Noted Speakers Discuss Subjects of Live Interest to Farmers

BUSINESS ABILITY IN MANAGEMENT OF FARM

That business ability in the management of a farm counts for much in the view of Dr. W. C. Stubbs, a former Virginian, now head of the State Experiment Station of Louisiana, was clearly indicated in a paper presented before the Farmers' Institute yesterday afternoon, entitled "Improvement and Management of An Eastern Virginia Farm." Though not entirely a resident of Virginia, Dr. Stubbs is the owner of a handsome estate in Gloucester county, on which he has put much time and study, especially in an attempt to restore the farm to its traditional Colonial fertility and productiveness. He said in part:

"The agriculturist is a banker and his soil his bank, its fertility his capital and the crops grown upon it his silver and gold certificates, which may be redeemed in exchange for labor and fertilizers, seed or stock, to be returned to his capital. Home-made manures are his domestic and commercial fertilizers his foreign exchange. Leguminous crops furnish him a savings department, which, if properly handled, will pay handsome dividends. A rational system of banking consists in so utilizing its funds as to insure the largest dividends without diminishing the capital. Surplus and resource funds increase public confidence and insure larger deposits, and are often created. A rational system of agriculture consists in producing the largest crops without diminution of soil fertility. This can only be accomplished by restoring to the soil all of the valuable ingredients removed by crops. Reserved or surplus fertility is often desirable, and is accomplished by heavy manuring. By drainage, irrigation, fertilization, proper preparation and subsequent intelligent cultivation, the farmer strives to overcome deficiencies of his soils, changes of weather, vicissitudes of climates and occasional atmospheric disturbances, so that he may always have a remunerative return for his labor. The same principles underlie both professions, and an intelligent knowledge and application of these principles are required for the successful prosecution of either industry.

Principles of Farming.

"Every successful banker spends laborious days and sleepless nights in the study of the various factors which affect his business, and it should be and must be the business of every successful farmer to diligently study every principle which underlies his chosen profession.

"But what are these principles? Briefly they are: (1) A knowledge of the composition and properties of the soil he cultivates, (2) The nature and requirements of the plants grown, and (3) The intelligent selection and application of the best methods of producing the largest crops of the latter, when grown on the former. An elaboration of these three principles constitute the 'Moses and the prophets' of modern agriculture.

"To succeed any and everywhere now in farming requires great intelligence, large caution and the best judgment. The seed of every crop should be selected with the utmost care and planted in only well-prepared and fertilized land. Oil available home-made manures should be properly distributed. These should be supplemented with mineral manures wherever needed, remembering that in feeding your lands, like feeding your stock, a balanced ration is most economical and profitable.

Labor-Saving Devices.

"Labor-saving implements should be everywhere used, and a rotation of crops, involving profit to the farmer and increase of fertility to the soil, should be adopted by every farmer.

"Reviewing the resources of Eastern Virginia, one is struck with the vast opportunities presented. High above tide, with a delightful climate, with excellent drainage conditions, with varied types of soil, permitting the widest range of agricultural industries, with excellent natural transportation facilities, with populous cities near by proffering the best markets for all kinds of products, with a people living in ancestral homes refined by a culture inherited from the earliest and best of American settlers, with numerous churches and excellent schools and colleges, with these homes and lands selling at ridiculously low prices, the opportunities in this section for investment and development are surpassingly and surprisingly great.

"If agriculture here is a failure, it is man's mistake. The trouble is not in the land, for where are responses so quickly made to intelligent culture? not in the balmy climate, not in our favorable seasons. God never made a better country for the laborer or the man of small means."

Apple Culture and the Orchard

Apple culture and the farm orchard were pictured in glowing terms by Hon. Samuel B. Woods, former Mayor of Charlottesville, and a prosperous apple grower of Albemarle county.

Mr. Woods opened with a graphic picture of the delights of the orchard to the dwellers on the farm, even where the orchard is not made one of the money producers of the farm, describing the healthy condition of his own children, who daily ate large quantities of apples, both green and ripe. He went on:

"I dwell on this view because we hear a great deal these days about the necessity of doing something to keep the boys on the farm. There is a general exodus of bright and enterprising boys going on all the time from the farm to the city, and the question is how to get them to hold on to the purer, better and more satisfactory life in the country and pass by the allurements of the city. To keep the boy on the farm, make the farm attractive, make it comfortable, and make it to his interest, and the question will solve itself. And there are few things, if any, that add more to the attractiveness and comforts of farm life than the orchard. It pleases the eye with its beauty and lends grace and refinement to the appearance of the home, and from the time the June apples ripen and answer that craving of humanity for fresh fruit to the winter evenings, when the storm rages, the snow drifts, as the wind howls around the house and the family gathers around the fireplace, with a big basket within easy reach, the apple ministers to the pleasure, comfort and health of all.

