also nuts and roots were available. The tuckahoe is an underground tuberous root used in New Jersey and Delaware, but the botanists disagree as to whether this is the Indian's food. There were also fish and shell fish. There was plenty of game--pheasants, turkeys, deer, etc. The settlers were against a fish and game diet. They had never had it and didn't enjoy it. People had to have houses after they were dumped on shore. They needed temporary shelters before planting could go on. No evidence of log houses can be found until after the Swedes came to Delaware. They were really Finns and knew log houses. They burned the forests at home and they were convicted for disobeying the law and so were sent to America. The research workers at Williamsburg found no evidence of log cabins before the Swedes.

The first fields were located in natural clearings along the banks of streams. The regions around rivers gave lush meadows. These natural openings may have been abandoned corn fields of the Indians. It is possible that these openings were natural and not cleared by fire. Many were probably produced by burning. Some of the openings we know were natural.

Once this type of land was used, land had to be cleared anew, which was no easy task to the English. First they had to admit sunlight to the soil, so that what is planted will grow, and second, they had to remove stumps for cultivation. The white man soon adopted Indian methods of girdling the trees, cutting the foliage and then eventually cutting the trees. The white people cut and burned trees for they could not believe it possible to raise crops by hoe culture.

The first crops were Indian corn or maize. Once they tried it, they found it had many advantages as a new crop. It was easily accepted as payment in hand for taxes. Corn afforded more food than you could get from European crops. It ripened earlier and was a labor saving crop.

The European crops were wheat, oats, rye, barley, and peas. Wheat was most widely raised and used. At first it failed because the ground was too rich. Incident of Jamestown. It became important in New England about 1640. It was then accepted in payment of taxes. During the 17th century the Connecticut Valley was the wheat belt of America. Much wheat from there was carried overland to Boston. The Middle Colonies were more successful with wheat. In 1676 wheat was first planted. River flats were used at first. They had crude tools with which to work and sowed broadcast. They raised both winter and spring wheat. The black stem rust attacked the wheat fields in New England (the "wheat blast") appearing about 1660 in eastern Massachusetts. In 1668 it spread to the Connecticut Valley. There was found to be a relation between the barberry and the wheat rust. There were laws forbidding the planting of them and their destruction. These ordinances against barberry lasted on the books through most of the 18th century. John Winthrop, Jr. was one of the leading men with a scientific outlook.

Rye yielded better than wheat on light sandy and gravelly soil. Hence the settlers came to raise rye. New Sweden along the Delaware went in for it especially, because they liked rye bread. The English did not prefer wheat at first but rye.

Barley was raised for the horses. The great Dr. Johnson defined "oats as a grain raised by Englishmen for the horses and by Scotchmen to feed man." Wherever the Scotch settled, New Hampshire, Vermont, Hudson Valley, hinterland of Pennsylvania, etc. they raised oats for food. Generally it was not used until the 19th century. The colonists mixed grains--peas and oats--called in the Middle West--succotash. Meslin was a mixture of wheat and rye in Colonial days.

Peas were raised for human food and forage.

Flax was one of the first crops raised in New England, New York, and Pennsylvania. It was popular in England and was a source of fiber from which linen was made. The colonies passed laws to encourage raising flax and hemp. It wasn't until after the wild animals were exterminated that the people raised enough flax to supply clothing needs. The Dutch and Germans were expert at producing flax and linen. Some hemp was raised and it was in demand.

Tobacco was attempted in New England, but they didn't raise very much. It was a garden curiosity. New Netherlands and New Sweden were fairly successful with it as a cash crop.

Vegetables: the main ones were from the American Indians. Gardening is an art that requires more effort than the earliest colonists could afford to give to it.

Fruit: Trees were raised from seed, by grafting and even by importing. Apples, plums, quinces, cherry, pears, etc. were raised. Cider was a leading beverage. Peaches became important in the Middle Colonies. The colonists made brandy of these fruits. And until John Bartram's time there was not much success with grapes. The climate is much warmer along Atlantic Coast than that of France. The French thus had little success with imported vines.

Livestock: Although very vital there was a pitiable scarcity of livestock in the earliest days. Losses due to transportation were great. There was no native stock and it was hard to obtain more from Europe. It was hard to furnish fodder or shelter in the first year. North America did not have a natural supply of indigenous nutritious grasses. All that we have were imported from Europe. Timothy spread rapidly, but it was also imported. The livestock were dependent upon open places in the forests. There was a wild rye grass, common to the Atlantic Coast. Broom straw (Andropogon) was found in the Middle and New England Colonies. The native grasses were not good. The cattle ran wild in the summer and practically starved to death in the winter. But the lack of nutritive matter made the task impossible. It was not long before English grasses were introduced. English grass means everything used for hay. Blue grass, white clover, red clover, and even timothy. Red clover became important in Pennsylvania about the time of the revolution. The cattle were dependent upon annuals, whereas they needed perennials. The native grasses were all annuals. The cattle ate the seeds (burning destroyed much). Artificial meadows were deliberately seeded with clover or timothy, etc. They seeded the uplands. In 1780 clover was planted in Pennsylvania around Philadelphia. Timothy was called herds grass in New England. It was planted in 1720.

Managing cattle was a problem. Fencing required much labor. Where the community had a commons for grazing, the fences were kept up by common effort. This was impossible where every man went for himself. If there were several shepherds the herds were divided. There was a great amount of legislation covering hogs. Sheep were first kept on islands in Boston harbor, Long Island, Coney Island, etc. in New York.

In the fall after harvest a day was fixed for opening of the meadows. They simply took down the fences and let the cattle graze. The common fields were "stinted"--the number of cattle per owner permitted to graze on the commons. The proportion was regulated by the amount of land tilled by individuals. There was a great deal of legislation re livestock covering branding, etc.

The ancestry of the cattle varied. Those coming to New England were Devonshire. Capt. John Mason of Maine imported some Danish cattle, large in size and yellow in color. This herd increased. His creditors seized them when he died and they were sold throughout New England. They were often referred to as "native cattle" or red cattle. This appellation refers to English ancestry. There are indications of frequent admixtures of Dutch cattle from the Netherlands and black cattle from the Spanish West Indies. The early settlers in Pennsylvania depended upon what they could obtain from the Swedes in Delaware. There is really nothing outstanding.

Livestock received little care and shelter in the 17th and 18th centuries. It was uncommon in England when it was not absolutely necessary. The first settlers did not recognize the severity of the winters in the New World. It was hard to obtain food supplies. Livestock were not put in barns except on the German farms in Penna. By the end of the 18th century, there is a distinction being made between fattening and feeding.

Cattle were most important during colonial days. Only a few places were more interested in sheep--principally the islands. Not more than 50 percent of the farms in New England had sheep. In Chester, Pa., there were less cattle, but they were better cared for. In Washington County, Conn., there was a distinct livestock area, where there were 40-50 horses, several hundred sheep, and 20-50 cows per farm.

Early in the 17th century beef was exported to the West Indies. In Hampshire County, Mass., there was a livestock center raising principally beef. In the back country of Pennsylvania, Virginia, North and South Carolina there developed a range livestock industry, comparable to that which flourished later on the Great Plains. Was the cattle industry in the Great Plains unique, or was it just a renewal of the frontier from the Piedmont? The cattle were driven from the Piedmont northwards to the region around Philadelphia. The marshlands of lower Delaware raised cattle. Vermont and New Hampshire cattle were driven overland to Boston, New York, etc. We have now the first references to stall feeding.

Dairying. First there was no distinction made between beef cattle and milch cows. There was no transportation of milk. Everyone kept cows and butter and cheese were produced on each farm. People in large towns imported some of their butter and cheese from Ireland up to the 18th century. There was lack of careful methods of handling. Timothy Dwight, president of Harvard, wrote a lot about cheese and told of the trade with the West Indies from Connecticut. Goshen produced 400,000 lbs. of cheese, which is quite a bit for one small town. Some farms had almost 100 cows in Narragansett County.

Sheep were imported from England and Holland. The winters were very hard on sheep. Legislation was passed to encourage sheep raising. Sheep were exempt from taxation in Connecticut. In 1665 Rhode Island led in sheep raising. The Middle Colonies did not raise so much. It was a part of general farm economy. There was no interest in the meat, just in the wool. The typical sheep was small, long-legged, narrow-backed, and with short fleece. Attempts to improve the sheep in the generation prior to the Revolution led to the introduction of Merinos.

Cattle were used for draft purposes. Oxen were preferred for farm work, because they were steadier. Earlier horses were importations from Europe. There were some from the Netherlands, a few Spanish or Arabian. The Quirakoan horses were used primarily for riding, not for draft purposes. In early communities the horses ran wild with the cattle. By 1650 New England was exporting horses to the West Indies. This export trade increased in the 17th century. Mules were raised in Wyndham, Conn. Because of his horse trading experience, Benedict Arnold knew the routes to Canada and was thus selected to lead expeditions against Canada.

Narragansett pacers were originated on Point Judith. Deputy Governor of Conn. Robertson had the sire. They were a small hardy breed, remarkable for their peculiar and comfortable gait. They too were used only for riding and were noted for their swiftness. Horse traders bought them up and sent them to the West Indies. The breed diminished after 1800. None of them were ever harnessed.

Conestoga horses were developed by the Pennsylvania German farmers from English stock. The name comes from a creek in Lancaster. It was a large, strong, draft horse. Their chief use was the hauling of the covered wagons filled with surplus grain to Philadelphia and Baltimore.

The Morgan horse was born in West Springfield, Mass. in 1793. The fame of this breed belongs to the 19th century (Justin Morgan).

Hogs were the most adaptable animals to colonial life. Pork packing was an

important enterprise in 1660. Corn was used to feed them and in other places they turned the hogs into the woods to fatten on acorns. Every farmer fattened a few hogs for his own family. That general practice led to a little excess pork being traded at the local store. The storekeeper salted it down in barrels and exported the "barrel pork."

Goats were important in the early years because they could shift for themselves. They did provide milk, but declined rapidly in importance.

### Farm Equipment in the Colonial Period.

First and foremost there was a great lack of farm equipment. There were published ideal lists of the number and kinds of implements needed for immigrants, but our best information comes from wills. The equipment was so valuable it was willed to various sons. The most frequent things are hoesk spades, scythes, reaping hooks, plows, carts, etc.

