

# PROMINENT MEN I HAVE MET

SPENCER AMBROSE BEACH

By

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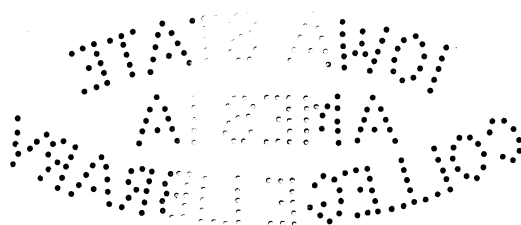
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## SPENCER AMBROSE BEACH

I think no one will question of giving Spencer Ambrose Beach a place in "Prominent Men I Have Met" because of the many fine and valuable contributions he has made to horticultural science. I may say that I can add but little to the fine sketches which have been prepared by T. J. Maney (Trans. of Ia. State Hort. Soc. 57:58) and Prof. A. T. Erwin, on the occasion of the presentation of the Beach portrait to the horticulture department of Iowa State college on the 2nd of November, 1923.

Professor Beach was born at Sumnerhill, N. Y., on September 15, 1860, and died at Ames, Ia., on November 2, 1922, after an illness of four months. During this illness he showed the fortitude and patience of a great hero. Professor Maney says:

"He was the exemplification of perfect patience and continually mindful of the welfare and comfort of not only those who were dear to him, but to all who ministered to his comfort."

It is always interesting to know what may have been the early home surroundings of our great men and women. The father of our Professor Beach was a physician of the old school, trusted and beloved by the community. A man who did his full duty to the community. It was my pleasure some years ago to have met the father, a man sparely built; high ideals; and was well trained along medical lines and who did good service to the Sumnerhill community of New York. The doctors in the days that the father of Professor Beach practiced medicine had long hours; they were family physicians in every sense of the word. Dr. Beach was broadly trained and broadly educated and aside from his interest in medicine he was interested in the growing of flowers and in horticulture.

We know also that New York with its hills, valleys and brooks must have left an impression on young Beach and gave him a love for the out-of-doors.

The parents of Professor Beach were Isaac Ambrose Beach, son of Samuel T. and Thankful Sarah (Spencer) Beach, and Maria North, daughter of Jeremiah Poole and Lucinda (Math-er) Wood. They were of English ancestry, with a slight mixture of Scotch and lineal descendants of several colonial families. One line, that of Poole, can be traced back to its advent from Normandy with William the Conqueror. The name originally was spelled De La Pole.

Professor Beach attended the public schools of Sumnerhill.

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He then went out to Michigan to teach a district school in the village of Matherton which was named for an uncle. He had some of preparatory work at Homer, N. Y., academy, then he attended the high school at Ann Arbor, Mich., and later went to southeastern Iowa to teach in the public schools. His cousin, George Spencer Beach, lived at Lenox where young Beach taught one winter. It was here that he came in contact with George O. Van Houten, Prof. J. L. Budd, and other horticulturists, which led him afterwards to enter Iowa State college. The long winter vacations made it possible for him to teach during the winter and during the first winter Professor Beach taught in the public schools of Story county.

He was attracted to Iowa State college because Prof. J. L. Budd who was then professor of horticulture, had established a reputation as one of the outstanding horticulturists of the country. He entered Iowa State college in 1884. He graduated in 1887. Prof. A. T. Erwin has given us this little glimpse about his appearance in Iowa and Texas:

"In his 'teens he gave heed to the advice of Horace Greeley to 'Go west, young man,' and migrated to southwest Iowa where he taught in a rural school. At the age of 23 he entered college at Ames. Here he came under the tutelage of that inspiring teacher, Prof. J. L. Budd, and elected horticulture as his life work, graduating with the class of 1887. This class numbered only 28 which is quite in contrast with the senior class of today. Nevertheless, it has produced its full share of prominent workers in the field of agriculture. Dean Curtiss, Dr. N. E. Hansen and Prof. Fred Mally were Professor Beach's classmates.

"For a brief period after graduating he was connected with the Silas Wilson nurseries at Atlantic, Ia. While with Mr. Wilson the idle season was spent selling nursery stock and as a nursery agent, either on horseback or afoot, he covered many of the rural districts of Iowa and became intimately acquainted with the farmer and his problems.