Stock in Orchards.

"The orchard should never have stock running in it unless it be hogs, or after the trees are quite old sheep. The trees should receive proper attention; they need it and will pay for it. I have never yet found anything worth having that grows on the farm that does not require attention. I do not go as far as some people and say if you are not going to take care of your fruit trees don't plant them. Plant them anyhow, whether you are going to take care of them or not. Some of them will bring forth fruit and will add comfort and value to the farm.

"I think every farm orchard ought to contain some apples planted with the commercial end in view, and these should be of the winter varieties. Good apples are always salable at a fair price in winter; the stores at which you deal will be glad to get them and they will pay the expense of spraying and a fair profit on the entire outlay. There are orchards in Piedmont and the Valley that are paying from $250 to $750 per acre, and small orchards well cultivated, and manured and sprayed ought to do this. If trees are well fertilized or manured every year they will bear a crop every year, and have no off years. It would take only a few hours to spray an acre of good sized trees, and this should be done about three times a season, at an outside cost of 15 cents a tree.

"The necessity of spraying brings us to the great drawback of the home orchard, viz., the pests, both insect and fungus, that have risen up to destroy and injure the orchard. In Virginia we used to plant trees, and after a while gather the fruit. That day has passed and gone, never to return. In isolated localities, if one is particular not to get the scale from the nursery, fruit can still be raised without spraying. But it can be accepted as a rule now that whoever plants trees should calculate on spraying, in order to get good fruit and to protect the trees from their enemies.

The Chief Danger.

"The chief danger is the San Jose scale, and this more frequently comes in from the nursery than otherwise, and while the methods used by nurserymen to prevent its dissemniation are reasonably effective they are not entirely so. Every one who buys trees should give them special treatment before planting. I have found that soaking the trees in a strong solution of tobacco is cheap and absolutely effective. First prune the tree's root and branch, ready for planting, then put them in a loblolly of tobacco dust and water, and let them stay there a while, if convenient all night. The trees come out of their bath freshened up and perfectly free from scale or aphis. Some have gotten good results from dipping the trees in California wash or scalecide. If you start with clean trees you will not probably have to spray for years. There is help to be gotten from farmers' bulletins, from county inspectors and from the prepared sprays, one of the best of the latter seems to be scalecide, which is effective and not so disagreeable to handle as the lime and sulphur. For the fruit the Bordeaux mixture should be used, and you would be surprised at the increase of yield if you would also give the potato vines a good dose. The details of spraying are very fully set forth in bulletins No. 243 and 247 and 283 of the United States Department of Agriculture, and in bulletin of the Virginia Experiment Station.

Clover as Aid to Improvement

Of the many subjects presented at the afternoon session of the institute that which provoked most general discussion was the paper on "Crimson or German Clover As An Aid to Land Improvement." The paper was prepared by Mr. J. B. Watkins, of Southside Virginia, of whom many questions were asked by farmers from all sections of the State. Mr. Watkins said in part:

"Crimson clover is of foreign origin, but seemed particularly well adapted to all that portion of Virginia south of the mountains, Middle, Southside and Eastern Shore. The plant is an annual, hence requires to be reseeded each year. The plant is of erect habit of growth, and has great power to stool; the leaves are numerous, the heads are oblong, cone-shaped, from two to three inches long, and are large seed producers. The average height of the red on moderately good land is eighteen inches, though, under very favorable conditions, it will grow to two or three feet. The root growth is said to be twice that of the stem, going down straight into the soil. Crimson clover, as is commonly known, has lost its right to the prefix crimson, as another variety of this clover has been introduced which has white blooms. Hence we prefer to designate the two varieties as red German and white German.

Can Be Used Anywhere.

"They are adapted to almost any land in Middle or Southside Virginia that will produce even a small crop of common red clover, and are much stronger growers on poor land that is not too stiff a clay, or too porous with sand, or is not boggy—we mean the extreme in each instance. We believe any land in the above section that is too poor to produce clover can be made to do so by the use of a little home-made manure or some good fertilizer. Three or four hundred pounds of animal bone per acre will produce a good crop on any land in this section. We believe that the nitrogen and other elements that return to the soil from each crop is worth $10 to $20 per acre.