The Pilgrims as early as 1636 had 30 plows. Rhode Island had none for nearly a generation after its settlement. In the first 7 years there were no plows at Plymouth. The Swedes in Delaware didn't even own oxen let alone plows. The Dutch had pretty good equipment from the first and they supplied the Swedes. The 17th and 18th century plows were very heavy and very clumsy. There was a great deal of friction and the iron sheath was very rough. The pitch of the moldboard was not proper until Jefferson used higher mathematics to determine the proper pitch. It took at least 2 men and 2 horses or 4-6 oxen to plough. It took a strong man to hold the plow in the ground. Another man or boy was needed to drive the horses. They couldn't plow more than two acres a day under the best conditions. They used a lighter plow for cultivating corn.

Carts used for haulign farm produce were practically universal as contrasted with the wagon (wheeled-4). The cart had but 2 wheels. The wheels were cross-sections of a hard wood log, with a hole chiseled in the center with a pin thru it. The poor man was forced to use a drag. The box was placed on the sledge and held about 8-10 bushels. Heavy wagons were not common until the 18th century and the only in Pennsylvania prior to the Revolution.

The most important tool was the "harrow" which to us looks like a drag.



Either wooden or iron teeth.

Fields were sowed broadcast and harrowed in. The farmers also made forks, but ploughshares, scythes, knives, hooks, etc. were made by the village blacksmith.

Harvesting grain, threshing, and gleaning was pretty largely just like that described in the Bible. Wheat and other small grain was reaped with a sickle. Grass and other small grain was cut with a scythe. At the end of the 18th century the cradle was used. A man could cut about  $\frac{3}{4}$  of an acre a day, unless the grain was heavy, then only  $\frac{1}{2}$  an acre. The cradle cut down on the labor required. For with this a man could cut from 2-2 $\frac{1}{2}$  acres per day. The limitation on raising wheat, etc. is the amount that could be handled when ripe, otherwise the grain is lost. When McCormack developed the reaper he stepped up production. In Threshing in New England they used the flail. This was also used in the Middle and Southern Colonies. The latter didn't raise much grain. The Middle Colonies used the practice of treading the grain out of the head with horses, spreading the grain on the threshing floor. After being threshed it has to be winnowed, the chaff being carried off by the wind. There were experiments with horse-power threshing machines. Washington had one, but doesn't describe it very well. There were experiments in Scotland with it too. Probably Sinclair wrote to Washington about these.

Dug-outs were followed by log buildings, and then by frame structures. Extending from the house was a series of out buildings. Some of these were connected by a long shed. The barn set at right angles to the house and the connecting shed ran to the other outbuildings and formed a protective spot--the barnyard. Among the Pennsylvania farmers, the buildings were substantial and commodious. The houses and barns were built of stone. The Schweitzer barn, i. e. the numerous Kreiders.

The southern colonies had a different set up. Plantations reigned there. They flourished from before the revolution to the Civil War. Although there are still some plantations, most of them have gone downhill. A plantation is a large farm of several hundred or thousand acres devoted to production of one or more staple crops for an outside market under centralized management or control. It has existed for 3 centuries and these three elements have persisted in spite of vicissitudes. The first plantation was the Virginia colony at Jamestown. The planting of a colony and the subsequent colony was the meaning of the word plantation to the English. The London Company owned the Jamestown plantation. With the subsequent distribution of land to individuals there sprang up colonists and farmers who had small portions. The large tracts owned singly called for imported labor and thus began plantations and slavery. Labor could be impressed as indentured servants.

Shortly both farmer and planter came to concentrate on tobacco. In the beginning they relied on indentured servants, but by the end of the 17th century they found slaves more satisfactory. Another focal point was the coastal region around Charleston, S. C. The Spaniards of the West Indies killed off most of the Indians by hard labor and thus had to use slaves. However, they became interested in gold in Mexico and Peru, so they left their plantations producing food. The English took them over. All along the coast they produced rice and later supplemented it with indigo. It was introduced from the West Indies. The system emerges in two distinct regions, around Jamestown and around Charleston.

#### General Beginnings of Agriculture in Virginia

The outstanding authority is Gray. Phillips "Life and Slavery in the Old South" is also good. Gray's approach is that of the economist. His generalizations are sometimes questionable. The site of Jamestown was favorably located re water routes and the valley bottoms were filled with rich soil, but the area was marshy and there was no much land readily available for clearing. The very first settlement was planted by Raleigh on Roanoke Island off the southeast coast of Virginia, near Albemarle Sound. The first year they planted barley, oats, and peas. The first settlers went back. In 1587 Raleigh made another attempt. Until 1591 no one came out from England. They were gone when the English returned after the Spanish Armada.

In 1607 Jamestown was founded. Vegetable gardens were planted, even cotton, oranges, and pineapples were tried. They planted the English grains. There was a lack of cleared land upon which to build. Another disadvantage was the insistence of the Company in London for cash products such as "pearl ashes". Few of the settlers were practical farmers. Another difficulty was that the rulers and organizers directed activities along other lines than crop production. They were supposed to look for metals, for the South Seas, and new products for the English. By the spring of 1508 they were reduced from 105 to 50. They didn't have food enough and lived chiefly by the fish and game. 279 bushels of corn were eventually rounded up from the Indians for food during the second winter. John Smith insisted that they plant 40 acres to corn and that they plant it correctly he kept two Indians captive to show them. The next group of settlers made matters worse. By 1609 there were 500 settlers and food enough for only 10 weeks. Only 60 were left

at the end of the winter, due to starvation and hostile Indians. They decided to abandon the colony and as they left they met Lord Delaware with more food and settlers.

Meanwhile great enthusiasm prevailed in England, so that in 1610 two more expeditions came over with settlers and supplies. By 1612 they were essentially on their feet. Lord Delaware insisted that they clear land and plant maize. In 1611 he seized the Indian cornfields, so that the Indians were dependent upon the whites for food. Dale was even more severe and spread the colony southwards. He put the hogs on islands in the James River.

The first expedition brought in livestock--hogs and chickens. In the great starving time, Lord Delaware found they had eaten all their livestock. Dale had to order protection of range and that they be kept in barns and that none be killed except by order. By 1614 the stock and crops were on a substantial basis.

They attempted to raise tobacco and it became a great staple. It was known and grown as early as 1570. It was popular before the Spanish Armada. By 1610, England knew it could not raise tobacco and she found herself importing it. Meanwhile the Virginia colony found the natives raising tobacco. They tried it, but it was a very poor sort. Around 1612 John Rolfe introduced a variety from the West Indies, Trinidad to be exact. He secured a very good crop from the seed he brought back. In July 1613 he made the first shipment to England. He was most successful and encouraged everyone else to plant tobacco. Dale restricted the planting by insisting each man raise his own food supplies. However the craze became such that everyone planted it even in the streets.

They experimented with other crops--viticulture, raisins, figs, silk culture, etc. even citrus fruits. French vine dressers came over and stimulated viticulture. A law was passed requiring every householder to plant 10 vines and care for them each year. This industry which seemed to flourish was ruined by the Indian massacre. It also suffered from the competition with tobacco. Again and again attempts were made to cultivate silk worms. They also tried flax, hemp, and cotton.

In 1624 the king took away the charter of the London Company, probably to enjoy the revenue himself. The colony continued to expand into the Tidewater section of Virginia. They reached the Fall Line about 1676, the time of Bacon's Rebellion it was led by farmers who had spilled over into the Piedmont of Va. Maryland too raised tobacco but it was of a lower grade than that of Virginia. It never was a great tobacco region. There were great plantations and the cheapness of land did not encourage conservation practices but as the land was depleted it was abandoned and new land was cleared.

Both Norfolk and Baltimore in the 17th century developed slowly. When the plantations spread into the Piedmont these grew more rapidly.

North Carolina was really settled by people from Virginia. The sea coast is land-locked by the islands paralleling the coast. Tobacco culture requires much care when the plants are small, because they are delicate. Its raising is most painstaking routine for otherwise the quality is not good. You plant the seed in a special bed (hotbed) in late winter or early spring in deep forest mold mixed with wood ashes. The fields are laid out in rows 3 or 4 feet apart with shallow furrows. When the plants are the length of the finger, they are set out. They are transplanted in hills in the rows and they must be set while the ground is damp. They get from 2 $\frac{1}{2}$ -3 feet high and begin to develop a top and a blossom. You then cut off the top and other leaves, leaving just the choice leaves. Suckers will develop and these must be removed. Worms also attacked the horn coming when the plants are half grown and the other when they are more mature. They found the leaves into hand, assorted according to

quality and size, then they packed it into hogsheads.

Rice became very important for South Carolina and to some extent in North Carolina. It was tried in the early days of Jamestown. About 1690 it was recognized as a crop with possibilities. After temporary failures they continued. Rice culture became the all absorbing interest in the plantations around Charleston and with this a great increase in the number of slaves. Throughout the 17th century there was such an increase with respect to increase in rice production that rice was produced on uplands. But the planters found that flooding helped the cultivation so they planted it on the best lands. The inland swamps were utilized for water, since it was easy to divert it. They moved to Tidewater plantations and the production continued there until the Civil War. You could not expand inland--they had shifted in the 18th century from inland swamps to Tidewater. When Georgia opened there was a new field for rice cultivation and the Carolinians moved in. Some of these operated down to the present. Harvesting commenced in September. They cut a swath about a foot wide. The plants were set in moist soil and the area flooded. The bobolinks bothered the grain. After the harvest the sheaves were dried and then brought home. In rice there was a further difficulty of separating the grain from the husk. It was done in the early days by hand. It was winnowed and screened. Rice flour was the broken grains and powder. In 1724 there were 14,000 white, 32,000 slaves and 4,000 tones of rice were exported. In 1749, there were 25,000 whites, 39,000 slaves, and 14,000 tones of rice were exported, By 1765 there were 40,000 whites, 90,000 slaves, and 32,000 tons of rice.

There grew up around Charleston an elaborate social system. They had a town house in Charleston. In the hot summers, they went northward to the resorts and water places, such as Newport R. I., etc. There were other towns that grew up Georgetown, Atlanta, etc.

