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CONNECTICUT

# Agricultural Experiment Station

NEW HAVEN, CONN.

BULLETIN 228

MARCH, 1921

## Connecticut Round Tip Tobacco

A New Type of Wrapper Leaf

By D. F. JONES

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# CONNECTICUT AGRICULTURAL EXPERIMENT STATION

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## Connecticut Round Tip Tobacco.

### A New Type of Wrapper Leaf for Priming; Recommended for Trial Where Havana is Grown.

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BY D. F. JONES.

Both Havana and Broadleaf tobaccos grown in New England have rather narrow-pointed leaves so that the yield of wrappers from a pound of leaf is relatively small. In an endeavor to obtain a type having a more nearly round leaf which would equal or prove better than the two well-known varieties in quality and surpass them in yield, a new variety of tobacco has been developed by ten years of selection and testing. This variety is called Connecticut Round Tip on account of the broad, full tips of the leaves and is offered to tobacco growers in the belief that it has certain distinct advantages which make it worthy of serious consideration.

In recommending a new type of tobacco for trial it is fully realized that there are many reasons why any variety differing from those commonly grown may be undesirable for the grower, no matter how meritorious it is, because the trade is unfamiliar with it and there is therefore a tendency to discriminate against it. At the same time no one can maintain that the kinds of tobacco now used will always be grown or that it is impossible to obtain new varieties which will be more profitable than those now employed.

Connecticut Round Tip should not be confused with other new varieties offered from time to time, most of which were variable hybrids which had not been fixed and stabilized nor had they been selected so extensively or carefully as this tobacco has been for certain definite qualities. No plants of Connecticut Round Tip were grown outside of our trial grounds previous to 1918. But in the last three years it has been tested in the field of comparison with types now grown and has been shown to have certain valuable qualities which merit attention.

#### ORIGIN OF THE ROUND TIP TOBACCO.

The problem was to combine in one variety or type the higher number and the better shape of leaves of Sumatra with the larger size and other desirable qualities of Broadleaf.

The method of doing this had been developed by previous study of inheritance in tobacco.

An artificial cross was first made between Sumatra and Broadleaf. The seed was planted the next year and from the resulting plants seed was saved for the third year's planting, when the selections were begun.

Each plant was carefully studied and noted as to all important characters which could be observed in the fields. From the plants which represented the desired size and shape, seed was saved under bags for the next year's test while all the less desirable plants were dropped out. This process was repeated year after year for ten successive years till finally three selections remained which seemed equally promising. Then these were tested on a larger scale.

In 1916 about one-third of an acre of each was grown, and separately harvested, cured and sorted and the weights and proportions of the different grades were used in making the final choice.

Throughout the work selection has been based largely on the weights and appearances of the cured and sorted leaves.

*It is not a "hybrid"* as the term is usually understood. A hybrid is a natural or artificial cross of two fairly settled varieties and the individual hybrid plants the second and immediately following years are very variable. Years of very careful selection are required to secure a variety or type with fixed characters.

The Round Tip here described comes from a "hybrid" which has been carefully protected from natural crossing and selected for ten years so that its uniformity to type is fully equal to that of either of the varieties commonly grown in the state.

This new tobacco is largely the result of the work of E. M. East, formerly with this station and now at the Bussey Institute of Harvard University. H. K. Hayes, also formerly connected with this station, and E. G. Beinhart of the U. S. Department of Agriculture, have had a large part in producing Connecticut Round Tip. The writer has continued and completed the work. B. G. Southwick of the Hartford County Farm Bureau has rendered valuable help in securing the co-operation of growers in carrying out field tests of the variety and in interesting dealers in the merits of the leaf. During the first years of development the tobacco selections were grown for the Connecticut Experiment Station by the Windsor Tobacco Corporation at Bloomfield. Later they were grown at the Shaker Farms at Somers. Much credit is due J. B. Stewart and M. M. Smith for their co-operation in this enterprise.