"We have had no trouble to continue growing German clover after we have gotten the land fertile enough to produce the first crop. It can be used anywhere in the rotation on the farm. It may be seeded with turnips, rape, or other grass seeds, but most commonly at the last working of the corn. After oats, wheat, millet and other grain crops, it should be seeded in the stubble and then disced and rediced to get seed in if land has run together hard; if not, a straight-tooth harrow will answer as well. It is best not to fallow the land for clover unless it is allowed to remain some time, as it does best on a firm seedbed.

Best Time for Seeding.

"In this latitude seeding might be done from the 20th of July to the 1st of October. Experience, however, has shown that about the 1st of September is the best time to seed, although we have had fine success with July seeding, provided there is plenty of moisture in the soil and it is not followed by a long dry spell. The advantage of seeding in September is that the nights are long, evaporation less, and we are not so apt to have a drought, as this plant is more apt to be killed by drought than from any other cause. These seed will vegetate more quickly than most other seeds, and should not be sown except after a good rain or when there is much moisture in the soil, as we have known the seed to vegetate during a dewy night and perish the next day from the hot sun and drying winds. We made many failures before we knew this, but rarely fail since taking this precaution. We defer seeding for weeks rather than seed when it is too dry.

"For a number of years we have selected a 10-acre field adjoining our farm lot to be used entirely for spring pasture. This may be seeded with corn or any of the grain crops, but we usually put in some rape, so that the hogs may graze it in the fall. After cold weather sets in we keep off all stock until the latter part of March, when we begin to put in milch cows, and a little later we put in horses, mules, sheep and hogs. Horses and mules are corned night and morning and turned loose on this clover field. They shed their winter coats rapidly and keep in good condition, though they are worked hard on the farm. Thus we save much hay and get our work animals in better condition than we could by any other system. They stay on the clover, wet or dry, and we have never known a case of bloat in horses, mules or cows. They are allowed to feed on this growing clover until it dries up, about the middle of June. During this period the horses are fed no hay except at dinner. As soon as the harness is taken off, they want to go to the clover field instead of the stable.

"Last spring, in addition to ten head of horses and mules, besides quite a number of milch cows, we put fifty pigs on this pasture field. We gave the hogs corn twice a day, and they gained flesh rapidly. In May we sent them off to market and they sold for 5 1-2 cents per pound gross. They about doubled their weight in the two months they were on the clover. We believe the cured hay has a feeding value equal to any, being about equal, in our opinion, to alfalfa, of which we grow considerable quantities; that is, if the hay is properly cured and properly cared for. To make hay we usually start the mowers when the fields are just passed full bloom and when but few heads have shed all the blossoms. The hay is allowed to remain on the ground or in wind rows until dry and then housed. We have harvested as much as fifteen or twenty tons, feeding it to horses, mules and cows, and after an experience of ten or twelve years we have had no bad results and our stock is easily kept in good and thrifty condition while feeding on it.

Revolutionizing Agriculture.

"German clover culture is revolutionizing agriculture in our section, and every farmer using it is improving his lands rapidly, both in fertility and mechanical condition. We consider it the greatest boon to agriculture ever discovered, and we are of the opinion that any land in Southside Virginia that can be made to produce a crop can be made rich. We are in the nursery and fruit business, and before we began to grow German clover we were corn and hay buyers for years. Now we are corn and hay sellers, though we have increased our number of farm animals in the last few years. Now nearly all of our progressive farmers are seeding German clover at the last working of the corn; also in their stubble fields, even when they do not care to use it for hay. It produces a winter cover for the land, prevents it from leaching, and is the most inexpensive crop that we can grow. We have seen no advantage in turning under the crop of clover unless the land is much in need of humus. The stubble and roots give humus enough in most instances. We know of no feed equal to German clover, green or cured, for young stock or milch cows. It makes milch cows produce the richest yellow butter in the largest quantity, and we see no reason why dairies should not be established in Middle Virginia if this system is adopted."

Truck Farming In Eastern Va.

Truck farming as developed in Eastern Virginia was explained to the institute yesterday afternoon by Professor T. C. Johnson, of the Virginia Truck Experiment Station. The enormous development of the trucking business in Virginia proved a surprise even to the members of the institute. Mr. Johnson emphasized the importance of the rotation of crops, giving several formulas which had proved effective. The use of cowpeas and millet for increasing the fertility of the soil was strongly recommended. Experiments with various preparations for the control of insects and fungus diseases by the use of Paris green and arsenate of lead were explained with pictures to show the relatively healthy condition of plants which had been sprayed, as compared with the backward and unhealthy condition of the unsprayed rows in the same field.