Indigo was introduced by Eliza Lucas. She was daughter of the English Governor of one of the British Island in the West Indies. He owned 3 plantations around Charleston. She became interested in her father's plantations and managed them. She was also interested in music. She experimented with cotton, ginger, and alfalfa and eventually indigo. Her first attempt was in 1741. She succeeded in getting the plants to grow. Her father sent her a specialist who mishandled the production to kill a rival. Eliza discovered it and learned for herself the process. She distributed the seed and asked her neighbors to raise the plant. In 1756 a specialist in the trade of London came to Charleston to direct the planters. From 1750 to the end of the Revolution he was there. They received good prices for their output. Indigo and rice--as far as labor is concerned--dovetail very nicely. It was produced on light dry soil, the seed being sown in the spring. It grew to 3-6-feet tall and bloomed in June or early July. They were then cut, put in shallow vats and covered with water. After twelve hours the fermentation caused a blue substance to be given off. The water was drawn off into a deeper vat and beaten vigorously for several hours. As soon as it looked blue, lime water was added, precipitated the bluing to the bottom of the vat, the water was drawn off and the paste in the bottom was kneaded, dried, cut, pressed, and shipped. The roots shot up so that there was a second crop of plants.

#### Labor in the English Colonies of America.

There was a great scarcity of labor in the 17th and 18th century. Consequently there was great emphasis on toil. It entered into the Puritan concept of the glorification of work. There were attempts to regulate wages. Massachusetts Bay Colony did from 1630-1680. Aboundless extent of free land led to everyone wanting to set out for himself, thus unwilling to hire out for wages. Labor was

more necessary in the South where the staple crop regime was followed. Lack of labor in New England was met by cooperation, both enforced and voluntary. The natives were pressed into slavery only in the West Indies by the Spanish for they died under the treatment. The English were not successful with using the natives for labor. The French along the Mississippi River enslaved them. In New England the Indians were held hostage after the Indian Wars to insure peace. They used Indian labor a little--it was just a solution with them of what to do with the captives.

The data on farm wages in the colonial period are very fragmentary. A bushel of maize was a day's pay for work in the harvest field. In New York a bushel of wheat was substituted. Food, hard cider, or rum, were included as part of the wages.

Indentured servants were used in the middle or northern colonies. It was a 17th century form of apprenticeship. There were voluntary and involuntary indentured servants. The term of years depended on the amount of money the servant had to pay for their passage. They flourished in the period 1685-1720. The so-called "free-willers" were unknown by the time of the American Revolution. They were given two weeks during which they might find a purchaser for themselves, but as they were not permitted to leave the ship, their chances were slim. The involuntary group included vagrants, criminals, debtors, and those unfortunates who had been shanghaied. The vagrancy laws were so extensive because the crown was afraid of civil war and did not want the labor groups to migrate from one place to another lest they congregate. The prisons began to overflow due to imprisonment for debt, etc. In the southern colonies indentured servants or redemptionists were given 50 acres when free. In 1671 Parliament passed a law prohibiting the export of criminals. They were used as artisans in New England (The English, Scotch-Irish, and Germans) and did not do much farm labor. They played an important part in Delaware and New Jersey. As soon as an indentured servant was free he set himself up in competition to his former master thus keeping prices down.

In 1619 the first slaves were introduced into Jamestown. Virginia in turn sold them to individual planters. They were not popular at first altho' they had great importance later. Slaves made up 3/5 of the total population in 1760 in the South. The number was small for two generations. During that time they found themselves in an undefined position. There is advice from a court showing that they were not called slaves and they were not treated as such. In the northern and middle colonies there were few slaves and they were chiefly domestic, not used on the fields. The abolition of slavery was advocated at the time of the Revolution. It was a great problem which could not be solved easily at that time. The Royal African Company monopolized the slave trade. Slave traffic was chiefly carried by colonial and British ships. This was the Triangular Trade. The Yankee slave trading ships would load with rum and sail to Africa where they exchanged it for negroes held captive on the coast by the other native tribes. Then they sailed to the West Indies where they slaves were sold for sugar, molasses, and tobacco. These were carried back to the states. Then the circuit started over again. The Middle Passage was the trip from Africa to the West Indies. This was the trade that built up many fortunes in New England, such as Peter Fanueil in Boston.

#### Agriculture in the Colonial Period.

The population in the colonies at the time of the French and Indian War was about 1,250,000. About 1/3 consisted of relative new-comers of French, German, and Scotch-Irish races. They had less influence than their numbers would suggest. The Scotch-Irish led in pushing back the frontier. There were 16,000 slaves in New England, 29,000 in the middle colonies, and 185,000 in the South.

The causes of the American Revolution have varied from generation to generation. Beard attributes it to the struggle between urban centers and the colonies.

Many of the people remained loyal to the Mother Country, perhaps 1/3 of them. People who for personal, political, or commercial reasons were friends of the Royal Governors; the merchants who were not smugglers; the rich planters below Virginia; the clergy of the Church of England; prosperous people, such as lawyers who were trained in England were all loyal. Only those like poor benighted Patrick Henry turned to the colonial cause. Then those who were naturally conservative; the most cultivated, wealthiest and most influential in the coastal towns also remained loyal. The greatest and strongest support came from the middle and lower classes. The frontiersmen, ardent individualists, adhered to the colonies against England, largely because she attempted to bar settlement west of the Alleghenies. The Virginia planters were deeply in debt to the London merchants and they probably were not loathe to be free of debt.

In a sense the Revolution was a Civil War. It was against the mother country and at the same time it was a civil war within the colonies. For the property of the Tories was confiscated and divided among the loyal Americans. They, on the other hand, enlisted in the English army and navy, their families fled to Canada and there formed the nucleus of the province of Ontario.

The acts of Parliament to control the economic activities of the colonies led to open rebellion. The mercantile system of the 18th century was very powerful in England. There the land owners and merchants ruled. The trade of the colonies was supposed to be monopolized by the cities and for their benefit. The colonies were to produce only things that the cities needed, and they were not to produce goods that they could or should buy from the cities. Thus the colonies were constantly in debt and they had no ready cash, but were forced to rely on paper money. The English did not want a free circulation of money in the colonies. The colonies tried to use various mediums for currency. Eventually they had to turn to paper money. Taxation was of course a cause. After 1763 the depression hit American Agriculture. This together with wasteful methods and crop failures led to a serious situation in the Chesapeake region generally. This economic depression following the French & Indian War (Seven Years' War) was world wide and due partly to several bad years and crop failures. New legislation called for taxes to be paid in coin, not staple crops. There was a general lack of understanding of the colonies and the colonies mistrusted the mother country. The question of western land was a great problem. Read the Way of Empire by E. E. Edwards. There was a growing sense of domination and individualism on the part of the colonies.

At the time of the Revolution the frontier had already a distinctive culture and way of thinking. Chester, Bucks, and Philadelphia Counties elected 26 members to the legislature, while the other five counties only elected 10. This led to dissension. There was a constant attempt to establish new colonies, such as Kentucky and Tennessee. There was a whole series of outbreaks, such as Bacon's Rebellion before the Revolution proper. In 1777 Congress recommended that Tory estates be confiscated and the proceeds be used to help the Colonial cause. This was an abolition of the vestiges of feudalism. Quit rents, the concept of entail, and primogeniture were abolished and the exodus decreased the power of the Tories.

#### Effects of the Revolution on Agriculture.

There was not a labor shortage. Of 2,500,000 population only 1/8 were in the army. The American Revolution did not cause a labor shortage, due to the apathy to the war in some quarters. In New York the farmers suffered from raids on the part of both armies. But while Washington starved the New Jersey -ites sold wheat etc. to General Howe.

Indigo was cultivated before the war and during it, but gradually died out when the bounty was lifted. Wool production profited by the war.

American on the whole profited by the Revolution because the troops--many of whom were foreigners--knew the best techniques of agriculture, so they had something to contribute. There was an awakening of a national consciousness.

It was manifested in many fields. The Americans cut away from things they considered English--civil law, the church. They chose new emblems, new names. There was an awakening in literature as they attempted to write for the masses. There was a beginning of art. A new language was started by Webster a one-man spelling campaign that ended up in a dictionary. They fell back on ancient Greek and Rome for architecture. They tried to make a new agriculture, where strangely enough they didn't throw overboard English improvements. They took all they could from the writers, Young, Sinclair, etc. With this movement went the growth and formation of agricultural societies, the most important of which was the Philadelphia Society for the Promotion of Agriculture.

LAND POLICIES FROM THE TIME OF THE REVOLUTION TO 1862.

We could characterize this period as a swing of the pendulum from one extreme to another. In the first period conservatism predominated--the land was regarded as a trust to be held by the government, a reserve for the years to come. From 1862-1892 the government is exercising the policy where the land is given to the public for a very nominal fee. Now we are going the other way--back to government control of land.

The early years were a critical period for the colonies. The Confederation of 13 states was no doubt more successful than anything previously tried, but they (the Articles of Confederation) not enough for a strong central government. They did organize a definite land policy.

The Congress got the various states to yield their conflicting claims west of the Alleghanies. This land became a common bond between the states. The soldiers and officers had been promised lands and they began to clamor for them. There was a need for revenue, so they looked to the public domain as a source of revenue. The Indians broke loose in the Northwest and carried on warfare against the upper Ohio Valley settlements. The government was forced to send out troops to quell them. In spite of the Revolution, Kentucky and Tennessee were continually filling up with settlers who drifted in. There was a danger that these same people would drift away from the United States.

George Washington realized the situation and had a vision of the possibilities for development in the interior of the continent. The necessity for forming a government for the territory west of the Alleghanies, an area that came to the United States by chance in the treaty, had to be settled. There was pressure from the people who wished to emigrate. The first ordinance of 1784, was a combination of the New England and Southern systems. In 1785 it was referred to a committee who passed it in May. There were to be surveys prior to the actual sale of land. It provided for townships to be 6 statute miles square. Each township was to consist of 36 sections. One in sixteen was to be set aside for schools. The main argument was on the subject of the amount to be sold and how it should be settled. There was to be a registry of deeds. This ordinance of 1787 was the basis for the colonial policy. Congress was to set up in the territories units of government to function until statehood. There were three main points of controversy:

1. Minimum allotment of land for sale per person.
2. Amount per acre.
3. Terms of payment--cash or credit.

These settled on three ideas, preemption, graduation, and homestead.