"His next move was to Texas where for a period of about one year he was head of the horticultural department of the state college. Professor Beach's professional career, however, centers around his work at the New York experiment station where he spent the next 17 years of his life."

During his college days he became associated with men like Dr. N. E. Hansen, Dr. C. F. Curtiss, Willet M. Hays, J. B. Keffer, and others who have made notable contributions to agricultural science. He had such teachers as Dr. Seaman A. Knapp, Prof. J. L. Budd, Dr. A. S. Welch, sr., E. W. Stanton, Dr. C. E. Bessey, Dr. Herbert Osborn, and Dr. M. Stalker. No doubt thru the instruction of these men Professor Beach laid a firm foundation for his future horticultural work, because after

all a fine structure cannot be built without a solid foundation. Prof. J. L. Budd and Jerry Sexton, the horticultural foreman, were pre-eminently practical men. Professor Beach gained much practical experience from them. I presume that he intended to go into practical work and therefore after graduation he became connected with the Silas Wilson nursery in Atlantic. Beach got much from this practical contact. Silas Wilson was a high type of business man and a fine man personally. One of the most charming men of the profession it has been my pleasure to meet in Iowa. Professor Beach was connected with this nursery for three years, learning every detail of this intricate business. Association with strong men has an important influence on the lives of men. They are factors in our development. They influence us in many ways. The horticultural influence of the sturdy pioneer men of Iowa had some bearing on the future life of young Beach. Men like C. L. Watrous, C. F. Gardner, Silas Wilson, Col Brackett and R. P. Speer influenced Beach I am sure, thru their personality.

In 1890 he was called to the chair of horticulture of the Texas A. & M. college. He filled the position with great credit to himself. I have talked with a number of men who had worked with him in Texas and they speak in the highest terms about his work. In the year 1891 came an offer to him to become the horticulturist at Geneva, N. Y., agricultural experiment station. This position had just been vacated by Prof. E. S. Goff, a graduate of Cornell. Professor Beach held this position until 1905. At Geneva, N. Y., he was thrown in with men of high ideals and standards, like Dr. Jordan. His real scientific work began at this station. I remember my interest in his work on the pollination of grapes. This work did much to stimulate grape growing in New York and laid a broad foundation for work in the breeding of this fruit.

Professor Beach came to Iowa State college in 1905. It was his alma mater, and much was expected of him. He came because he thought there were opportunities in Iowa, especially in the breeding of hardy and desirable fruits. The horticulture was still to some extent uncharted. Professor Maney, one of his strong students, tells us of the Beach interest in Iowa horticulture.

"When Professor Beach came to Iowa in 1905 he did so not merely because Iowa State college was his alma mater, but chiefly because he saw here an opportunity to make a definite contribution to the horticulture of the upper Mississippi valley by helping to put the breeding of fruits suited to this region on a scientific basis. As a monument to his memory he leaves a collection of twenty to thirty thousand cross-bred seedling fruits, one of the largest collections of this kind of material in

the world and one which is fundamental in the further development of the science of fruit breeding. At the time of his death he had already produced 14 varieties of apples which may prove superior to anything now grown in this region.

"In one of his talks before the State Horticultural society Professor Beach said, 'What kind of a world would we have were it not for the dreamer, for the seer, for him who sees visions and then goes to work to bring his visions to pass?' Professor Beach was a dreamer and a seer. He had visions, but also had the qualities of mind to bring his visions to pass. All his work was done with painstaking accuracy and his conclusions were clear and logical."

Professor Beach was a man with a splendid personality, calm, dignified, always weighed everything to get the correct attitude on the problem before him. He was a conservative.

In the Iowa State College Student at the time of his death, was expressed the following fine sentiment in regard to Professor Beach:

"Yet in another sense, Professor Beach is still with us. He is with us as a friend, for who will say that the sympathy, the interest, the counsel, the sheer human kindness of this man who was the friend of every student, is gone? Professor Beach endeared himself to the student body as well as to the host of his other friends in a peculiar way which few come to know. He was almost the personification of sympathy.