Remarkable Development.

Mr. Johnson said that the development of truck farming in Eastern Virginia had been so quiet and gradual that very few people outside of the area immediately concerned realized its magnitude. He continued:

"Figures show that 407,497 barrels of spinach, 246,739 barrels of kale, 107,418 baskets of radishes, 431,105 barrels of cabbage, 94,690 baskets of peas, 113,508 crates of berries, 173,000 packages of cucumbers, 682,079 barrels of potatoes, 221,260 baskets of beans, 353,549 melons, and over 310,000 packages of other truck products were shipped from the port of Norfolk alone during the year ending August 31, 1907. When to this is added the quantity produced on the Eastern Shore, which, according to newspaper reports, amounted to over $2,100,000 last season, a faint conception of the magnitude of the industry may be gained.

"The practice followed in growing these crops is somewhat peculiar to the region. Instead of permitting the ground to lie idle three to six months in every twelve, it is in use constantly. One or two money crops are followed by grass or peas, which are used on the farm.

Control of Insects.

"A problem almost equal to that of fertilizer in importance is the control of insects and fungous diseases. The Colorado potato bug probably leads as the most destructive insect, but it has a close second in the aphids, various species of which attack such plants as cabbage, kale, spinach, peas, beans, melons and others. The potato bug may be combatted with arsenical poison, but not so with the aphids. A large amount of Paris green is used for this purpose. It is applied mostly in water, from one to three pounds to fifty gallons of the liquid. It is also used in the form of a dust, gypsum being employed as the carrier. The aphids are controlled by applying a soap or oil emulsion. The station made a series of tests with different poisons for the potato bugs, and emulsion for the aphids, with gratifying results. The indications are that arsenate of lead will be a more economical poison. It costs less per pound, and has the advantage of adhering to the foliage much better than Paris green. However, it should be applied before the bugs get a start, or its action seems to be slightly slower than that of the former. The aphids were held in check by the kerosene emulsion (1 gallon saturated solution of whale oil soap and 2 gallons of kerosene, thoroughly emulsified and diluted 1 part to 25 of water).

"The fungous diseases have made their worst attacks on cucumbers, cantaloupes, peas and beans. The station has had all these under treatment during the season, but the work on the peas and beans has not progressed far enough for report. With cucumbers and melons some very decided results were obtained."

Mr. Stacey, of Amelia, says the delegation from his county will be greatly enlarged to-day. He thinks Captain Rudd's train on the Southern road, due here at 8:40 this morning, will bring in fifty or more sons from old Amelia.

Reproduction of Plant Life

Reproduction of plant life was discussed in a thoughtful and carefully prepared paper at the morning session by Dr. Paul B. Barringer, president of the Virginia Polytechnic Institute, at Blacksburg. Though the subject was technical and scientific in character, Dr. Barringer popularized his address by blackboard illustrations, and he secured the close attention of a constantly increasing audience. He said in part:

"There is little doubt that life first appeared on this planet in the water—in the sea. As a result water has always been, and probably will forever be necessary, in greater or less degree, to every form of living matter. It must be remembered that these early seas were not salt. The sea water of to-day is the result of ages of evaporation and concentration.

"It is equally certain that through the action of the tides—being stranded for longer or shorter intervals on the sand of the seashore—some of the simple marine forms became in time accustomed to the earth, and terrestrial life had its beginning.

Change in Habitat.

"While immaterial to us where this change in habitat first took place, it was probably on the shore of some tropical sea, where the sun's energy never waned, and seasonal changes were practically unknown. Under these conditions, presented by the rich, steaming, mud flats of the tropics, we can readily imagine this change made perfect, and the early modification of the original plant form evolved.

"In the sea, these vegetable cells had the sun as their source of energy; they had their water and their food dissolved in the water around them. They were subject to but slight diurnal or seasonal change in temperature while in the sea, and little variation in the supply of food. The currents of the sea that brought their food bore away their waste products, and life was extremely simple. The mass of the sea was so great that the seasonal variations in temperature rarely ever exceeded the changes we see in a single day in the atmosphere.

Difficulties Overcome.