Disposition of Public Land

Acts	Minimum Purchase (acres)	Minimum Price (per acre)	Conditions of sale
1796.....	640.....	\$2.00.....	One-half cash and one-half credit, payable within 1 year

(continued)

Acts	Acres	Price	Conditions
1800.....	320.....	\$2.00.....	One-fourth cash, one-fourth credit within 40 days, one-fourth credit within 2 years, and one-fourth within 4 years.
1804.....	160.....	2.00.....	Ditto
1820.....	80.....	1.25.....	Cash
1832.....	40.....	1.25.....	Cash

Both principles of graduation and preemption are symbols of the rapidity with which the west was settled. They selected what they thought were better lands, and left islands of poorer land in the hands of the government. They began to urge the lowering of prices for these poorer lands. Congress finally passed an act that land was to be reduced to \$1.00 if the land had been on sale for 10 years, or reduced to  $12\frac{1}{2}\%$  if on sale for 30 years. This is gradation. The farmers found themselves constantly ahead of the surveys and thus were squatters. This is the Southern system--indiscriminate settling. This was a direct violation of the law. In Ohio they were driven off by troops, In the end Congress gave up. They sat on the land and formed claims associations. A delegate from these associations would go and bid in the area desired. They were called "clubs of honor." Eventually in 1841 they were given the right to keep their lands.

Preemptions - Homestead Act.

Graduation was recognized in 1854. The acts of 1841-1851 are regarded as significant but are just preludes to the final victory expressed in the Homestead act of 1862. The provisions were: Any U. S. citizen, or deed of intentions, head of family, or 2 years residence, entitled the claimant to 160 acres on payment of fees and later 5 years residence on land. This constituted the ultimate triumph of the 18th century liberal land policy. Many land problems of today are due to late passage instead of in the '40's. An example is the Great Plains Legislation of today to correct abuses. In 1933 the Secretary of the Interior withdrew land from settlement for resurvey to determine fitness for cultivation. This rendered it inoperative.

Basic idea in Southern system of "Headright."

View of conservative to gradual liberalization of land policy. J. Q. Adams emphasized public lands as natural resource to be conserved as a base of public funds for education, welfare, and general benefit of the public. This was opposed by self-interested groups, the eastern land-owners because of lowering land values. Manufacturers felt this would compel high labor wages to keep labor. The eastern land-owners also felt that it pauperized its benefactors. "The bee that robs the hive of its neighbor becomes lazy and improvident disregarding own flowers...resulting in death of won and others hive." Land operators were interested in cheap land and joined up with labor which hoped to escape industry's clutches and low wages. There were various groups and individuals who fostered free land, especially National Reform Association felt that it should be distributed equally among the population. Greeley was a leader in this. The Reform element and Labor-cause transcended near economic self-interests.

National Reform Association distributed pamphlet "Vote yourself a Farm." Beneath all was the fundamental American concept of democracy, the equality of economic as well as political power. Enthusiasm for preemption and effective national administration to save America for economic democracy resulted. Every pioneer was in part a speculator, hoping for an increase in land values. He often had more than he could cultivate, thus different from the European peasant..

Planned priced and recoup losses by increased land values. Small politicians were small speculators who held a few farms for rise in price.

Large Scale Land Speculation began in Colonial Period.

This took place during and immediately following the Revolution. In 1788 money desperate Confederated Government made 2 grants on the Miami and Ohio Rivers to for \$1 an acre to 38¢ for the poorest. In this sale to the Ohio Co., the leaders were mostly Revolutionary officers who proposed to use continentals to buy a million acres.

The National Reform Association headed the movement of sufficient important to be called "New Agrarian Movement". The actual leader was G. Henry Evans, a New York labor leader. He argued that man's right to live, have natural necessities, light, air, water and land, the product of labor. He also argued that land holdings must be equal and alienable. By 1850 the general principles were advocated by about 600 or the 2000 existing papers, especially the New York Tribune. In 1851 it was supported by Tammany Hall. In 1845 Andrew Johnson introduced 1st bill as Tennessee Congress for Homesteads. In 1848 the idea of Homestead was adopted by the "Free-Soil" party for political gains, but was opposed by eastern capital because of labor and land speculation. The southerners who planned to leave their holdings for the new Eastern lands opposed the Homestead Act. It was not passed until the South withdrew. Congressional representatives giving Lincoln and Republicans the control from 1860.

RR grants continued with no strict limits on size of holdings of individuals. During the 15-20 years prior to 1860 there was a Political Revolution in America. Free land arguments became clear. Opposers of free homestead argued (1) its unconstitutionality; (2) that the national government pledged as trust to sell and not give the land away; and (3) the questions of immigration and emigration would tend to make people shiftless. By 1852 The delegates from the South voting against it were almost unanimous. In 1854 the opposition was labeled with the abolitionists. They attempted to fill lands with northern and not southern farmers. Between 1858 and 1859 the struggle over the Homestead Bill became very partizan. Southern Cuba seizure plot Bill vetoed by Buchanan. It was passed in 1860 by Congress and vetoed. They used all arguments against veto and made the bill a political issue in 1860. The union of mid-west farmers and eastern manufacturers was evident in the bargain that resulted in passage.

The national government paid the first request for free land. In 1797 came request from Ohio pioneers. A similar petition came from Natchez, Miss., in 1799 and 1804, in 1806 for Indiana. There is enough to show that free land idea never died until 1862. There was considerable movement in 1812 by Pennsylvania, Ohio, and territories westward through petitions made to Congress. An Ohio man delivered a petition to Congress containing the theory. They considered every man entitled by nature to a portion of the soil of the country. No man should possess more than 200 acres. There was no congressional encouragement until 1825 when Thos. Hart Beaton of Missouri became the champion advocate for free land. He worked for modification of existing laws. The preemption act of 1841 represents the greatest effort.

There was distinct frontier donations. In 1842 Congress passed a series of acts donating land to settlers in pioneer areas in return for services as military protectors of frontier. For example in Penna., Fla., Oregon, Wash., and N. Mex. This distinction is to be noted: these were for services already rendered.

The period of colonial agriculture has two main achievements: (1) the foundations of our present system were laid under the British colonial policy. The plants and animals of the old world were tried out and adapted to this continent. There was always the problem of labor supply which was never solved. Available markets were slow to develop. Geography was dominant force in the economic systems of the 17th century (Shryock). Another feature is the frontier (2) common to all the colonies regardless. It shifted westward by degrees with new conditions and new opportunities constantly arising. Down to third decade of the 18th century, European agriculture continued to be medieval in origin and techniques. It isn't until 1740 that we have the agricultural revolution. This crudity tended to be continued here, due to abundance of land and labor shortage. The trade of the colonies was largely in agricultural surpluses.

PERIOD BETWEEN AMERICAN REVOLUTION AND CIVIL WAR (1776-1860)

This is a most difficult period to epitomize as the dates are political. This is a period of change. There is a shift from subsistent agriculture to commercial agriculture (nationalistic). The dominant characteristic is the transition, but this didn't take place at the same rate or at the same time throughout all the states. It must be treated by sections.

Territorial expansion went on throughout this period from the Alleghanies west to Great Plains where they were definitely halted by the Indians barrier. Here the movement stopped at 1850. The Indian policy was shaped by the idea that the Great Plains were only fit for Indians and not for white settlement. There were restless pioneers, greedy land speculators, and peaceful farmers, planters, and ranchers, who went out into these areas. But the last really had the most to do with the annexation of territory to the United States.

There was a continuous accumulation of extensive areas of arable land. Consequently, there was prolonged the period of extensive or poor farming. There were few technological developments. Ultimately there came to be a regional specialization--wheat in Minnesota, and cotton in Mississippi. You could hardly have diversified self-sufficient farming. With the westward movement there was a development of intensified sectionalism. There was always rivalry between the two westward expanding groups.

Methods of production were unprogressive in the first third of this century. The U. S. was a century behind Great Britain in developing increased productivity. There were not new markets and the abundance of land did not increase productivity. The Napoleonic Wars made foreign trade very precarious. The west was even more backward than the east. About 1830 there came a group of forces that shifted agriculture to commercial agriculture. About this time there developed an outlet for agriculture. England built cotton mills and looked to the southern states for cotton. The southern planters moved to Alabama, Mississippi, and Texas to raise cotton. They didn't realize it but they raised no food, but expected to receive it from around Ohio. New England also built mills and needed added food supplies. Similarly in the 1840's rising industries caused an impetus to agriculture, which felt that the corn laws should be annulled. In the 1840's there were ars and famines, to that European countries came to look to the U. S. for food. This stepped up opportunity to expand foreign markets. Beginning of the grain trade. In 1830-40 the farmers reached the prairie land, level, fertile, and treeless. With that was liberalization of land policies by the federal government. Prairie land was land covered with a thick mat of grass. In the great plains you have bunch grass with bare soil in between. Once the people learned that it was just as good and didn't have to be cleared, there then came an improvement in implements, livestock, and seeds. There was some improvement in agricultural methods.

There was also a revolution in transportation. The turnpikes were built, there was a period of canal-building. On the ocean came the shift from steamboat to clipper. There were agricultural societies, federal and state aid for agriculture. These changes made the least impression in the South. They increased the profits by increasing land and labor and not by improving the methods of planting.

Agricultural interpretation of the Civil War. To Europe wheat was more important than cotton, so England did not retreat from neutrality. Agriculture determined the outcome of the war itself. The southern system, collapsed after the war, showed that it could not have persisted. The South could not compete. It did not have the transportation facilities and the new machinery did not suffice to pull the South through.

There are three sections to be considered:

- 1.--Older section
- 2.--Northwest (Area northwest of the Ohio)
- 3.--South (Area south of the Ohio)

Section 1.--This section's agriculture was essentially a migration of the eastern system until the prairies were reached. They subsisted on game until they cleared enough land for corn. They sometimes got good crops such as 50-60 bushels of corn to the acre and they got 30 bushels of wheat. Corn was planted with a hoe and cultivated two or three times. They manufactured potash. They destroyed much humus that should have been saved. They tried to produce maple sugar. They built corn cribs, but didn't build barns for livestock, they put fences around hay, instead of putting it into hay mows. They hesitated to settle prairies because of lack of trees, which to them was a sign of poor soil. They didn't want to leave the larger streams, which served them as transportation routes. There was also the problem of drinking water. There was a scarcity of water that was fit to drink. Another problem was shelter for the livestock, where no barns were built. Roads were just impassable. There wasn't adequate machinery to work the prairie soil. A considerable part of Indiana and Illinois was brought under cultivation prior to 1850. John Deere is supposed to have invented the first steel or iron plow in 1849.

