capital which is being constantly used up. If no schools were maintained over a period of a single generation, the effect on the economic life of a people would be most disastrous. In the modern industrial society in which we live, it is quite as important that we should provide capital in terms of educated men and women as it is that we should build railroads or factories.

If we believe that the American ideal which suggests that every individual should have an opportunity for making the most of himself is more important than amassing wealth, more important than any other governmental enterprise, then we shall certainly support our schools. It is the obligation of our profession to hold before the people of the United States this ideal of the founders of our republic. We must seek to develop that standard of values which places opportunity for individual growth and development above any other good which can be secured. We must help our public to stand fast and to work, yes, even to sacrifice, in order that the day may come in America when there shall be guaranteed to all "a fair start and an equal chance in the race for life."

GEORGE D. STRAYER.

AGRICULTURAL EDUCATION IN THE HIGH SCHOOLS OF VIRGINIA

AT the head of all science and arts, at the head of civilization and progress, stands not militarism, the science that kills, not commerce, the art that accumulates wealth, but agriculture, the mother of all industry, and the maintainer of human life," said our first President.

The agriculture schools of the United States owe their origin to the movement against the old classical schools and in favor of technical education. This movement began in most civilized nations about the middle of the nineteenth century. A number of agricultural schools were started between 1850 and 1860 in eastern and middle states, where the movement made itself most felt, but without trained teachers they accomplished very little.

From 1850 to 1900 the progress of the agricultural schools was very slight. After this time the country woke up to the fact that her boys should have agricultural training along with the training received in other branches of high school work.

In 1907 Congressional District High Schools were first operated in the southern part of Virginia. These schools were not, strictly speaking, vocational schools, but were small town and rural high schools in which departments of agriculture and home economics, and sometimes a school farm, were supported by state funds. To make it possible for these schools to operate as centers of vocational education for congressional districts it was found necessary to establish in many of them dormitories for boys and girls. The dormitories made it possible for the girls to do practical work in home economics, but it prevented the boys from doing the best type of practical agricultural work. A relatively small number worked on the school farms, which were of small acreage and poorly equipped.

The schools did not develop as rapidly as one would expect, because of various obstacles: First, many parents were opposed to their children spending time on a subject which could be taught in the home; second, there was general ignorance of the course and its utility; third, general prejudices are always found against new subjects.

The Smith-Lever Law passed by Congress May 8, 1914, made federal aid available for every state in the Union beginning with the year 1914. It established a close co-partnership between the Federal and state agencies in the organization and administration of the extension service.

The general lines of the extension system for the state have now been well marked out. They embrace (1) the county agricultural agents, (2) the boys' and girls' clubs, (3) the movable schools, (4) supporting work of the college department specialists.[1]

The entire amount for the first year was $48,000 to be divided equally among the forty-eight states. The amount gradually increased until the federal government is now con-

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1Yearbook of the Department of Agriculture 1915, Page 54.

tributing some four and one-half million dollars anually.

The purpose of the Smith-Hughes Act, approved by Congress February 23, 1917, is clearly stated in the following language: "An act to provide for the promotion of Vocational Education; to provide for co-operation with the States in the promotion of such education in agriculture, trades and industries and home economics subjects; to provide for co-operation with the States in preparation of teachers for vocational subjects and to appropriate money and regulate its expenditure."

The Federal Government does not undertake to organize and supervise the vocational training in the States, but does agree to make financial grants from year to year for its support. These contributions are conditional and their acceptance by the States imposes certain obligations to expend the money in accordance with the provisions of the Act.

When the Smith-Hughes Act was passed Virginia had to give up her Congressional District High Schools. These high schools were permitted to organize their departments of agriculture and home economics in accordance with the plans of the Smith-Hughes law.

The first schools to be organized were:

SCHOOL	COUNTY
Appomattox	Appomattox
Burkville	Nottoway
Chester	Chesterfield
Driver	Nansemond
Elk Creek	Grayson
Hampton	Elizabeth City
Lebanon	Russell
Manassas	Prince William
Middletown	Frederick
New London Academy	Bedford
Turbeville	Halifax

In addition to the old Congressional District High Schools certain additional schools were organized in 1917-18. These are shown below:

Charlotte Court House	Charlotte
Chase City	Mecklenburg
Claremont	Surry
Culpeper	Culpeper
Wakefield	Sussex
Williamsburg	James City
Woodland	Carroll
Blacksburg[2]	Montgomery

In order to receive an appropriation for vocational agriculture, the local school board has to provide the following: First, five acres of land convenient to the school; second, a farm shop with equipment costing not less than $750; third, a well lighted room for teaching agriculture and a laboratory costing $350; fourth, a small annual amount for maintenance. This should not be less than five dollars for each pupil.