#### CHARACTERISTIC FEATURES OF ROUND TIP TOBACCO.

The plant is a tall, vigorous grower which flowers and sets seed abundantly in the field. It has a strong root system which enables the plants to stand up in the field better than Havana. The leaves are not as large as Broadleaf but they are more com-

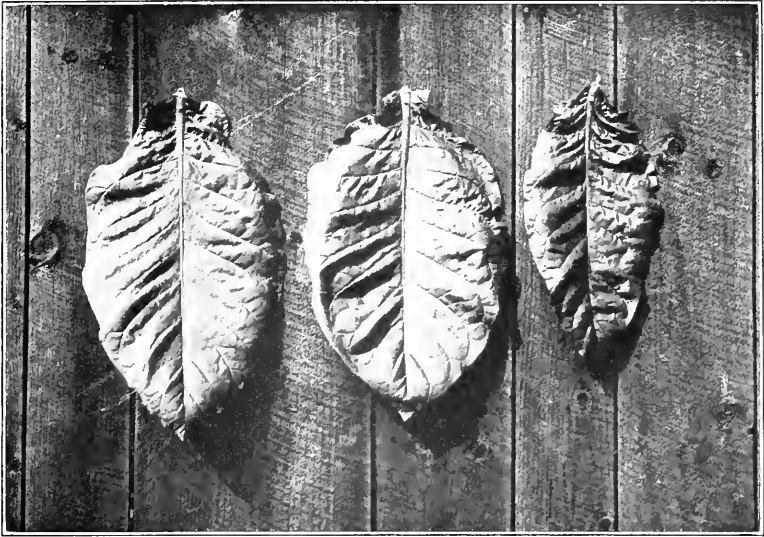


Figure 1. Round Tip leaves from the bottom, middle and top of one plant at the time of first priming.



Figure 2. A field of Round Tip grown by Morgan & Dickinson, Windsor, Conn., in 1920, who say: "It showed wonderful growth, averaging 24 leaves to the stalk, and we were particularly impressed with the round shape of the leaves and the plant's root system."

PLATE XVII.



Figure 3. Round Tip plants grown by T. J. Kearney, Poquonock, Conn., in 1920, who was pleased with their vigorous growth and production of numerous and well shaped leaves.

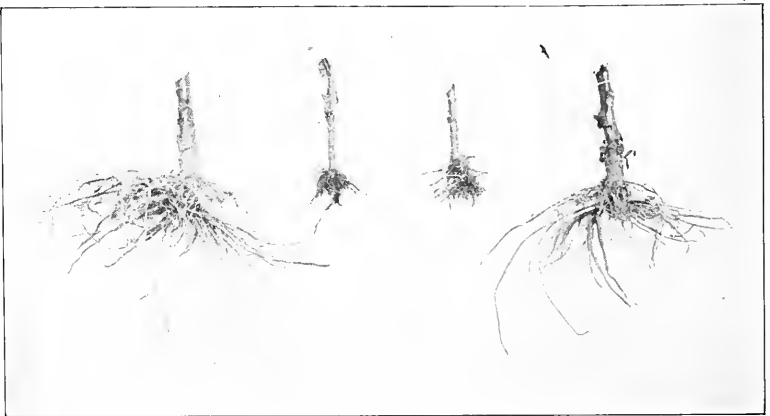


Figure 4. Roots of two plants of Round Tip, at the sides, compared with two roots of Havana, in the center, arranged in the order and comparative distance in which they grew in a field badly infested with root rot.

pact, having a broad rounding shape without the long drooping tip usually shown by that variety. The plants develop from twenty to twenty-four good sized leaves per plant. These are spaced somewhat farther apart on the stalk than those of either Broadleaf or Havana, making the plants more suitable for priming than for stalk cutting. By topping lower with from sixteen to eighteen leaves the cut tobacco can be handled satisfactorily in the sheds.

In one field in 1919 a few plants were accidentally set among Havana in the field which was badly infected with root rot. The Havana plants made a very small growth while the Round Tip plants showed no sign of injury to the roots. They were vigorous and fully twice as tall as the Havana plants growing beside them. The differences in root growth are shown in the accompanying illustration. If this resistance to unfavorable soil conditions proves to be characteristic of this variety under all conditions it will be a most valuable feature and one which alone makes the variety very promising.

At their best the leaves are nearly as wide as they are long and are noticeably full at the tip. They are also held upright and close to the stalks, thus avoiding considerable damage in the field. The lengths of the leaves run from sixteen to twenty-six inches but on account of their shape a twenty inch leaf is equivalent to a much longer leaf of either Havana or Broadleaf and pound for pound yields a greater number of wrappers.