There were certain advantages such as excellent forage. They tried to build sod houses, but they were not successful east of the Missouri River because of the high precipitation. What aided the development of the prairies was the raised prices and new equipment. The farmers lacked material for building fences. They tried to plant hedges of Osage Orange. West of Ohio the agriculture is a westward expansion of the agriculture of the seaboard states. Wheat appears where a colony is opened up, but eventually it migrates. By 1830 Ohio became an important wheat state. In 1849 the order of importance in wheat production was first Pennsylvania then Ohio and New York; by 1859 it was Illinois, Indiana, and Wisconsin. This shift in wheat production from east of the Alleghanies to west of them is most surprising. Certain areas were prairie lands where wheat was concentrated upon.

Corn responded fairly quickly to opening of new lands. Corn can be grown most anywhere in the United States and thus it can be raised by poor farmers everywhere. As corn moved west it formed a belt south of the wheat belt. Corn concentrated in the Ohio basin and limestone areas of Kentucky and Tennessee. It spread to Illinois and Missouri. By the time of the Civil War it had found its place.

The New England and Middle Atlantic states stood still, or at least became moderately expanded. They raised livestock taking the hogs to market on the hoof. They were referred to as wind-splitter or hazz-back. They were fed corn. Hogs and corn have made an alliance which it has been hard to break. The hogs were driven overland to Philadelphia, New York, etc. Some of them were sent down the Ohio on to New Orleans. About 1840 the packing houses began to form. In 1860 they were located close to the River. Cincinnati in the late 40's and early 50's was called "Porcopolis," but Chicago was fast assuming prominence.

The range cattle industry eventually became a beef cattle industry. Due to unfenced range lands, beef did better. Renick brothers drove cattle overland to Philadelphia. They cleared about \$30 a head. This influenced others to do the same. The speed of the cattle depended on their age. There thus developed an integrated cattle industry. The farmers brought in cows and saw that they were well fed. Most of these people were Virginians who had gone west especially to do this sort of business. Northern Ohio became a general feeding ground. The cattle driven eating last longer than the hogs. Cattle from Texas were driven northward to feeding grounds along the Ohio. New England could not compete with this.

#### Trials Confronting Agriculture in Older Section of United States (Especially New England)

This was a period of great stress for farmers in New England. Manufacturing

began to develop with the rise of factory towns and their demands for additional foodstuffs and raw materials. They didn't realize that they would not benefit much. But by 1840, they had to shift to commercial agriculture. Canals and railroads in the old northwest exposed New England's farmers to competition. The West poured in its surpluses just at the time when the New England farmers were willing to shift. There was a change in techniques as well as a change in rural conditions and life. The markets for New England agriculture was a determining factor. Agriculture stagnated, there was a low standard of living, general stagnation, and emigration westward. There was economic self sufficiency. If they could not sell, they could not buy. Read "Household Manufactures in the United States, 1620-1860" by Trejan.

The farms near the port towns did produce surpluses to be shipped out and there was some barter at the country stores, where the products were accumulated and then shipped. "Farming wasn't a business in New England, it was a way of life."

There was an increase in population--a phenomenal increase in three southern New England states from 1810-1860. Immigration was extensive from the Revolution to 1810. The increase was 130 percent. In 1820 in Virginia the same situation prevailed, with people migrating frequently. At the end of this period, there was immigration from Ireland, a few French Canadians also arrived. 1807-1815 there was a boom in agriculture due to the stimulus in manufacturing. Then there was a depression in 1819 and the home market drops off. There was a definite movement to improve agriculture. Alkanah Watson was the center of this movement. He was originally a merchant in Boston, after retirement he went to Pittsfield. There he formed the Berkshire Agricultural Society and in connection with it he organized Agricultural Fairs--as we know them in America. These were directly due to Watson. In 1807 he tied his imported merino sheep on the village green at Pittsfield. He knew of the activities of the Philadelphia Society for Promoting Agriculture. It didn't have much influence with dirt farmers. Watson so organized his society that some phase of it would appeal to everyone. This idea spread rapidly and every state soon had a society and a fair. These included exhibits such as we have today.

In 1830's the farmers shifted from wooden to iron ploughs, and from oxen to horses. They held ploughing matches. There was a gradual increased specialization determined by the location of markets, natural resources, and geography. First truck farming was around the larger cities. The farmers in the hills raised cattle--fattened them in the Connecticut valley. Tobacco and wool were also grown.

Western competition was not felt until after 1840. That was probably because there was no crop specialization in New England. Wool and beef felt this competition the hardest. In 1850 New England lost 50% of the sheep. A few commodities remained immune. Hay, for example, increased during the period, corn also increased, potatoes declined due to a blight. The islands didn't seem to get the blight.

Changes in farming households. They were once self-sufficient and produced some surplus. When farmers got cash for crops, they could buy commercial products. There came price fluctuations, employment, was not easy to find--what was the younger generation going to do? They could migrate, become factory workers, etc. Many families during the transition stage engaged in manufacturing at home. They sewed men's clothes, hats, etc. They went in for wood carving and handicrafts.

#### Southern States:

All the planters felt the depression in the decade that followed the Revolution. Most of them depended on tobacco. Many of them switched to other crops because for 50 years the price received for tobacco was very low. When new plantations were cleared the old tobacco fields were abandoned.

Rice had come to a state of transition. Indigo was disappearing. The price of slaves declined precipitately in 1780's and 1790's. Many, because of this, advocated the abolition of slavery. Washington wrote to a friend that if he didn't object to selling slaves he would get rid of his, but he thought they would prove very troublesome. The farmers in New England during the depression started to march to Boston under the leadership of Daniel Shay. The state sent some militia against

them and they only went as far as Springfield. Everyone became very much alarmed at this uprising and branded them as communists. Jefferson, safe in France, was the only one who didn't shudder at this demonstration for economic equality. This dread really led to the overthrow of the Articles of Confederation and the drawing up of the Constitution.

Cotton had been used for centuries and the absence of an adequate supply kept it from being used as widely as flax and wool. From 1769-1780 there were a series of inventions in England which made it possible for the countries interested to use more cotton. Spinning and weaving machinery were invented in England by Hargreaves, Compton, et al.

After the revolution, people sought ways and means of expanding cotton production. This came at a time when other crops were falling short. The farmers were looking for a crop that would be a new crop. Green seed, short staple cotton had long been cultivated from New Jersey to Georgia. But it was only for domestic consumption. During the Revolution the American farmers increased the production of cotton. This cotton could not become a great staple, because it was too difficult to separate the seed from the fibre. It was hard to do and a slave could only separate about 2 lbs. a day.

The planters attempted to find new varieties as early as 1786. Several new strains were tried on the Carolina coast. Bourbon cotton was sea island cotton that come from the Bahamas, but it suffered from too short a season. This introduction of sea island cotton was fairly general. Samuel Spaulding and George Bissett introduced it. The first success was in 1790 by William Elliott. From then on most farmers took it up. The fibres of sea island cotton are 2" long. It is fine and silky and very long. It was also very strong. The more fortunate Carolina planters made fortunes in a few years. The bolls never matured as well as they did in the Bahamas. The yield was very low. Only a strip 30 miles wide through South Carolina and Georgia was suitable for the cotton. Ultimately the people on the Piedmont wanted to raise cotton, but the species was not suitable.

"The Pine Barrens" separate the Piedmont from the Atlantic Coastal Plain. The sand is too light for much use. They divide the Piedmont in Carolinas and Georgia from the mountains to the west. They are a strip about 100 miles wide. Cotton (short staple) was tried about 1800 on the Piedmont. Most of the settlers came from Pennsylvania, Virginia,. The capture of Savannah and Charleston by the British drove some of the planters back into the Piedmont. Until Whitney invented the cotton gin, these back country areas could not raise cotton. While visiting a chance acquaintance, Mrs. Green, at her plantation near Savannah, he heard all the problems discussed. For a time he did very well, but he lost much through law suits and competition.

The Effects of Cotton

Cotton was the most important crop in the South. It was largely the single export of the United States. It was on a steady increase up to the Civil War. With the expansion of cotton came a revival of slavery as an institution. This also led to the struggle between the North and South. There was western migration into Mississippi and Alabama, as well as Texas. Simultaneously the cotton industry flourished in New England.

<u>Year</u>	<u>Bales</u>	<u>Comment</u>
1790	4,000	
1800	73,000	
1810	178,000	22% of total value of exports of U. S
1820	335,000	32% or \$66,000,000,000/
1830	732,000	41%
1840	1,348,000	
1850	2,136,000	
1860	3,841,000	57% or \$333,000,000,000

The growth of green seed, short staple cotton spread into Tennessee, and then to Alabama and Mississippi. Rich soil was found to better than the uplands. There was a hue and cry to get rid of the Indians, and there were also difficulties with the Spanish in Florida. They swept on to Texas, where it played a great part in its

annexation and subsequent war with Mexico.

By 1850 Georgia raised the most; in 1860 Mississippi, Alabama, Louisiana, and Texas raised more than South Carolina. With the shift of the center of cotton production trade and the rise of the cotton center spread westward. New Orleans began to flourish.

As slavery developed it permeated the social and economic life of the South. 1820-22 is the high water mark of the abolition movement in the South. Slave labor was adapted to the production of cotton. The use of slaves did necessitate much waste and new lands were needed constantly. It was difficult to introduce improved machinery.

### Farmers in Politics

There had always been a difference between city and country--politically, socially, etc. Rural communities differed in dress, customs, morals, etc. The rural view of townspeople was that they were idlers, wasters, parasites, and sharks. This general idea on the part of both groups has been in existence since cities first arose.

There are those who felt that the town and country were separate cultures and antagonistic to each other. In the last century there have been many things to level these differences--modern instruments, radio, automobile, railroads, compulsory education--or in Europe enforced military service. However, the farmer is the only one directly in contact with nature.

Who bears the burden of taxation? In the South the tariff benefited merely the industrial centers, not rural ones. Another factor is prices. Originally prices were fixed for each community, but later prices became more general. The guilty party varies from middle man, transporter, speculator, etc. Now one group is up, now another. There has been a ceaseless struggle to control this by law. It is very difficult for a farmer to strike out at intangible or abstract forces. It has been hard for the American farmer to develop an appreciation of economic law, so they attack a group.