"We see plants on the seashore to-day still half-marine and half-terrestrial, which would die if taken from the shore, but when we look back on the day when the first plant found its footing on the sand beyond the limits of the tide-flow, and was forced to start upon an independent life, under absolutely new conditions, we cannot fail to be impressed by the magnitude of the task imposed upon it. A plant rooted and bound fast to the soil of the earth, unable to move, and yet dependent for its energy upon the sunlight which varies annually, both in angle and seasonal intensity, and yet charged with the task of perpetuating its species, faced a problem not unworthy of our philosophic consideration. When we consider also the fact that the plant's own needs must in time exhaust the soil in which it lives of its available plant food, leaving none for its successors, and still further that the fact that sometimes the very activities by which it lives, in time produces in the soil in which it is imbedded poisons which not only shorten its own life, but render its habitation unfit for its own offspring—we see some of the difficulties which have been overcome by the simpler forms of life.

How Seasonal Changes Are Met.

"As we know, animal life meets these seasonal changes and other conditions in various ways—man prepares for winter by laying in fuel; the squirrel stores up nuts for food; the dormouse and the bear, in cold climates, hibernate; some birds migrate, etc., etc. The plant alone must hold its ground, and by infinite resource overcome the threatening dangers.

"What we call for lack of a better name humus, is not simply decaying vegetable matter of the grosser sort—it is decaying plant matter, plus the bacterial flora that infects every plant when dead, and the value of humus in making soil food available is due as much to the bacteria as to the deciduous downfall from the tree or plant. What is true of the tree is in like manner true of the small plant.

Attack the Living.

"But some of these bacteria are not content to attack only the dead; some attack the living. Among a certain group of plants which we will call the legumes, as the locusts, peas, beans, clovers, etc., it is found that certain bacteria will enter the living hair cells and make their way into the small rootlets where they produce changes of the utmost importance.

"If we consider the conditions that now face the rooted plant, we will see that being bound fast in the soil and compelled to live there on a food supply necessarily limited, its first need for its offspring is a change of soil, a change of location, and secondly, that as its source of energy, the sunlight, is certain to diminish from the earth's planetary motion, it must in most climates prepare for a period of diminished activity, and physical stress; viz., a season of winter.

"The cells of these roots now begin to take on new growth, much like the cells of a cancer in animal tissues, and a large tumor or tubercle is seen growing out from one side of the root, while in this tubercle may be seen the numerous progeny of the bacterium, which by its entrance excited the growth.

"Now, this would at first seem a calamity to the plant, but it is not. It is intentional, on both sides, and in a way necessary. The plant furnishes these invading bacteria with a needed carbohydrate, sugar or starch, which plants have in abundance; while the bacteria on their part are useful to the plant, for they in some unknown manner, take from the air around them the element of nitrogen and make it available for the use of the plant.

"In short, while technically called a symbiosis, it is simply a partnership between the plant and the bacteria, passed from parent to offspring through ages, and now necessary to good business on the farm. These tumors are the 'nodules' of the peas, clovers, alfalfas, vetches, etc., and these root bacteria are the bacteria of the 'cultures' now sold for 'innoculation' of the soil where legumes are to be placed.

The Propagation of Species.

"Time will not permit more in this brief sketch of the natural history of the plant in its relation to the soil. It may seem fanciful and useless, but the knowledge of a steady and consistent purpose in the living things we deal with, in any calling, is of value.

"The plant having ever in view the one great purpose of life—the propagation of its species—has learned to make use of an infinite variety of means to accomplish this end.

"To know something of this great purpose, however little, makes of us more intelligent husbandmen, awakes in us a broader sympathy with nature, and gives a broader conception of that omnipotent power which first set in motion these resistless forces."

Labor and the Farmer

Perhaps the most practical and immediately applicable address made before the Farmers' Institute yesterday was that of Mr. James Bellwood, of Chesterfield county, who urged in the strongest terms the adaptation of farm work to present-day conditions. Answering the general complaint of the raise in the cost of labor, Mr. Bellwood said he would welcome an increase in the cost if it brought with it an increase in efficiency and an opportunity to introduce machinery and improved methods of farming. Mr. Bellwood is himself one of the most successful farmers and dairymen in the State, having come into Virginia from Canada some twenty years since in search of a congenial climate. Following, as his address did, the remarks of welcome of the Governor and Mayor, and the president's address of Mr. Sandy, Mr. Bellwood brought down the house by remarking that, while not a Mayor or a Governor, nor yet a doctor or professor, he was yet proud to say that he was a farmer, and a successful farmer.

Virginia's Inducements.

Discussing his own removal to Virginia and his success with nineteen successive crops since coming, he said he had come to the conclusion that Virginia offered to a farmer fairer inducements than almost any place in the United States. Mr. Bellwood went on to tell of a trip which he had recently taken through the West, in which he had investigated the large farming operations of the prairies, and especially inquired into alfalfa raising and the problems of irrigation and drainage.