"In the material world, the influence of Professor Beach will live on. It would be impossible to estimate the economic service this man has rendered, for its results are only beginning to be realized. The Mississippi valley is indebted to him for no less than 12 new varieties of apples, which as they are further propagated, will be an ever increasing factor in its prosperity. His profession is indebted to him for the contribution of much new knowledge, the result of his research and untiring industry.

"His influence as a religious leader will live on. Professor Beach was a deeply religious man of the most sincere and genuine type. Not only by giving of his time and resources to his church and to any worthy cause connected with it but by living the sort of life that is possible only as the result of deep conviction and belief, this man proved an inspiration to those who were associated with him."

I have not attempted to give the expressions of professors who were associated with him, nor the personal relation of Professor Beach to horticulturists of Iowa and this college. I take pleasure in quoting Professor Herrick, who was long associated with him at Ames and the State Horticultural society.

"I first met Professor Beach when I came to Ames on

August 19, 1912. I was associated with him up to the time of his death. As extension horticulturist I came in almost daily contact with him while not in the field. When coming to Des Moines in April, 1920, Professor Beach was president of this society. He became president of the Iowa State Horticultural society in 1918.

"It is hard for me to express my opinion concerning Professor Beach. He was more like a father to me than anyone else other than my own parents. He seemed to have the ability to instill confidence in one's own ability. For example, I have many times come in from field work rather discouraged with what looked sometimes as a hopeless job. Professor Beach was always able to make me feel that the work was worthwhile and I always left his office with renewed vigor. I am confident that he was the best friend I have ever had outside of my own family. He will always be remembered as a man of great ability and still of a very quiet unassuming nature."

Professor Beach had a fine community contact which is worthwhile for any college man. In this connection the Sunday school work at the Congregational church at Ames is highly commendable. Professor Beach always was interested in the welfare of the community in many different ways. He was a director of the Ames National bank, and a member of the fraternal organizations in the community. The Student has the following to say on his work in the Congregational church:

"But with all his notable achievements as a scientist and as a teacher, Ames likes to think of Professor Beach as a friend, a counsellor and as a citizen. He had many friendships, in the college of course, and also in the community. He was always kindly and generous. He had especially a deep interest in young men and daily they came to him with their personal problems. For many years he led a Sunday morning class of young men at the Congregational church, which was known as the "Beach Class" and thru this he influenced the lives of hundreds of students. At different times he held official positions with the Congregational church and with the college Y. M. C. A."

In this connection, too, I want to say that during the meetings of the Cosmopolitan club Professor Beach showed a deep interest in the work of the Cosmopolitan club, and gave it his fine support. He had a deep interest in all of our foreign students showing a breadth of interest.

In the report made by the faculty memorial committee, this high tribute was paid to Professor Beach:

"A great man has gone from among us. The passing of Professor Beach ended the earthly career of one of the noblest men that has served this college; a scientist of a high order and



a benefactor of his fellowmen; a steadfast friend and an earnest Christian gentleman. We can hardly reconcile ourselves to the loss of him. We are sorely bereaved. But we know that our former colleague would not have us mourn. Far from it. His record of splendid service and of loyal devotion to his work and research, which so recently fell from his strong hands. Faithful work on our part, in the interest of the high ideals for which Professor Beach labored without ceasing, will be the finest tribute that we can pay to his memory.

"However, it is a labor of love to set down, as impartially as is possible, a brief record of the work of Professor Beach and to write something concerning the leading personal qualities of this great man that stood as a background to give supreme value to all that he did."

"Professor Beach had but one purpose in life and that was service, especially along the technical lines in which he was trained. He achieved notable things as an educator and research worker in horticulture.

"In his position as vice-dean, it was Professor Beach's privilege to come in close touch with a large number of students. We shall never know the full measure of his helpfulness in this relation, but very many of the young men of the agricultural division have repeatedly told of the great debt of gratitude they owe Dean Beach for the help that he gave them thru friendly counsel and advice when the way seemed uncertain or when doubts assailed and some of the problems of life seemed to be too difficult to be solved without help from a sympathetic adviser."