### Farmer Movements

Some believe that these movements have occurred only since the Civil War. However, those before the War were successful and those afterwards failed. In the Colonial period there was constant conflict between the mother country, and the colonies and between the colonies and Colonial Governors. Some of these were armed rebellions, such as Bacon's. This was due to lack of food and Governor Berkeley refused to let any food out of Virginia. This coupled with Indian outbreaks on the frontier led to a movement for redress. Nathaniel Bacon attacked the Indians, Berkeley objected and eventually Bacon ousted the Governor and took Jamestown. Bacon unfortunately died at the height of his career. This was a farmer movement--an attempt by farmers to improve their condition by political power.

Next came the Regulator Movement in North Carolina. There were two sections--Tidewater and western North Carolina. As the east controlled the legislature they taxed the west on the basis of their own prosperous area. The west rebelled until put down by troops. Shays Rebellion really led to the meeting of the Constitutional Convention, where they drafted an entirely new form of government. In the agitation that resulted in the acceptance of the Constitution various groups were at each other's throats. The merchants were for it, the farmer on the frontier were opposed to it.

Period of Federalism,	1789-1801	
"	Jefferson	1801-1829 (Jeffersonian democracy)
"	Jackson	1829-1861 (Jacksonian democracy)

In the first period the Federalists were in power and chiefly concerned with enforcing the Constitution. There was constant debate on the National Debt, for some wanted the Federal Government to take over state debts and pay those contracted during the Revolution. The farmers didn't want the Federal Government to

to assume the debts. Another bone of contention was the protective tariff. Hamilton was in favor of a very elaborate tariff system. Another issue was the United States Bank, as it was empowered to issue currency. There were questions on shipping. The Federalists wanted a standing army and navy. The farmers objected strenuously. Foreign affairs led to a friendly attitude toward Great Britain and disapproval towards French Revolution. These things all gradually caused cleavage in the governing bodies.

Jefferson retired from George Washington's cabinet and wrote letters to start a new political movement. He was a planter and farmer and was in favor of bringing liberty to the masses; consequently, his ideals were very democratic. John Taylor helped him evolve theories of interpretation of the government. They did not believe the government should do any more than necessary. The Federalists, John Adams, Hamilton, and Jay opposed Jeffersonians. The election of 1800 was in a sense a political revolution. It was a turn towards democracy.

#### Different Social Classes in the South

Most of the social classes were the result of the slavery and plantation systems. 1) 5/7ths of the families owned less than 10 slaves; 2) the professional groups owned a few slaves--such as 2 for house servants. This group included doctors, lawyers, etc. The large plantation owners were their friends and so they supported their views. 3) A few free negroes owned slaves.

In 1830 there were 2,000 free negroes who owned slaves. These declined towards the Civil War. Sometimes this was a means of free negroes buying their relatives. They usually did this on the instalment plan. A negro minister bought 27 to free them. Some, of course, made a business of dealing in slaves.

The non-slave holding whites were 2/3ds of the population. Only 1/3 held slaves and these colored the picture. Few hesitated because of conscience. It was largely lack of money that prevented slave-holding. A few small farmers refrained on principle. Many Quakers moved from North Carolina, thru Kentucky into Indiana because of their aversion to slavery. The few that remained are classes as poor white. Nor all these small farmers of the border states were really poor whites. They were probably Scotch Irish. Buck divides them into mountaineers and lowland planters. The Georgia "cracker" drove cattle with long whips, cracking them as they went thru the country; another group, the "clay-eaters" were extremely poor whites in Alabama and Georgia who due to a deficiency of diet had a hankering for something--this longing they satisfied by chewing clay. They lived in 1-room log cabins without windows. They were even looked down upon by the negroes. The poor whites looked down on the negroes in turn. Andrew Johnson was a poor white, a self made man, but he was a rare example for he made the White House.

The poor whites didn't have any ill feeling towards the planters probably because they didn't know any better. Many of them had hookworm due to lack of shoes, and consequently not much energy. It wasn't until 1902, that Stiles worked out the life cycle of hookworm and showed how to cut down its spread. This lack of energy kept them from doing too much. The share-croppers came in about 1810 but they were not widespread until after the Civil War. We tend to think of share-cropping as a negro problem, but actually the negroes have been pushed out and the whites pre-dominate in the share-cropping class.

Thus the number not connected with slave-holding was slightly more than the number of slaves plus slave-holding families. The percentage of slaves and slave-holding decreased greatly after 1850. This tends to prove that slavery was dying out. In 1860 there were 3,950,000 slaves and 8,290,000 free people of whom only 251,000 were negroes. One half of the people were slaves or slave holding families. On the border states there were only 2/5ths of the population. In the deep south there were 2/3ds

## Transportation of Agricultural Goods

The first settlers depended on ocean transportation and direct communication with Europe. There was an exchange of commercial and agricultural products. When the settlers moved inland, the rivers were the principle routes of trade; later roads were improved, then came canals and lastly railroads. Prior to 1860 the United States was chiefly agricultural. As these goods are hard to transport, transportation was a weighty problem. After the Civil War the railroad boom led to the settlement of the territory west of the Mississippi. In the East, of course, the railroads came after thicker settlement, whereas in the West they led to thicker settlement.

Colonial Period. The first means of transportation was by dugout and canoe, later flatboats were used. There were Indian trails that gradually evolved as roads or trails that could be followed on foot or horseback. New England has more roads than the other colonies. Towns tried to encourage road building without much success. Early roads followed the route of the New York, New Haven, & Hartford RR. In Tidewater Virginia etc. water was the chief mode of transportation. There were a few roads, but they were so dusty it was awful and there were very few bridges. Between this lack and the heavily wooded forests it was almost impossible to build roads for it was too expensive for the colonists. Carriages were few and travelers traveled partly by post and partly by water.

Turnpike Era. From 1790-1820 there was a demand on the part of farmers for ways to get their products to market. In the cities there was a demand for cheaper food. Then the land speculators wanted roads to lead into the interior. The turnpikes were built by a company who sold stock and then charged toll. The Philadelphia-Lancaster Pike cost \$465,000 for a stretch of 66 miles. This was a successful venture from the first. 86 companies were chartered in Pennsylvania alone. There was rivalry between seaboard cities in order to tap the interior resources and trade. Companies also built toll bridges. These companies were important. It cost \$125 for a ton of freight to go from Philadelphia to Lancaster. Standard freight charges were \$10. per ton per 100 miles. The cost across the Atlantic was only 40 shillings per ton. This came to a point where there was a nation wide demand for state aid, and then they turned to the Federal Government for additional aid. In 1806 there was a surplus in the treasury and the hue and cry rose that it be used for roads. Albert Gallatin reported to Congress on internal improvements. He proposed canals across Cape Cod (not finished until after the World War), etc. Roads were proposed to lead to the main rivers. Canals were proposed to go round the falls in the rivers. He also proposed National roads west from Pittsburgh to Detroit to St. Louis, New Orleans, etc. A canal was proposed to go thru the Mohawk Valley, from Lake Champlain to the Hudson, and from the Susquehanna to the Schuylkill. Most that it was estimated to cost was \$20,000,000. The Cumberland Road was the chief result, authorized in 1806. It was called the Old National Pike. The first 130 miles went to Wheeling, W. Va., and were completed in 1818. By 1823 it went thru Zanesville, Columbia, and Springfield. It then went to Richmond, Indiana, Terre Haute and Vandalia. It took 30 acts of Congress and \$7,000,000 to complete this much. Until the advent of the railroads, this route, 834 miles long, was the chief means of reaching the west. Andrew Jackson vetoed the Road Bill so hard that no more were built with Federal funds.

Steamboats and Canals. Watt invented the steam engine and then various people tried to adapt it to the water. Fulton's Clermont, made the first successful trip from Albany to New York in 1807. Fulton was backed by Robert Livingston who had the cash. Fulton was granted a monopoly on rivers in New York State and on the lower Mississippi. In 1811 he built the first boat at the Pittsburgh shipyard. Not until 1815 did the first steam boat make the trip up and down the Mississippi River. The Supreme Court decision, Gibbon vs. Ogdon, states that neither State nor individual could monopolize a river. It took 30 days to go

from New Orleans to Pittsburg and cut the cost in half. By 1860 there were over 1,000 steamboats on the Ohio-Mississippi system. Steamboats did not develop rapidly on the Great Lakes. They came in about 1830. This led to a demand for Congress to appropriate money for clearing rivers.

Interest then swung to canal building. The cost of transportation was still high due to excessive handling of freight to and fro over the mountains. Artificial waterways were naturally advocated. In 1785 a canal was built around the falls of the James river at Richmond. A canal was also built thru Dismal Swamp to Albemarle Sound. Alkanah Watson of the Berkshire Agricultural Society and DeWitt Clinton are both prominent names in the building of the Erie Canal. It was proposed in 1792, and the construction began in 1825. It was 400 miles long. Clinton was directly responsible for it. It cost about \$25,000 per mile, or \$7,000,000. in all. It ran thru Buffalo, Rochester, Syracuse, Albany, and Rome. A series of subsidiary canals were built to the Great Lakes, etc. The Erie Canal was a great success at once. There was an increase in farm values, land values, and New York City became the leading seaport as a result. It tied the Northwest with New York and separated it from the South. The panic of 1837 put a crimp in canal building and when the country recovered railroads were already in the lead.

### Sugar

Sugar first assumed importance in certain West Indies where it reproduced without replanting for a period of 10 years. It was beyond the region of frost and so matured and was reaped at leisure. Cane can be grown as far north as Georgia, but to use it commercially for sugar it needs 8 months free of frost. This limits it to Southern Louisiana. It has been grown with success in the Everglades of Florida.

It was first produced in the Barbadoes. This island contains only 166 sq. miles. Its first permanent settlement was in 1644 by an unprosperous group of English Colonists. During the Civil War in England many Royalist refugees went to Barbadoes. Later Cromwell sent several thousand Scotch-Irish there as indentured servants. Negroes were imported and proved an advantage over the whites. In 1643 there were 11,000 white, 5,000 negroes, and 10,000 separate farms. Two years later sugar growing was introduced. Ten years later the crop sold for 1,000,000 pounds sterling. Sugar prices fell in 1860. The white population diminished, but the negroes increased to 41,000 and the farms fell from 10,000 to 800. During the rest of the 17th century the Barbadoes was the most important colony. Then it ranked second to Jamaica.