"After touring pretty much all of this country," continued Mr. Bellwood, "I returned to Virginia with the conviction confirmed that Virginia is the best State under the sun for any one to start farming."

"As to the labor problem: We have got to pay higher wages, and we might as well own up to it. Conditions are not what they were twenty years ago, when I came here and hired men for $10 a month and their rations. We must pay larger wages, but if we go at it in the right way the problem is not so bad as it looks. In the Dakotas, where I visited, they were paying $2 and $3 a day for farm labor, but they gave the men six or eight horses to drive and a big plow, doing as much work as a half-dozen of our negroes do on a Virginia farm. I saw out there a man driving eight or ten horses to a wide drag or harrow, with a sort of tricycle behind with high wheels, and he sat on a high seat, and his team, with plenty of power, went right along at three or three and a half miles an hour, instead of the typical creeping pace of the Virginia negro and his mule, where you have to sight him by a fence-post to see if he is moving.

"Harvest machines out there were cutting a twelve-foot swathe, as against the old style cradle and hand-binder of my boyhood, where two men put up two acres a day, and thought they had done a day's work. It was an eye-opener to me to see a man sitting on his binder in Dakota, cutting and binding something more than twenty-five acres a day. That man driving the binder got $5 a day, and he earned it. They save labor out there, where on the roads you see one man driving a train of wagons hitched together with eight or ten horses. In Virginia we throw our labor away.

"I saw in a field in North Carolina since coming home, twenty-six horses and mules, and twenty-two people driving them to cultivators and small plows. I don't wonder such a farming community is not prosperous, with such a waste. In the West one or two men would be doing the whole work, at higher wages, it is true, but the wages would be earned. The Mayor said in his remarks that he usually went to a Virginia farm for repose and rest. The trouble with Virginia farming to-day, there is too much repose and rest. The man who would make a success of farming, as in any other business, must be at it early and late."

What Institute Means to Farmers.

"My remarks will be brief. I must not consume time that can be profitably spent listening to the discussion of many subjects of vital importance to us all, which are on our program.

"The Virginia State Farmers' Institute was organized five years ago and each year I am gratified to note it increases in strength. One of the strongest features of the institute is that it is absolutely a nonpartisan organization for mutual self-help. Farmers meet each year for the consideration of practical methods of farm life.

"We are getting into co-operation as never before, and we are being drawn together by one great, common interest—agriculture—in other words, the salvation of our country.

"These institutes are calculated to increase, to a great degree, every agricultural movement of our State. Ideas are exchanged and discussed. They are schools of instruction for the old and the young—an education for all, which has renewed the interest in all directions. Agriculture is being taught in our rural schools, our summer normals have given it a place on their programs, our young people are daily seeking information along this line, the press is ever ready to accept articles bearing on the great subject, and our agricultural colleges are taking on new life.

"I repeat, our State Farmers' Institute is accomplishing lasting good. We have grown in numbers (there is safety in numbers), in interest and in brotherly love. We must be cemented by the great desire to reclaim the neglected lands of our grand old State.

"United we stand, divided we fall."—President Sandy, commenting on work of institute in address delivered yesterday.

IMMIGRATION AND THE FARM LABOR PROBLEM

Declaring himself unalterably opposed to indiscriminate immigration, Commissioner Koiner, of the State Board of Agriculture, addressed the institute at the morning meeting touching on the problem of farm labor. The commissioner has made two trips abroad in the interest of desirable immigration into Virginia, and told something of the difficulties with which his efforts were beset. After outlining the work of the department and the steps taken by the Virginia Legislature to induce immigration, Mr. Koiner continued:

"The law confines our work to farm labor and home-seekers. All our efforts have been to secure only such people. We have confined our work abroad to England, Scotland and Ireland almost entirely. Some work has been done in Scandivania. I am opposed to indiscriminate immigration, and have refused the idle and unemployed labor from every country which has offered it. Steamship companies and immigration agents have offered to send thousands of these, all of whom we have declined. In introducing this work, we have been as careful as possible to begin with a desirable class of labor, who in turn will bring their friends from other countries; for if the movement is started from the farms, it will continue as such.

The Transition Period.