Professor Beach was a fine teacher. He was able to present the subject in a lucid and forceful way. Professor Maney has said:

"Professor Beach was an ideal teacher and had a happy faculty of imparting his enthusiasm in his subject to his students. He was a trusted friend and adviser to hundreds of students. In his passing Iowa State college has lost one of its most valuable members and the state and nation has lost a notable scientific worker."

The New York state experiment station at Geneva, N. Y., had this to say about Professor Beach:

"His work as horticulturist at the Geneva station has been performed in a faithful and laborious manner, and the lines that he has followed have been intimately connected with the actual needs of nurserymen and fruit growers. He has given especial attention to the treatment of diseases of orchard, nursery and garden plants.

"Professor Beach has also in progress experiments in testing many hundreds of different varieties of fruit. The station

now has one of the largest collections of varieties of fruit on this continent and pomologically one of the most interesting in existence."

Professor Beach served as president of the Iowa State Horticultural society during the time 1918-1922, and on his death Millard Harrington and R. J. Pearse at the meeting of the Iowa State Horticultural society on November 14, 1922, presented the following resolution which was adopted by an unanimous and rising vote:

"It has been with a profound sense of sorrow that the members of the Iowa State Horticultural society have learned of the death of their president, Prof. S. A. Beach of Ames, Ia.

"Not only in our own state, but also nation-wide, sorrow has been expressed upon the death of a man who has meant so much to the horticultural interests of the nation.

"The name of Professor Beach will ever be remembered and associated with the development of Iowa horticulture. There has been no one man in the state who has done more for the horticultural interests of Iowa or who has taken time to work for their basic principles than Professor Beach.

"The Iowa State Horticultural society by electing him as their president has bestowed upon him the highest honor in their power to bestow.

"Therefore, it is extremely fitting that at the close of this most useful and unselfish life as a husband, father and citizen that we should express our appreciation of his great service to horticulture in Iowa.

"Therefore, Be It Resolved, by the Iowa State Horticultural society, that we express to the bereaved family, our sincere and loving sympathy on the death of this loyal devotee of horticulture. That a copy of these resolutions be sent to the bereaved family and that these resolutions be placed upon the records of the society."

### Scientific Work of Professor Beach

The background of a man's training is important for his future work. The training in botany that Professor Beach had under Dr. C. E. Bessey in the fundamentals of botany, gave him a broad outlook on botanical science. Dr. Bessey was a most excellent teacher overflowing with enthusiasm and always able to interest students. Dr. Bessey at Ames was followed by another excellent teacher, Dr. Byron D. Halsted who also was able to interest his students along botanical lines. Dr. Bessey's line was general morphology, and general botany. Dr. Halsted laid stress on economic botany, especially plant pathology, so

young Beach naturally became interested in plant pathology which some years after graduation (1892) led him under my direction to receive his M. S. degree, along the line of plant pathology, choosing as his thesis subject, "Diseases of the Bean." Of course Professor Beach received especially valuable training in economic entomology from Dr. Herbert Osborn who probably stood without a peer in this country on our leaf hoppers. In systematic pomology the guiding hand was Prof. J. L. Budd who during the student days of Professor Beach was interested in the Russian apples and the breeding of a hardier stock using these varieties as a base.

His scientific work began at the Geneva (New York) Agricultural Experiment Station (1891) where he had splendid facilities and could look ahead, in other words where he could plan for the future and in looking over this work it is apparent that at the very beginning, certain projects were laid out and consistently followed for many years, 1891-1905. In the very first report he discusses plant breeding work, the strawberry receiving some attention. The treatment of fungus disease of plants also received early consideration and his interest in these subjects continued up to his death.

I believe that most horticulturists will agree with me when I say that horticulture is applied botany and this was the thought of Professor Beach. Therefore horticultural problems can be quite as scientific as any problem in botany or zoology. The papers by Professor Beach along several lines may be grouped under taxonomy, physiology, and pathology. The finest of his papers deals with taxonomy or classification of fruits and in a brief discussion of these let me begin with the fine monograph on the "Apples of New York" which gave Professor Beach a national reputation as a horticulturist. This is an outstanding scientific contribution. In preparation of these two splendid volumes he had the assistance of N. O. Booth and O. N. Taylor.