The State Board will provide a teacher for twelve months at a salary of not less than $1,500. A supervisor of agricultural education is provided by the board to be stationed at Richmond to receive reports, and give advice along the lines of agriculture. The local expenses for the first year may prove a little heavy, but after the first year, the expense is very small.[3]

The annual appropriation granted by the Federal Government under the Smith-Hughes Act is shown in Table III.

TABLE NO. III

Fiscal year ending June 30.	Total Appropriation for Agriculture and Home Economics.	Agriculture—For salaries of teachers, supervisors and directors.
1917-18	$1,860,000	$ 548,000
1918-19	2,512,000	748,000
1919-20	3,182,000	1,024,000
1920-21	3,836,000	1,268,000
1921-22	4,339,000	1,514,000
1922-23	4,823,000	1,761,000
1923-24	5,318,000	2,009,000
1924-25	6,380,000	2,534,000
1925-26	7,367,000	3,027,000
Annually thereafter	7,367,000	3,027,000

The Smith-Hughes gives its funds to agricultural and home economics instruction in high school, while the Smith-Lever Act gives the funds to county agents. But the instructor and county agent carry on their work together in connection with agricultural and individual projects.

The Smith-Lever Extension Service has its Virginia headquarters at Blacksburg, and the Smith-Hughes Service has its headquarters at Richmond.

Relatively few boys will enter institutions of higher learning when they complete their high school course. Even if they do not enter such institutions, they will be better fitted for a vocation which will affect the farm home, the distribution of farm products, the *community and national life.*

[2]Blacksburg organized the work during the session 1918-19.

[3]Agricultural Education, Bulletin No. 13. Federal Board for Voational Education, Washington.

At the present time agriculture is concerning itself largely with problems of production and distribution. These problems will always be of great importance because the life of the nation depends on them.

Mr. G. A. Cobb said, "No doubt our greatest opportunity for improvement and advancement will always be within the field of production."

In order to meet the problems of production and distribution our extension workers, supervisors, and instructors, must give themselves industriously to the solution of agricultural work.

The supervisor of each state visits each agricultural high school department, and gives advice as to better methods of instruction, examines the equipment, studies the project work, and reports to the State Board conditions and recommendations for improvement. He is expected to include in his plans: First, the improvement of teachers in service; second, the inspection of schools; third, assistance in the establishment of new schools and classes; fourth, the preparation of bulletins and other special literature.[4]

Qualification Of Teachers

The teacher of agriculture is required to have a four-year high school course or its equivalent, and a four-year college course, or other qualification.[5]

The teacher should know and be in sympathy with each pupil and parent, and be a general leader in the community.

For the training of white teachers of Agriculture the State Board has established at the Virginia Polytechnic Institute, Blacksburg, a four-year course. Practice teaching is a principal phase in the last semester. This work is done in the Blacksburg High School and under general directions of the Agricultural faculty. For colored training the work is given at the Virginia Normal and Industrial Institute, Petersburg. A two-year course of training in agriculture is given and special provision for observation and practice teaching is made through the trade and industrial classes organized at the institution.

"The duty of a high school agriculture teacher," said Mr. G. A. Cobb, "is to train boys that they may know the soil, and the ways of plants and the ways of animals; that they may understand the relations of the man on the farm to his fellow man in other industries, and that they may understand world agriculture and world economic relations; that through the applications of such understanding the door of opportunity may be opened to every man, woman, and child among us; that our people may become a more prosperous people, a people of higher ideals and nobler aspirations all to the end that our nation may be a still greater nation than it is."

Course Of Study

The Agriculture work should average not less than three hours each day for nine months. It is not necessary that the three hours of work be done at school. The project work may be done on the home farm, and school credit will be allowed. A minimum of eighty minutes each day is devoted to work along agriculture lines in the school period.

The pupil is required to work on some agriculture problem all the time he is enrolled as an agricultural pupil. The project should bear a direct relation to the work done at school; for instance, if the work of the first year deals with plant production, the supervised project should be plant production. The home project method throws the pupil upon his own resources and develops his power of initiative as well as gives him an increased knowledge and skill in solving practical farm problems. All project work is primarily educational in nature and emphasis is placed on mind growth and the intellectual development of the individual.

The success of project work as a part of the agricultural course is dependent on the amount of systematic and permanent supervision and direction, if this work is to function with a minimum degree of efficiency. The teacher has special training in technical agriculture as well as in the pedogogy of the subject, and by virtue of the fact that he is employed by the calendar month and for twelve months' service each year, he is in a position to follow up closely the project work during summer months.[5]

The course of Study as mapped out by State Board is found in Table No. IV.

