REPORT

ON THE

CULTURE AND CURING OF TOBACCO

IN THE

UNITED STATES.

BY

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SPECIAL AGENT.

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
CENSUS OFFICE,
Washington, D. C., October 15, 1881.

Hon. FRANCIS A. WALKER,
Superintendent of Census.

SIR: I have the honor to submit my report on the culture and curing of tobacco in the United States, together with special reports upon this industry in Arkansas, Florida, Illinois, Indiana, Kentucky, Louisiana, Maryland, Missouri, the New England states, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and Wisconsin.

The product of Florida and Louisiana, taken together, amounts to only 77,136 pounds, a very insignificant fraction of the total crop of the Union for 1879.

It is believed that the soil and the climate of Florida are more especially adapted to the growing of tobacco, with the fragrance and texture of Cuba tobacco, than those of any other part of the United States. Enough has been done in this state to show that with proper selection of varieties and intelligent culture and management a product of most excellent quality, closely approximating that of Cuba, can be grown upon a large extent of its territory.

The Perique of Louisiana is unlike any other tobacco in the world, in the peculiar manner of curing and handling and in flavor, but the product is small, and cannot probably be much increased in quantity.

These considerations have made it advisable to include the two states above named in the list of those upon which special reports are made.

To obtain the information necessary, a schedule, prepared in this office, embracing fifty-two distinct questions, was sent to growers of tobacco, and to such other persons as were presumed to possess knowledge on the subject, in every county of the tobacco-growing sections. Subsequently, a second and more elaborate series of questions was incorporated in a supplemental schedule, and distributed with especial care to persons who had positive knowledge of the subject-matter. This supplemental schedule embraced one hundred and seven distinct questions, the object of which was to elicit accurate and trustworthy information about all the details of the industry, from the sowing of the seed until the product passes into the hands of the merchant or manufacturer. It was found necessary to prepare a third series of questions, ten in number, which were submitted to correspondents who had already exhibited a desire to aid in the labor of investigation.

An extended correspondence was required to clear up obscurities and to compare and verify facts. Your special agent made personal examination of numerous districts of territory in which the plant is grown, obtaining in this way a more accurate knowledge of many important details than could possibly be derived from mere correspondence.

The investigation in its scope and character was unprecedented. Tobacco planters, of life-long experience, when asked to make answer as to certain details of the industry, required conference with others to reply intelligently. The examination of farm records, and not unfrequently laborious journeys of many miles, were

necessary to obtain the facts desired. The schedules as returned, almost without an exception, evidence a painstaking care to give full, clear, and accurate information. Special thanks are due to those whose prompt and carefully prepared replies form the basis of these reports.

Acknowledgments are due to Wallace Tappan for valuable data as to the management of tobacco in New York; to Frank R. Diffenderffer for special information as to the industry in Pennsylvania; to R. L. Ragland for an excellent account of tobacco culture in Virginia, Maryland, and West Virginia; to Thomas E. Browder, of Kentucky, for assistance in unraveling the intricacies of the various types grown in that state and in other states; to Professor G. C. Swallow for a description of the soils of Missouri, with their geological derivation; to Professor Goessmann, of Massachusetts Agricultural College, for an interesting account of the soils of the Connecticut valley; to Professor W. C. Kerr, of North Carolina, for a very suggestive report on the tobacco soils of that state; and to H. M. Doak, of Tennessee, for valuable assistance in the preparation of this report. Nor must I omit to mention the services of C. F. Vanderford, of Tennessee, in revising and condensing this report and comparing its statements with the original sources of information.

To Dr. S. S. Rathvon, of Pennsylvania; to M. H. Clark & Bro., of Clarksville, Tennessee; to Sawyer, Wallace & Co., and J. S. Gans & Co., of New York; to Gierke & Niemann, of Baltimore; to John Ott, of Richmond; to F. W. Ferrel, of Danville, Virginia; to Jacob Zimmer, of Miamisburg, Ohio; to C. & R. Dormitzer & Co., of Saint Louis, Mo.; to W. G. Mier, of Louisville, Ky.; and to E. H. Griest, of Cincinnati, Ohio, I am indebted for valuable suggestions.