It was no small task for Professor Beach to look up the bibliographical references and then describe the character of the fruit and adopt a system which is now generally used in the description of apples. Professor Beach gave a splendid introduction of the history of the apple and its origin, showing his familiarity with the literature of the subject. This two volume work with fine colored illustrations is a most praise-worthy scientific contribution for New York, and is a worthy model for horticultural monographs.

The example set by Professor Beach was followed by U. P. Hedrick in his fine monographs on grapes and plums. The apple monograph is full of valuable data on the apple and many varieties and adaptations to soil. Prof. T. J. Maney has well said:

"It was at Geneva that he made one of the finest contributions to American horticulture in the form of a two volume monograph entitled, "The Apples of New York." This work is outstanding in the field of systematic pomology. For this valuable contribution the Royal Horticultural society elected him to its membership, an honor which was conferred on only a few scientists in the United States. In addition to his work with apples at the Geneva station, he also laid the foundations for the publication of the notable works on systematic pomology which have come from that station in recent years under the direction of his successor, Prof. U. P. Hedrick.

We may now refer to his other scientific work in connection with the Geneva, N. Y., agricultural experiment station. In 1893 he became interested in the self-pollination of grapes and again in 1899 the grape was the subject of interest to him. In 1902 along with Prof. N. O. Booth the subject of pollination received his attention. (Bulletin 169.) Some splendid contributions were made. Professor Beach found that poor fruit is not only caused by the dropping off of buds or poor conditions of the vines, but the most common cause is imperfect pollination due to impotent pollen. This is a very valuable piece of research work. One of the earliest contributions that Professor Beach made was a paper on grapes which he discussed, both native and exotic. This early work led later to other reports on the subject of grapes. It was found that many of the varieties of grape were self-sterile. Professor Beach's contribution has been very valuable to horticulture and botanical science.

Plant breeding engaged his attention for a great many years and no doubt his plant breeding work will stand out as one of his most valuable contributions at Geneva, N. Y., experiment station and the Iowa State college. During the time of his professorship at Ames he taught in a splendid way, a course in plant breeding. He did not enter into the many finer problems of genetics but did give a broad outline. He left it to men like Dr. J. N. Martin of the college to look after the finer points in cytology.

Professor Beach did a large amount of practical work in connection with the breeding of fruits. This work began while he was studying under Professor Budd and had his attention while he was connected with the Geneva, N. Y., experiment station. He was invited to come to the Iowa State college, largely because of his interest in plant breeding and the development of hardy fruits for the upper Mississippi valley.

It has been said by Prof. A. T. Erwin that Professor Beach left some 300,000 cross bred seedlings and upwards of 3,000 trees of bearing age, as the result of his work done here at Ames.

Prof. A. T. Erwin says:

"Professor Beach was interested in fruit breeding, not merely from the standpoint of developing new and hardier varieties, but also from the standpoint of studying the principles of breeding as they apply to the apple. His ambition was to determine what are the factors of inheritance in the apple and to learn what parents and combinations of parents transmit desirable characters of hardiness, good tree habit, both in the nursery and in the orchard, productiveness, fruit of good quality, of red color and late season. Seedlings from 50 different mother parents and 43 pollen parents were secured in this initial work representing a total of 120 combinations."

Professor Beach wrote to Rapheal Klein:

"In the spring of 1902, I began work in fruit breeding, particularly with the apple, pear, bush fruits, and strawberry. Later, I extended this work to include quite extensive grape breeding investigations. Many of the varieties of fruit which were originated by me or under my directions while I was horticulturist at the Geneva experiment station have been named and introduced into cultivation. These include many varieties of the apple, some raspberries and other small fruits. So far as I know none of the varieties of grapes which I originated at Geneva has as yet been named and propagated for general dissemination to the trade. Publication of the results of this work has been done very largely by my successor at the Geneva experiment station, Dr. U. P. Hedrick, together with my former associates who remained on his staff.