[4]These instructions are taken from Bulletin No. 2, Vocational Education State Board, Richmond. Page 7.

[5]These regulations are found in Bulletin No. 2, United States Department of Agriculture. Page 29.

TABLE IV

FIRST YEAR

		No. Times Each Week	No. Minutes Each Period	Units
Non-vocational	English	5	40	1
	Algebra	5	40	1
	General Science	3	40 minutes and two 80 minute periods	1
Vocational	Plant Production	5	80	1
	Farm Shop	2	80	
	Supervised project		5 hours and 40 minutes each week for 9 months	½
				4½

SECOND YEAR

		No. Times Each Week	No. Minutes Each Period	Units
Non-vocational	English	5	40	1
	Plane Geometry	5	40	1
	Economic Geography	5	40	1
Vocational	Animal Production	5	80	1
	Farm Shop	2	80	
	Supervised Project		Average 5 hours and 40 minutes each week for 9 months	½
				4½

THIRD YEAR

		No. Times Each Week	No. Minutes Each Period	Units
Non-vocational	English	5	40 minutes	1
	Farm Arithmetic and Bookkeeping	5	40	
		3	40 and two 80 minute periods	1
	Human Biology			1
Vocational	Horticulture and Field Crops	5	80	1
		2	80	
	Farm Shop		5 hours and 40 minutes each week for 9 months	½
	Supervised Projects			
				4½

FOURTH YEAR

		No. Times Each Week	No. Minutes Each Period	Units
Non-vocational	History and Civics	5	40	1
	English	5	40	1
	Chemistry or Physics	3	40 minute period and two 80 minute	1
Vocational	Rural Engineering and Rural Economics	5	80	1
	Farm Shops	2	80	
	Supervised Project		Average 5 hours and 40 minutes each week for 9 months	½
				4½

Total Academic Units	16
Total Project Units	2

When changes in the course of study are made the teacher submits it to the State Supervisor for his examination. Emphasis is placed upon the needs of the locality. In a tobacco section naturally tobacco is the leading cash crop; so the pupil is taught to plan his plant project so as to raise tobacco most economically and at the same time he must raise other crops in order to feed his stock and family and to economize his time. In the corn sections, the projects are worked the same way; the leading products of the locality are given first consideration when a course of study is being planned. A text book is required for each year of the agricultural work, and thirty additional reference books must be in the library.

According to the Bulletin of the State Board of Education, September 1919, Vol, II No. 2, the Vocational teachers are supposed to get behind their work and push it to the limit, that they may help to minimize the criticism which is now being directed at vocational departments. The fact it that the proportion of salaries that are being paid to teachers of vocational education, and the number of pupils directly benefited by this instruction is comparatively small. Such criticism will be eliminated if the teachers will extend every effort in promoting better project work and in giving them the proper supervision and attention. In this way the teachers will reach a direct field of instruction and the enrollment of pupils will perhaps be doubled. The vocational department in every high school is the nucleus of our state system for agricultural instruction in the local districts and communities, and from this radiates educational activities in agriculture which will ultimately reach and benefit all who expect to become identified with the vocation of farming.

In the year 1921-22 there were fifty-three schools giving agricultural courses, not including the eight colored schools. In the white schools 1017 pupils were enrolled, and in the colored schools 154. The total enrollment for white and colored was therefore 1171.

Three new white and two new colored schools were established in the fall of 1922, making a total of 66 agricultural schools in the State, that is, schools which are meeting requirements of the Smith-Hughes Act.

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[5]The information for the last two paragraphs is taken from page 17 of State Board Bulletin No 3, January, 1918, Vol. II.

[6]Courses of study planned by the State Board. This is often changed by the individual instructor, subject to the approval of the State Supervisor.

[8]There are 66 schools in the state, but only 62 counties are represented. Therefore four counties have two schools. There are two Agricultural Schools in Syringa, one white and one colored.

Table No. V shows the schools and teachers of 1922-23.