Jamaica was larger by 25 times and about 1,000 miles west. It was taken over by the English in 1755. A few hundred Spanish who raised cattle and prepared cacao lived there. Many Roundheads fled to Jamaica and began its development. The southern coast consisted of savannahs that were very rich and easily tilled. Plantations developed along the coast under the tutelage of overseers from the Barbadoes. They also raised ginger, cotton, and cattle. In the beginning of the 18th century sugar predominated. Sugar grew on the other islands, but it never reached the proportions of sugar in Haiti. This in turn was eclipsed by Puerto Rico and Cuba.

In southeastern Louisiana sugar raising was coexistent with cotton in the tidewater area. The soil was admirably adapted to sugar. The water-logged soil could not be used for general tillage. The settlements and farms were on elevated strips of land bordering the main stream, or old channels of the Mississippi. Due to the topography the fields were long and narrow and artificial levees had to be build to avoid floods. The first settlers were French who were eventually called Creoles. The upstream people were German (early settlers) in the parishes of St. Charles and St. John. They engaged in mixed farming. Next came the Arcadians who were harried out of Canada. Then came Anglo-Americans taking up lands farther

north. Gradually negroes came in for labor, but the Creoles dominated until the accesssion by the United States. By the end of the 18th century the negroes equalled the whites. There was a need for a cash crop. Late in the 18th century the inhabitants were engaged in diverse pioneer farming--hunting, fishing, cattle raising, grain and vegetable production, trading, etc. Indigo was produced for export. Some tobacco and cotton were also grown. Ulrich B. Phillips says attempts were made in 1762 to raise sugar, but frost came too soon for it to mature. Cane was grown and used for syrup and making rum. Santo Domingo sent some cane and negroes to the Jesuit brothers in Louisiana. In 1759 a mill was erected for processing sugar. In 1780-1800 the planters raising indigo were forced to find a new staple. Solis, a Spaniard, built a sugar mill below New Orleans and failed. Etienne de Bore, a prominent Creole, demonstrated the success of sugar growing. He got his seed from Solis and in 1796 he got \$12,000 for his crop. This led to rapid expansion of sugar growing in Louisiana. In 9 years 81 plantations were developed largely by Santa Domingo refugees. The French exiles had spent some time in Cuba, while others came directly to America. This group knew sugar growing and so actually made it a success in Louisiana. They settled about New Orleans. Slavery boomed in spite of the Constitution. Many of the Southerners packed up and moved from the old Atlantic seaboard states into Louisiana. Wade Hampton with all his slaves was a good example from South Carolina in 1811. There was consequently a clash between these groups and the French Creoles.

<u>Rate of Sugar Growth</u>			
<u>Year</u>	<u>Average Annual Production (Hogsheads)</u>		
1820.....	52,000		
1850.....	280,000		
	<u>Plantations</u>	<u>Slaves</u>	<u>Gross Value</u>
1827.....	308.....	21,000.....	\$34,000,000
1830.....	691.....	36,000.....	50,000,000
1849.....	1536.....	100,000	

Note: There was 40-50 gals of molasses for each hogshead of sugar. In 1830 steam power came in. Louisiana supplied one-half of U. S. sugar and seemed to be destined to supply all of it.

The cotton market expanded in the '50's and increased the price of slaves. There was then a check in the progress of the sugar industry. In 1850's the introduction of vacuum pans in the manufacture of sugar made a great difference. The technologic developments made great growth in the industry possible. There was a consolidation of holdings, as well as a simplification of processing. There is a high degree of mechanization in the industry. In 1858 there were 12,098 plantations producing 362,000 hogsheads of sugat for 987 plants. Most of these were steam mills. The number of slaves doubled from 1830 to 1850 and doubled again from 1850 to 1860. The banner year was 1853. There was perfect weather. A few attempts were made along the Brazos River in Texas to raise sugar.

They used mules and had branch railroads. The planters were also the first to use guano in the U. S. Valcour Aime on the right bank of the Mississippi, about 60 miles above New Orleans, was a "typical" creole, wealthy planter. In 1852 he owned 15,000 acres. 800 were in cane, 300 in corn, and 150 in crops of the negroes. The rest was swampy forest. Some attempt at self-sufficiency was made. Each year 2,000-3,000 cords of wood were cut for the steam engines. 215 slaves, half of which were field hands worked with 54 mules. He had the best equipment available. The fields were ditched and fertilized. His land was valued at \$350,000 and his buildings at \$100,000. He produced 1,300,000 lbs of sugar at 4¢, 60,000 gals of molasses at 34¢. The plantation depended on inter-state trade. 46,000 barrels of coal were purchased from Pittsburgh each year.

In January the fields were ploughed into feep furrows, the cane planted, and

ploughed over. In February and March slaves gathered wood, cleaned ditches, repaired and built roads and railroads. During the summer corn and cane were cultivated. In August the slaves gathered corn and hay. Late in October the grinding season began. They stripped cane and cut it. Hauled it to the mill where it was ground and boiled. When the danger of frost was apparent, every hand went into the fields to cut down the rest of the cane. Piles were made of it specially built to protect them against the weather

American Revolution as a Farmer Movement. A series of episodes, such as Shay's Rebellion definitely led to the adoption of the Constitution.

The Federalist Period was really from 1790-1860. We have three big periods of political alignment. There has been only one since that time.

Period of Federalism vs. Republicanism (Jefferson)	1789-1816
" " Whigs vs. Democrats	1830-1856
Rising Republicans bs. "	1856 to present.

In the Federalist period the roots of party antagonism were buried deep in the Colonial Period. These showed up in the American Revolution, the adoption of the Constitution. The opponents of the constitution were the inland farmers, debtors, and impoverished people. The Federalists led by Hamilton succeeded in carrying thru the adoption of the Constitution and the assumption of the National debt. This led to political cleavages to raise funds to pay the debt. Hamilton also sponsored tariff (protective). He advocated and secured the establishment of a U. S. Bank, advocated sound national currency--the minting of gold and silver coins. He encouraged American shipping by favoring American ships, taxed foreign built and foreign owned ships. He advocated a strong national defense--a standing army and navy. Jefferson retired as secretary of State to Monticello so that these measures divided the country politically and they remained the basic issues.

Jefferson was a frontiersman in a way. Most of his followers were farmers, etc. The common people were chief in his estimation. During Adams administration Jefferson was in a strategic position. Why did Jefferson succeed in his opposition to Hamilton? Because all of Hamilton measures were based on the public pocketbook, and caused a redistribution of wealth. The speculator profited by buying up the old bonds, so they had them when Hamilton redeemed them. The stock holders of the U. S. Bank also made money. Manufacturing profited too, but the masses paid heavily. Many people came to feel that the Federalist party was unjust--the farmers and planters thus ousted them and brought in Jefferson and his type of Democracy (1801-1928).

His principles were well supported in Congress. It elected its Jefferson, Madison, and J. G. Adams. The war in Europe hampered normal development of American trade and Industry. The Jeffersonian treatment of:

- (1)--debt: The party paid it off as fast as possible. They were against it, but wanted to get rid of it.
- (2)--Bank: The original charter expired and they refused to renew it, so the small state banks took over and flooded the country with paper. During war of 1812 they needed a central financial organization, either state (private) or federal control.
- (3)--Taxes: These had to be levied because of War of 1812. They cut out direct taxes and sponsored indirect taxes.
- (4)--Tariff: Party made no changes. The tariff yielded large revenue. There were protests, but in 1816 a tariff bill was passed that would have done Alex. Hamilton heart good.
- (5)--Land: In 1803 Jefferson purchased Louisiana Territory. The financial and commercial interest of the seaboard opposed the purchase, but farmers and planters favored it.

Many changes took place, which in the long run strengthened the left wing. Development of the west, extension of cotton development in the southwest, and the industrial revolution in the east all helped.

The balance of power ultimately shifted from the coast to the west. There was a different social and political outlook in the west where Jefferson's ideals were realized. Life was simple, therefore they thought that Government was also simple. Anyone could hold office they believed. The West was a debtor section it owed money and paid high interest to the East. They believed in rotation in office and short terms. In the East the rise of industries led to a wave of immigration. These older states still insisted on property requirements for voting.

Because the whole Jefferson party didn't swing left, there was a distinct party formed. This leads us to Jackson, who brought in a revolution. He destroyed the U. S. Bank and put Congress in the shade. He was a strong Nationalist. He was an agrarian frontiersman who stood up for the laboring classes of the East. This was Jacksonian democracy.

Jeffersonian democracy was content to agitate in terms of local government but the Jacksonian agitated to democratize the Federal Government. They wanted to pay the National debt as soon as possible; they abolished the National Bank and left everything up to state banks. Jackson reduced the tariff, attacked the Federal Judiciary, tried to change the Supreme Court. This led to the Dred Scott Decision later. Jackson refused to be bound by the Supreme Court decisions. From 1828-1850 the party won every presidential election; they controlled Congress and the Supreme Court. The platform of 1840 is very clear cut. In practice they carried out most of their practices.

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The farmers and planters plus a rising industrial class in the East, all favored Jackson. The southern plantation spokesmen got control of the party in 1850 and had no regard for other groups which they needed. Consequently the Republican party organized in 1856 and came into power in 1860. This party sprang up as a result of general unrest in the United States. They selected John C. Fremont as a candidate, because he was popular and well-known. The Republican movement was quite Democratic in fact.

Stephen A. Douglass was really a great statesman. Originally from Vermont he moved to Illinois. The Lincoln-Douglass debates put Douglass on the spot and forced him to commit himself on many questions, thus showing his Northern and Western favoritism, with the result that he would not be acceptable as a united Democratic candidate.

The Republicans came into control with Lincoln. However, they did not control the house and the Senate, and, if the southern states had not seceded, the Republicans could not have done a thing. As it was war saved the day for the Republicans.