"One of the things which attracted me greatly to Iowa when I was offered the position here, was the opportunity which I saw of making a definite contribution to the horticultural work of the upper Mississippi valley by helping to put upon a scientific basis, the breeding of fruits adapted to this region. Upon coming here I at once began apple breeding and other lines of fruit breeding. These have been carried forward for the past fifteen years and are now year by year in increasing measure yielding invaluable results. These results are important not only for increasing our scientific knowledge of apple breeding and of materials suitable for securing certain desired results in that line, but because incidentally out of the hundreds and even thousands of new varieties which are being brought into bearing some are proving to be of such superior merit that they are being named and disseminated for extended trial. In fact, my assistants and I, in our conferences on this matter sometimes say to each other that we believe if the entire list of the old named varieties and commercial orchards of Iowa and adjacent states, were to be wiped out of existence, we could furnish from our collection of seedling apple material a new list of varieties which, for the most part, would be superior to

those now being disseminated thru the nursery trade for the orchardists of this region.

"The collection of original apple breeding material of known parentage which we now have growing on the breeding grounds of the pomology section of the Iowa experiment station both here at Ames and at the state fruit breeding farm at Charles City, Ia., aggregates from two thousand to three thousand trees of bearing age and reaches a total of between twenty thousand and thirty thousand different seedlings either in the orchard or nursery or seed beds. We confidently expect that out of this material will come new varieties which will be adapted not only to the extremely rigorous and trying climatic conditions of the upper Mississippi valley as far north as southern Minnesota, but also to corresponding climatic regions in other sections of the country; also we expect that among these new seedling varieties some will be found which will have the style-quality and keeping qualities to enable them to compete successfully in the general markets with many of the old standard varieties."

Professor Beach was very much interested in the diseases of plants. He emphasized this in connection with his annual experiment station reports in Geneva, N. Y. In the report for 1893 such topics as bean diseases and cherry diseases received his attention. Some of the earliest experiments made in this country in connection with the treatment of leaf blight and leaf spot of the cherry were made by Professor Beach. The tomato disease report was a valuable one. Reports of diseases of plants were made in the annual report of the Geneva, N. Y., experiment station for 1893, 1894, 1895, 1896, 1897, and 1900.

The spraying experiments for diseases of plants made in the '90's proved that much damage can be prevented by proper spraying. In his later work at Geneva he made an exhaustive study of the relation of fruit bloom and spray. In one of his experiments of 1900 he discussed the treatment of nursery stock by fumigation, also with hydrocyanic acid. The diseases of gooseberry also received his attention.

Professor Beach at Geneva and L. H. Bailey at Ithaca, performed some valuable experiments on spraying in bloom of orchard trees. Professor Beach found that Bordeaux mixture 1-11 prevented the germination of pollen. Another publication on the same subject, "Spray mixture and spraying machinery" (Bulletin 243) received his attention. This work was done with the co-operation of B. A. Clark and O. N. Taylor.

The spraying of orchard fruits interested him when he came to Ames, and he published a valuable paper, "Spraying Practice for Orchard Gardens" in 1912. This was, therefore, a continuation of the work that he started in New York.

In 1898 he made some experiments in connection with the forcing of lettuce. This continued to interest him because in 1900 some more material was published on the forcing of lettuce.

The forcing of tomatoes was taken up in Bulletin 125.

The storage of apples began while he was connected with the Geneva, N. Y., experiment station. In 1904 with Prof. B. A. Clark, they reported on the storage of apples in New York. Consequently this received his attention when he came to Ames. He therefore inaugurated some experiments, the results of which have been of great value to the fruit growing industry of the country.

In 1893 and 1903 the experiment on thinning apples received his attention at New York. It was found that better and more perfect fruit was obtained by thinning.

Professor Beach did some very notable work in connection with the sod-mulch and tillage in the orchard. This has had a very large influence on the method of taking care of orchards in New York. Professor Beach tells us in one of his letters:

"One notable line of work which I carried forward at Geneva was the comparison of sod-mulch with tillage and cover crops for apple orchards. At the time when this project was undertaken there was a great deal of discussion in the horticultural press and in horticultural societies with regard to the comparative merits of these methods of orchard soil management, but unfortunately there was then no reliable, scientific experimental data concerning the matter upon which to base conclusions. I think it is unquestionably true that, after the publication of the results of this line of work which I inaugurated, and which were also later written up by Dr. Hedrick, the commercial apple-growers of New York state came to have a very much clearer understanding of the comparative merits of the methods of orchard soil management above referred to, and settled their practical operations accordingly."