"Some of these Scotch and English people have brought with them from $500 to $2,500, and have deposited these small sums in the savings banks and hired themselves to the farmers to make enough money in the end to buy themselves a little farm home in Virginia. This is the kind of farm labor we need in Virginia to take the place of the shiftless, unreliable negro labor that is now worrying and hindering our Virginia farmers. We are just now in the transition period of labor in Virginia, changing from the unstable negro labor to a white labor who have ambition to better their condition in life. To complete this change will require years of time and patience. This change in labor will also require a change in their management. White labor will not be content to live in one and two room log cabins that have been vacated by the negro. They should be provided with more comfortable houses, with gardens and other accessories, which will make them contented and satisfied with our country. For a satisfied immigrant is the best advertisement a State can have.

"There is another class of immigrants who are harder to induce to leave their country, but who are now valuable to the State. There are tens of thousands of tenant farmers in Scotland and England who are applying now from $5 to $40 an acre a year money rent for the land they are farming. A large number of these people would come to Virginia and buy a small farm if they knew they could buy land here for the price they are paying each year for rent. These people are excellent farmers, as a rule, and are the same stock of Scotch-Irish and English, who came here and settled in Virginia some 300 years ago, and whose descendants we Virginians are largely to-day.

About Virginia Land.

"In some counties in Virginia a half dozen or more farms have been purchased by Scotch and English farmers, and each year others will follow them in increasing numbers. About $200,000 has been invested in Virginia lands by people from Great Britain alone during the past eighteen months. This work is in the beginning and moves slowly, but the outlook is promising. We need them.

"Virginia has about 8,000,000 of idle acres of land, a kind and naturally strong soil, waiting for intelligent cultivation to give back a rich reward in a comfortable home and independent life to all the patient and intelligent labor that has been bestowed upon it.

"Our Virginia land is to-day selling below its value. There is no State that possesses so many advantages as Virginia. She can grow a greater variety of crops and fruit than any other State. We are near the great Eastern markets. Our transportation facilities are good and improving. We have the most salubrious climate and kindest soil and most hospitable people of all the States. We are now cultivating less land, but producing greater crops. For 000 bushels; in 1907 Virginia cultivated 2,110,000 acres in corn, yielding 37,800,000 busheds; in 1907 Virginia cultivated 1,840,000 acres in corn, yielding 45,200,000 bushels; more than 300,000 acres less, but yielding 7,400,000 bushels more corn, and at present prices, worth nearly $6,000,000 more.

Results of Better Farming.

"There are the many results of better farming. We are raising more live stock. One-fourth of our farmers derive their principal income from live stock. This is the only State that exports beef cattle in numbers direct from the pasture fields. We are growing more fruit, having now more well cared for orchards than ever before, $1,000 per acre having been offered for some of our orchards this year, and the sales of some orchard crops have run as high as $700 per acre. We grow the world's finest apples in quality. The hay crop in Virginia has doubled in ten years. Trucking has increased in Virginia within the last ten years 500 per cent. One county in Virginia now grows 5 per cent. of the sweet potato crop of the United States. Virginia is growing more peanuts now than were grown a few yeares ago in the United States. Virginia grows the finest chewing tobacco in the world.

"These are the results of better farming and prove that good farmers are the best assets a State can have, and the more of them, the better for the State. The farmer is the wealth-producer for the State. Virginia is today the richest State in the South except Texas. She has increased in population 7 per cent. in five years, which is more than any other Southern State. Virginia has a population of only forty-one people to the square mile, and an aggregate of 2,000,000 of people. If she were as thickly settled as England, she would have a population of 24,000,000, and our lands would be worth ten times their present value. We need more people. We are not producing enough hay, wheat, bacon and dairy products for home consumption. We ought to produce a large surplus and be sellers and not buyers of these products. A steady stream of home-seekers and farm laborers would soon double the value of our crops, and the value of our lands. The value of the crops and live stock in Virginia last year was $149,000,000, and is increasing each year, an increase in the past few years of $43,000,000.

Back to Old Dominion.

"It was immigration that has populated the wild cheap lands of the West and made them much higher in price to-day than our Virginia lands, and many of these Western people are now coming to Virginia each year to invest. Canada has appropriated millions of dollars for immigration work. Canada has to-day 300 agents at work in Great Britain, who located 32,000 Scotch immigrants in Canada last year. Farm lands in Southern Canada that sold a few years ago for $10 per acre are now bringing $100 and over per acre. What immigration has done for the Western States, it is now doing for Canada, and immigration properly supported and directed, will in time bring like results to Virginia. While Virginia has given vast territories of her own imperial domain to make other States, she has been so unfortunate as to lose 587,000 of her sons and daughters, who are living in other States, but some of them, like weary pilgrims, are returning to their birthplace to spend their declining years at home. The salubrious climate, cheap lands, and other attractions in Virginia, are bringing to this State each year an increasing number of homeseekers and investors from the Northern and Western States, and also from Canada. There are many Canadians living now in Virginia. During the past two years nearly 4,000 farms have been purchased in Virginia by outside people, bringing an investment of $25,000,000."