In color and quality of cured leaves the tobacco is more nearly like Havana and is recommended for the uses to which Havana is put. Many have said that it resembles shade grown Cuban somewhat. However, in color and general wrapper qualities it is usually distinct from any of the varieties now grown and in time should win a place for itself on its own merits.

#### FIELD TESTS.

In testing the productiveness and quality of this tobacco it has been difficult to get a satisfactory trial for the reason that it has not been grown in sufficient amount. It has not been possible to devote much seed bed space to the growing plants and consequently there have never been enough plants to set the field all at one time. As a result, plants differing in maturity were harvested at the same time as it was necessary to pick the whole field at each priming. Moreover, the plants were handled as Havana was treated and it has since been learned that the Round Tip requires somewhat different treatment in certain particulars.

It is generally agreed that the leaves should be picked earlier than the Havana leaves of the same stage of development. They should not be left until they show yellow. The plants being large

yielders are heavy feeders and must be fertilized accordingly. Producing more leaves than Havana it should be fed proportionately more. This extra expense is fully justified since on a given area and with the same labor, except for handling, a greater quantity of tobacco is produced. The leaves being wider than Havana they should be spaced farther apart in the sheds in order to cure properly.

In 1915 at Bloomfield 1400 pounds per acre were secured and the year following 1800 pounds in three primings not counting tops. In 1918 at the Shaker Farms the rate of 2800 pounds per acre was obtained from a field of about one-third of an acre. In 1919 it was tested in seven different places in the valley by growers of Havana in amounts ranging from one-fourth to five acres. Three of them grew it as a stalk tobacco and the others primed it. The weights ran from 1400 to 1600 pounds per acre. The tobacco was set rather late and on account of uneven planting the conditions were not favorable to this variety.

In 1920 Round Tip was grown in thirteen different places in amounts from a few plants to eight acres. The tobacco made a good growth in spite of a late start in many cases, until damaged by the hail storm. In spite of much injury to the last pickings weights of from 1600 to 2000 pounds per acre were secured. The percentage of light wrappers was also high in nearly every case.

When properly cured the "burn" is satisfactory. The only serious objection to this tobacco is that it may have a bitter taste. Some think that this can be obviated by proper curing and ageing.

Its remarkable ability to stand up on soils in which other tobacco fails to thrive was also shown very clearly in 1920 in those places where a direct comparison could be made.

#### OPINIONS OF TOBACCO GROWERS.

*From M. M. Smith, The Shaker Farms, Somers, Conn.*

The young plants of the new variety of tobacco started more quickly, grew a large round tip leaf, required very little suckering, and stood up against a storm better than the ordinary type. As the yield of leaves and weight was more than the type usually grown, believe it should be fed accordingly. Also found that owing to wide spreading of roots, there is danger of too deep cultivation after plant is half matured.

*From Morgan & Dickinson, Windsor, Conn.*

We set out 9,000 plants of Round Tip on June 27th, 1920, and finished harvesting our tops on Sept. 14th. The 9,000 plants produced 1,778 pounds with some loss in weight by hail, as the last ten leaves were cut in the storm. This tobacco produced 828 pounds of No. 1 Wrappers and 571 pounds of No. 2 Wrappers. It showed wonderful growth, averaging 24 leaves to the stalk, and we were particularly impressed with the round shape of the leaves and the plant's wonderful root system. After assorting and handling this tobacco we bulked same and turned the bulks six times allowing the temperature to reach 116 degrees. After turning the sixth time we baled and placed in a warm room. We have no fault to



find with our experiment but on the other hand are very much pleased with it as far as we have gone. We had a local manufacturer use a little of it and the yield is good. He said he could wrap 1,200 cigars with two pounds.