There are those who think the War was due to two distinct, conflicting westward moving types of labor plus something more. In the North and West small scale free farmer and in the South the wealthy planter with his slaves were each desirous of moving farther west. The newly founded Confederacy placed its bet on "Cotton is King." The entire diplomacy of the Confederacy is centered on that philosophy. They believed England and France would help them because cotton was so important to them for manufacturing. The English were fairly favorable towards the Confederacy. There was no appreciable effect on the English manufacturers at first, because of the bumper crop of 1860. The English laid in great supplies and so did not need cotton. Meanwhile India and Egypt began to expand their cotton production while the South became desperate. They needed medicine and armaments and had to supply cotton to obtain them. The Union blockade proved fairly effective and the southern transportation system was too bad to stand up. Meanwhile (according to L. B. Schmidt) the crop failures in England led the English to believe that wheat from the North was

more necessary than cotton from the South. There were questions raised in Parliament, but not until after England decided to remain neutral with respect to the United States.

The South started with a bumper cotton crop. They soon realized they couldn't feed the army with it. They tried diversified agriculture, but after three years they needed outside supplies. The transportation system broke down and they could not carry the food to the army. There was really an amazing amount of food available. There was a great deal of smuggling carried on by the active connivance of the Union Army especially in the Mississippi Valley.

Agricultural prices did not rise so high during the course of the War. In the North there was a serious labor shortage, due to the number of men in the army. There was also an increased demand for food. The main solution was the adoption of new farm machinery--particularly the reaper. A demand for wool led to increased sheep production. There was a reduction of hog production. Agriculture in the north prospered during the War. The secession of the South led to the passage of the Land Grant College Act, the Homestead Act, and the Act for the Establishment of the Department of Agriculture all in 1862.

Riches, Naomi. Agricultural Revolution in Norfolk. 194 pp., illus. Chapel Hill, 1937.

"Satan on the road to Hell  
Ruined Norfolk as he fell."

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(p. 4) But, aside from the necessary brevity of the treatment accorded Norfolk agriculture in the works mentioned above (among those, Ernle especially), there has been a failure to disentangle the ideas of Jethro Tull from those of the "Norfolk school." All of the practices advocated by Tull, Townshend, Coke of Holkham, (p. 5) Arthur Young, and others are likely to be grouped together under the title of the "new Husbandry." Jethro Tull applied this term to his own "horse-hoeing husbandry," and in his famous book of that name, published in 1731, he voiced his disapproval of fertilizers and crop rotation....the very cornerstone of the Norfolk system was crop rotation; and marling...was one of its most characteristic practices. Jethro Tull described turnips as having lately "come into fashion," but showed no understanding of their significance as a step toward convertible husbandry. Since they were the fashion, he was interested in drilling and cultivating them, but his enthusiasm was more for the drill than for the turnips. On the other hand, Arthur Young, the great popularizer of the Norfolk system, was prejudiced against agricultural machinery, such as horse-hoes, and insisted on hand-hoed turnips down to the nineteenth century. He pointed out again and again, as did the two ablest writers on Norfolk agriculture, William Marshall and Nathaniel Kent, that the success of the Norfolk system depended on the successful culture of the turnip and clover, because of their place in crop rotation. Jethro Tull wrote that clover was "foul feed for horses and injurious to cattle." The Norfolk farmers regarded it as the most important of all the "artificial grasses."

Lord Ernle then describes how Townshend marled his lands, practiced the four-course crop rotation, and planted turnips, with no indication that in all this, except the drilling of the crops, he was following the Norfolk system which was opposed to that of Jethro Tull.

(p. 6) R. N. Bacon, William Marshall, Nathaniel Kent and Arthur Young wrote on Norfolk and all were leading agriculturists.

(p. 9) One outstanding feature of these agricultural changes was enclosure.

Another development influencing agriculture was the emergence of a metropolitan economy, perhaps the result, or at least the physical expression, of the spirit of commercial competition.

(p. 10) A new interest in agriculture is apparent in the fact that the sixteenth century produced the first agricultural literature after ...Walter of Henley.

(p. 11) By the seventeenth century enclosure for arable purposes was more frequent, thus making more and more land available for experiment.

(p. 12) The influence of the landed gentry in government after 1660 enabled them to pass legislation favorable to agriculture.

(p. 15) The agricultural revolution might best be described as the "application of new methods to farming for the purpose of making money."

(p. 16) In the first place, the agricultural revolution had little to do with machinery and thus is in sharp contrast to the industrial revolution. The increase sought in productivity was achieved by a more rapid abandonment of the old open-field system than had characterized the earlier centuries and by the gradual substitution of elaborate crop rotation by which land was not allowed to lie idle to regain its fertility. Such crops as turnips, lucerne (alfalfa) and clover, the latter especially valuable, were used to restore soil fertility. Productivity was also increased by a more general use of marl, which individual ownership made more practical, and animal manures, made more available by the additional cattle supported on the turnips, lucerne, and clover. The introduction of the so-called artificial grasses also made possible the keeping of larger numbers of cattle. ...the real goal was a convertible husbandry, in which livestock helped to increase grain production by furnishing more manure and by consuming the crops necessary in the new scheme of rotation.

The improvement of livestock was incidental to the great discovery that animal and grain production could be successfully combined by using the new crops... and the artificial grasses as the connecting links.

(p. 76) What was this famous Norfolk husbandry? Kent believed that the superiority of Norfolk methods went back to the time of Charles II, a view which is supported by the fact that the first reference to Norfolk husbandry as such found by the present writer is in one of John Houghton's letters of that time, 1681, in which he described the practice of planting "hay or other seeds" on barren sandy ground so exposed to the wind that the new grass had to be protected by bushes or furze staked down.

(p. 78) Its use is very old. Pliny mentioned the Britons' digging of pits for marl, some of which he said were one hundred feet deep, an obvious exaggeration. Arthur Young pointed out that these pits described by Pliny yet remain in many parts of England, especially near Feversham in Kent. The best proof of their antiquity, however, is that they are found in the wildest part of the New Forest. From this it seems that marling has been a more or less constant practice from earliest times. The fact that its effects lasted eighty, or, as some writer put it, even a hundred years, explains why the practice had to be constantly "revived." Each generation thought of it as a practice of antiquity...It was urged by Plat in 1594, by Norden in 1607, by Markham in 1638 and by the anonymous (p. 79) writer "N" referred to above in 1752, who says that before his time it was common to marl two or three acres, but that the practice on an extensive scale in Norfolk was a development of his own lifetime. Many writers say that Townshend, after his retirement to Raynham in 1730, revived the almost obsolete practice of marling. And yet marling was being practiced extensively there in 1706, and the account books of the Raynham estate show that it had been, throughout the last seventeenth century. Defoe's observations in 1722 show that marling should not be identified with the second half of the century only. In describing the land around Crith, Greenwich, and Northfleet, he writes: "From these chalky cliffs on the River side, the rubbish of the chalk, which crumbles away when they dig the larger chalk for lime, (or as we might call it), the chips of the chalk, and which they must be at the charge of removing to be out of their way, is bought and fetched away by lighters and hoys, and carried to all the ports and creeks in the opposite county of Essex, and even to Suffolk and Norfolk, and sold there to the country farmers to lay upon their land, and that prodigious quantities, and so it is valued by the farmers of those countries that they not only give from two shillings and six pence to four shillings a load for it, according to the distance the place is from the said chalk-cliffe, but they fetch it by land-carriage ten miles, nay fifteen miles up into the country."

In 1731 at Holkham 2,096 loads of marl were spread; so it is evident that marling even on a large scale did not begin with Townshend.

(p. 151) The poor nature of the soil itself also helped in the development of crop

rotation. Some of the land was so sandy, that if we are to believe contemporary accounts, to allow it to lie fallow would be to allow it to blow over into the next parish. Fertilizer, not fallowing, was essential, and the expense of marl, the most widely used fertilizer, was so great that to supplement it by fallowing seemed too wasteful. The land had to be "rested" by planting a variety of crops. So Norfolk farmers were most willing to borrow ideas from their neighbors, the Dutch, with whom the county had close relations because of the textile and fishing industries. Moreover, the Dutch, with their reclaimed land, had been compelled to solve much the same problems as the farmers on the "Norfolk Broads." So Norfolk farmers experimented with Dutch clover, turnips, carrots, and artificial grasses and were most anxious to achieve convertible husbandry, because the stock not only consumed the crops essential to the rotation scheme but added to the fertilizer available for the sandy soil. Norfolk was thus the connecting link between the practice of agriculture on the continent and the practice of agriculture in England.

(p. 152) The backward counties were exhorted and ridiculed by Young in his most vigorous fashion. The following is interesting in that it names what were, in Young's opinion in 1771, the five most enlightened counties. When he was traveling in Northamptonshire, he noted the practice of burning manure for fuel and wrote, "Will ye believe me, ye farmers of Norfolk, Suffolk, Essex, Kent and Hertfordshire, that this is the constant (p. 153) practice not only of the cottagers, but of the farmers themselves. No, you say, it is impossible, except among the Hottentots."

(p. 155) In one sense, Norfolk contributed to its own downfall, for, with its poor soil and climate, it developed a technique which, when applied in more favorable regions resulted in a competition which Norfolk was unable to meet.

Modern Norfolk farmers believe that the future of the county will be found in the development of dairy herds fed on lucerne; in the cultivation of small fruits peculiar to the land, such as gooseberries and currants produced for the canning industry; and in the barley, the century-old stand-by. Many Norfolk farmers say with pride, "On this soil, we can grow the best barley in the world."

XIV - The Agricultural Revolution: Its Elements and Significance.

During the 19th century, agriculture was transformed from a simple, pioneer and largely self-sufficing occupation into a business organized on a scientific, capitalistic, and commercial basis.

The elements of this agricultural revolution in the United States were:

- land policies
- settlement
- farm machinery
- transportation
  - railroads
  - highways
  - waterways
- market expansion
  - home markets
  - foreign markets
  - cooperatives
- agencies promoting scientific knowledge
  - leaders
  - societies
  - fairs
  - periodicals
  - State departments
  - Federal Department
  - education
  - sciences
- political activity
  - liberal Republican movement
  - Granger movement
  - Greenback movement
  - Farmers' Alliance and Populism
  - Progressive movement
  - National nonpartisan league
  - Farmer-Labor Party
  - agricultural bloc
  - McNary-Haugenism
  - Export debenture
  - tariff

The agricultural revolution produced agriculture by regions:-

- humid and subtropical crops belt
- cotton belt
- corn and winter wheat belt
- corn
- hay and dairying region
- middle Atlantic trucking region
- wheat regions
- grazing and irrigated crop region
- north Pacific coast region
- Pacific subtropical crops region