TABLE NO. V

SCHOOL	COUNTY	TEACHER
Apple Grove	Louisa	J. B. Roller
Oppomattox	Appomattox	T. F. Ackers
Atlee	Hanover	W. R. Emmons
Big Stone Gap	Wise	J. S. Powell
Blacksburg	Montgomery	E. C. Magill
Boyce	Clarke	D. J. Howard
Bridgewater	Rockingham	W. W. Anderson
Brownsburg	Rockbridge	R. P. Wall
Buckingham	Buckingham	H. C. Groseclose
Burke's Garden	Tazewell	F. X. Credle
Burkeville	Nottoway	W. S. Green
Charlotte Court House	Charlotte	R. M. Ritchie
Chase City	Mecklenburg	J. E. Brame
Chester	Chesterfield	R. H. Bruce
Claremont	Surry	J. M. Ellison
Climax (P. O. R. F. D., Chatham)	Pittsylvania	H. L. Saville
Coobs Creek	Matthews	H. W. Garrett
Courtland	Southampton	J. F. Hollifield
Critz	Patrick	G. H. Todd
Culpepper	Culpeper	R. R. Tolbert
Cumberland	Cumberland	
Dinwiddie	Dinwiddie	W. R. Williams

SCHOOL	COUNTY	TEACHER
Disputanta	Prince George	J. T. McGraw
Driver	Nansemond	J. L. Edwards
Eastville	Northampton	W. A. Morgan
Elk Creek	Grayson	F. R. Kirby
Ewing	Lee	G. G. Frazier
Fincastle	Botetourt	N. R. Patrick
Floris (P. O. Herndon)	Fairfax	P. K. Lucas
Great Bridge (P. O. Fentress)	Norfolk	M. O. Roache
Ivy Depot	Albemarle	F. M. Taylor
Lawrenceville	Brunswick	C. D. Lewis
Lebanon	Russell	L. B. Connelly
Lincoln	Loudoun	M. P. Geimer
Manassas	Prince William	H. W. Sanders
Middletown	Frederick	J. O. Beard
Montross	Westmoreland	W. O. Strong
Mount Jackson	Shenandoah	J. P. Graham
Nassawadox	Northampton	T. V. Downing
New London (P. O. Forest Depot)	Bedford	W. L. McDonald
Oceana	Princess Anne	S. E. Sellinger
Pearisburg	Giles	P. W. Edwards
Poquoson	York	T. R. Sinclair
Powhatan	Powhatan	L. E. Pettyjohn
Salem	Roanoke	A. T. Lewark
Sparta	Caroline	F. B. Cale
Syringa	Middlesex	A. W. Kay
Temperanceville	Accomac	J. R. Graham
Toano	James City	Clarence Jennings
Turbeville	Halifax	Ernest Hembrick
Varina (P. O. .R F. D. 5, Richmond)	Henrico	G. E. Rice
Wakefield	Sussex	R. H. Cook
Whitmell	Pittsylvania	K. L. Greenefield
Williamsburg	James City	C. S. Watkins
Windsor	Isle of Wight	L. E. Morton
Woodlawn	Carroll	O. C. Cox

COLORED SCHOOLS

Albemarle Co. Tr. School, Charlottesville, Va.	J. P. Burley
Caroline C. Tr. School, Bowling Green, Va.	L. L. Davis
Charles City Tr School, Ruthville, Va.	J. A. Oliver
Chesterfield Co Tr. School, Granite, Va.	G. L. Davis
Gloucester Co. Tr. School, Roanes (P.O. Gloucester, Va.)	W. F. Banks
Halifax Co. Tr. School, Halifax, Va.	H. S. Sykes
Middlesex Co. Tr. School, Syringia, Va.	J. H. St. C. Walker
Nottoway Co. Tr. School, Blackstone, Va.	J. M. Botts
Sussex Co. Tr. School, Waverly, Va.	R. N. Bolling
Va. Normal and Industrial Inst., Petersburg, Va.	H. F. McFadden

The following bulletins will be of great help to agricultural teachers: Bulletin No. 16, Agricultural Training, Department of Agriculture, Richmond, Va.; Farmers' Bulletin 1041, U. S. Department of Agriculture, Washington, D. C.; Bulletin No. 10 of the State of Missouri for Vocational Education, September 1921; Bulletin No. 2, Vocational Agriculture State Board of Education, Richmond, Va.; Sept. 1922, Bulletin No. 1 "Agricultural Education and Administration," Washington, D. C.; Dec. Bulletin No. 5, Volume XV of Virginia Polytechnic Institute, Blacksburg, Va.

The following books:

Benson and Betts—Agriculture, Bobbs-Merrill; Davis—How to teach Agriculture, Lippincott; Robeson-Lyon's Soils, Macmillan Company.—IDA SAVILLE.

WHAT DO INTELLIGENCE TESTS MEASURE

Are intelligence tests worthless? What is meant by mental age? Is it true that the average mental age of the American people is 14, and if so what does this mean? Different people will probably answer these questions in different ways, largely owing to