Silo Building and Silo Crops

Professor Lyman Carrier, of the Agricultural Experiment Station at Blacksburg, discussed silo building and silo crops at the evening session of the Farmers' Institute last night. His lecture was illustrated with blackboard work and charts. Many questions were asked with regard to the use of silo crops in feeding. Professor Carrier having seen them used in many States. The silo, he explained, is a concrete or wooden hogshead-like building to store green, chopped feed or ensilage for use in the winter season. By having an absolutely water, air and moisture-proof structure, in which the green feed is rammed fresh and packed away under heavy pressure, with all air excluded, the ensilage is kept green and fairly fresh for winter feeding, one of the speakers likening the process to that in packing sauerkraut

Size of the Silo.

The size of the silo, said Professor Carrier, should be regulated by the size of the herd to be fed, since once the silo is opened in the winter, it is necessary to take off a layer of two or more inches a day in order to keep the ensilage from souring by exposure to air.

Twenty-eight or thirty feet in height was recommended as the most advantageous height, as the natural weight of the feed would greatly assist in packing.

For crops for silage, Mr. Carrier said corn had always been the main crop used for silage, since it produced more forage than any crop except sorghum.

Any green forage, such as cowpeas, or alfalfa or clover, or all mixed with corn forage, might be packed in the silo and produce good result. The mixture of corn and cowpeas at filling time, rather than raised together, was recommended.

It was urged that in mixing crops in the silo, care should be taken that the crops should be in the same stage of development.

Use of Wet Straw.

For a covering, straw or corn stalks to make a mat over the ensilage was the general opinion, one of the speakers saying that by the use of wet straw he had lost only a few inches of his silage from mould.

Professor Carrier said there had been no innovation in farm buildings in the last century that had done so much for the advancement of live stock interests as has the silo.

"Although practiced by the Romans over 2,000 years ago, the storage of silage was for a long time abandoned until it wa sagain tried in France about seventy-five years ago. The first silage made in this country was in 1875 by Dr. Manly Miles at that time connected with the Michigan Agricultural College. There are now about 500,000 permanently constructed silos in the United States."

The side pressure of the heated ensilage was estimated by Professor Carrier to be eleven pounds to the square foot for every foot in depth.

Possibilities of Seed Growing

Confidence in the soil and in the climatic conditions of Virginia showed in every line of an address made by Mr. Henry W. Wood, of this city, before the farmers yesterday morning on "The Possibilities of Seed Growing in Virginia." After discussing the problem in general, Mr. Wood referred to the individual crops, leading up to the conclusion that there is no State in the Union better adapted for the development of agricultural conditions than Virginia, Mr. Wood continued.

"In my experience and travels over this State I have been especially struck with what I may term the 'good nature' of Virginia soils and climate, and I believe that a good living can be made more easily on farming lands in Virginia than in those of other sections. Indeed, the fact impresses me that a living can be made too easily in Virginia for our own good, and that it does not make our farmers and agriculturists put forth the efforts which they should in order to grow the best and most profitable crops.

"In traveling through the prosperous agricultural sections of Canada and the Northwest I was very much impressed with the thorough and systematic attention which they pay to their fruit, in regard to cultivation, spraying, pruning, etc., and I am thoroughly convinced that if the same methods were applied to our fruit crops in Virginia no section could surpass it in production or profitableness.

"In conclusion, I would state that my own firm and fixed opinion is that there is no section or country on the face of this globe that has a better soil and climate or greater possibilities for the development of agricultural conditions than our own State. The great needs of our State are intelligent cultivation and rotation of crops, good roads and a little more energy and industry on the part of our people. Given these, Virginia will become one of the most attractive and prosperous States in our Union."

A Bedford delegation that reached the city yesterday was composed of Colonel George A. Nicols, Dr. J. C. Marshall, Major C. Hull and Captain Macon Carter. "Crops are flourishing," said Major Hull, "the drought is broken and the prospects are bright, particularly for tobacco and corn."

Mr. H. Carrington Griggsby, of Charlotte county, who cultivates 2,000 acres of land and does it successfully every year, is a prominent member of the institute.