*From A. H. Brown, Windsor Tobacco Growers, Inc., Windsor, Conn.*

My experience with the Round Tip Tobacco the season of 1919 and 1920, while in the nature of an experiment only so far as the growing and curing is concerned, has convinced me that it possesses many desirable qualities from the grower's standpoint. It seems to produce good results on what is called "sick land" owing perhaps to its stronger root growth, and is less affected by wind storms. The name Round Tip well describes the shape of the leaves and the lower fifteen vary but little in length. In 1919 I harvested from twenty-two to twenty-six leaves per stalk but in 1920 a hail storm destroyed the leaves on the upper part of the stalk after harvesting fifteen but the number was the same as in the previous season. From my experience would advise priming a little earlier than we do the Havana variety at least the lower part of the plant. In regard to the "appearance of the assorted and fermented leaves" the failure of a number of expert tobacco men to select a Sumatra wrapped cigar placed in a box with cigars wrapped with Round Tip is pretty good evidence that it possesses the qualities that the trade demands. While its taste has been adversely criticised many smokers have grave doubts as to their ability to detect it in any way.

*From Benjamin L. Haas, L. B. Haas & Co., Hartford, Conn.*

Our experience has been that this new type of tobacco requires a greater length of time to cure properly. There are features of this tobacco which necessitate the tobacco being in bulk a greater length of time, and it should lay in the bale, at least, two or three months before being manufactured. There are qualities in the Connecticut Round Tip which must eventually prove to be very profitable to the cigar manufacturers. We are of the opinion that this type of tobacco will become very popular after we understand how to handle it. It requires more time in curing process than any other type of tobacco we are now growing.

*From W. A. Haviland, The Haviland Tobacco Co., East Windsor, Hill, Conn.*

We grew one-half acre of Round Tip on land that had ceased to give us a satisfactory growth of "shade." On one side of this we grew Conn. Havana and on the other a Wisconsin resistant Havana No. 2901. This No. 2901 did very well, in fact much better than the Conn. Havana but the Round Tip throughout the entire season was larger and thriftier than either. Our experience leads us to believe that the Round Tip will yield well, even on "sick soils"; the shape of the leaf is good, the third priming is comparatively better than that of primed Havana and if a certain bitterness can be overcome in sweating Round Tip should be a very valuable tobacco.

*From The Farnham Tobacco Corp., Hartford, Conn.*

The seed of Round Tip tobacco which I used was rather poor and the general impression I had of the plants was that they were much slower in growing than either the Havana Seed or the Broadleaf. They seemed to be harder to push to the size necessary for planting. I planted the tobacco closely, about eleven thousand plants to the acre, and found the same tendency in regard to growth applied to the early-set plants as well as those which were in the beds, but when the tobacco became eight or ten inches high it grew rapidly and from that time on until maturity it grew faster than any other variety I had. The time for harvesting the

first leaves, in my judgment, is when the tobacco reaches the height of a man's shoulder, as I found when picking was delayed it became thick and of very poor color. Just before the tobacco buds out I found it ready to harvest up as high as the fourteenth leaf, and have decided next year to have all the good tobacco off, up to the eighteenth leaf by the time the plants break into flower. I found this tobacco more or less difficult to cure, the leaves having a tendency to stick together, due to the gum which the tobacco carries to a marked degree. The shape of the leaf is all that can be desired both as to length and width. Probably it would suit a larger number of customers if it did not grow as long as it does, but am perfectly satisfied in that regard. The only criticism I have to make is regarding the taste, which of course is a very important one, but I firmly believe that as time goes on it will be taken care of without trouble. The tobacco has a bitter taste, and although extreme temperatures have been tried in the fermentation, it has not been eliminated as yet. I believe that if the tobacco was taken down in very high case and put directly into the bulk and allowed to reach a very high temperature this trouble would be remedied. If this one factor can be taken care of and the tobacco made one which will appeal to the taste of the average smoker, I believe that it is by far the best thing that the Valley has ever had and should really make a new era in tobacco growing.

#### CONCLUSION.

It has not been our policy to say much about this tobacco as we expect it to win its own way. If it has real merit, as the preliminary trials show, it will be grown in so far as it proves profitable. In order to be appreciated it must be seen growing in the field and after sorting. Before the manufacturers will buy this tobacco they must appreciate what it is and know that it can be secured in quantity. The fact that a large number of cigars can be wrapped per pound of leaves is one forceful reason why they should give this new tobacco a careful trial.

This brief history and description is written to introduce the Connecticut Round Tip to the tobacco growers of this district in the belief that when it is tested on an adequate scale and becomes familiar to the buyer that it will be profitable for growers and manufacturers alike.



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