In 1897 Professor Beach reported on some more of the uses of wood ashes in the orchard. It has been a common belief that wood ash counteracts the apple scab. It was found that this is not true—however, it does give a better color to the fruit.

In 1901 he became interested with H. Hasselbring in some experiments with stable manure as a nitrogenous fertilizer.

One of the notable contributions by Professor Beach and F. W. Allen, jr., associated with Dr. J. N. Martin, was the paper on "Hardiness in the Apple as Correlated with Structure and Composition" in which an enormous amount of valuable data on the hardiness of fruit trees is gathered together. This will always have to be consulted in a study of this problem.

Other scientific contributions: N. Y. agricultural experiment station, "Apples of New York," 2 volumes. Bulletin No.

114, "Gooseberries;" Bulletin No. 117, "Leaf Spot of Plum and Cherry;" Bulletin No. 125, "Forcing of Tomatoes;" Bulletin No. 140, "Wood Ashes and Apple Scab;" Bulletin No. 146, "Forcing Head Lettuce;" Bulletin No. 169, "Fertilizing Self Sterile Grapes;" Bulletin No. 174, "Trimming of Nursery Stock;" Bulletin No. 196, "Spraying in Bloom;" Bulletin No. 208, "Stable Manure and Nitrogenous Fertilizers for Forcing Lettuce;" Bulletin No. 223, "Self Sterility of Grapes;" Bulletin No. 239, "Thinning Apples;" Bulletin No. 243, "Spray Mixture and Spray Machinery;" Bulletin No. 248, "New York Apples in Storage," besides many articles in annual reports.

Professor Beach believed in co-operation. In his address as president of the Iowa State Horticultural society for 1920, he urged the affiliation of allied organizations with the State Horticultural society. This afterwards was brought about. He made this statement:

"Individualism cannot accomplish what Iowa horticulture needs; co-operation can."

In the annual address in the year 1919, he urged that Iowa might "well give better attention to her forests, groves, wind breaks, and forest products." He urged the affiliation of Iowa horticultural organization.

In his annual address for 1921 he reports of the affiliation of the six societies with the State Horticultural society. He comments on the importance of binding different organizations together and the co-operation of leading schools. He presents a fine tribute to Charles G. Patten.

Professor Beach was a member of the American Association for the Advancement of Science, the American Society for Horticultural Science, and the Iowa State Horticultural society, American Pomological society, Alpha Zeta, Gamma Sigma Delta, Phi Kappa Phi, Sigma Xi and corresponding member Iowa Academy of Science.

Professor Beach was largely influential in securing an active interest and appropriation for the Midwest Horticultural exposition which has had a fine influence on the horticulture of Iowa.

He was elected an honorary member of the Royal Horticultural society of London, England. He was the prime-mover of the formation of the American Society for Horticultural Science. Prof. A. T. Erwin has well said:

"In 1903, he presented to a small group, of which the writer was privileged to be a member, the need of an organization of professional horticulturists. It will be recalled that up to that time, this body of workers had no definite part in the sectional programs of the American association, and as between entomology and botany, they were somewhat in the position of



a 'man without a country.' He issued the call for the first meeting of the Society for Horticultural Science and served as secretary during its early and critical years. In the face of some indifference, he laid the foundation for an organization which has done a wonderful work and wielded a potent influence for the advancement of American horticulture."

Professor Beach was married to Miss Norma Hainer at Aurora, Neb., July 2, 1890. He had four sons: Frank H., who is connected with the State university of Ohio, at Columbus; Julius E., an attorney in Chicago, Ill.; and Victor H., credit man for one of the large banks in New York; Ambrose, deceased.

Those who have had the pleasure of meeting the Beach family will always remember the hospitality and congeniality as well as the fine Christian home influence. Professor Beach in more than one way has left his impress on the community. His life will ever remain a blessed memory.