Very respectfully, your obedient servant,

J. B. KILLEBREW.

CULTURE AND CURING OF TOBACCO IN THE UNITED STATES.

CHAPTER I.

STATISTICAL REVIEW OF THE TOBACCO CROP OF 1879.

Tobacco is grown to some extent in every state and territory of the Union, except possibly Utah, Montana, and Wyoming. As a staple crop it is produced in only sixteen states, in one of which (Arkansas) the industry is of recent origin. Of the total crop of the United States in 1879 (472,661,158 pounds) these sixteen states produced 469,816,203 pounds. The remainder (2,844,955 pounds) was grown upon small patches in all parts of the country, embracing a range of 22 degrees of latitude and 52 degrees of longitude, and exhibiting the remarkable facility with which the tobacco plant accommodates itself to varying conditions of climate and of soil.

A considerable quantity of tobacco is grown in Alabama, Georgia, Mississippi, South Carolina, and Texas. This product rarely finds its way even to primary markets. It is raised for home use, mostly cured by sun and air, and is consumed almost entirely for pipe-smoking. A very small part of it is stripped and made into twist for chewing, the manipulation being of the rudest character.

In Alabama the plant is grown in all but three counties. The average yield in 1879 was only 206 pounds per acre, an evidence of careless culture and wretched management. More than one-third of all the tobacco produced in the state was grown in the eight counties lying along the Tennessee river—163,264 pounds on 757 acres. In Madison county, upon 224 acres, was produced 36,356 pounds—162 pounds per acre. The very small yield can only be explained by stating the fact that the plant is raised only in patches, simply for a cheap article.

In Georgia three-fourths of the product was made in that part of the state north of Atlanta, though grown to a small extent in ninety-six of the one hundred and thirty-seven counties. The average yield for the state was only 235 pounds, that of Cherokee county (17,900 pounds on 35 acres, an average of 511 pounds) alone showing an approach to profitable production.

In Mississippi the average yield was 282 pounds. Of the total product more than nine-tenths was grown north of the latitude of Jackson, and of this not more than 5,000 pounds were produced along the Yazoo and in the country between that river and the Mississippi. The only county producing a yield indicating even moderately careful culture was De Soto, making 12,026 pounds on 27 acres—445 pounds per acre. The soils of De Soto, Marshall, Tippah, Tishomingo, and of all the northern and eastern counties, except the bottom lands, are well adapted to the production of a fair grade of tobacco, only needing manurial applications and good cultivation to produce remunerative crops.

In South Carolina three-fourths of the total product was grown in nine counties in the northwestern corner of the state. The average yield per acre in this section was 262 pounds, Oconee county making 4,775 pounds on 13 acres—367 pounds per acre. The plant is grown to a limited extent in 23 of the 33 counties of the state.

In Texas the average yield was 323 pounds. The plant was grown in 91 counties; but more than three-fourths of the total product was raised in 35 counties in the eastern part of the state, from Fannin county, on Red river, to Newton county, on the Sabine. Lamar county, in northeastern Texas, adjoining the Indian territory, made the largest yield: 15,003 pounds on 29 acres—an average of 517 pounds. Attempts made by German colonists to produce a marketable tobacco met with little success, the product being coarse and of inferior quality. This may have resulted from an improper selection of varieties, or possibly from unfavorable seasons. Extensive bodies of land well adapted to certain types of tobacco are found in the northern and eastern sections of Texas.

In New Jersey, upon soils and under conditions very much like those of southeastern Pennsylvania, tobacco is grown to some extent, Mercer county producing 69,810 pounds upon 60 acres in 1879, an average of 1,163 pounds, and Burlington county 94,487 pounds upon 76 acres, an average of 1,243 pounds per acre. Only 8,018 pounds were grown in other counties.

Michigan and Minnesota have succeeded well in growing a fair quality of tobacco for home consumption. In Michigan tobacco was planted to a limited extent in forty-seven counties, with an average yield of 494 pounds per acre. Lenawee county, on the Ohio border, reported a yield of 6,863 pounds on 10 acres; Monroe county, on lake Erie, in the southeast corner of the state, 5,757 pounds on 11 acres; and Van Buren county, in the southwest, 4,586 pounds on 9 acres. In Minnesota the average yield was 429 pounds, and the plant is grown in fifty counties. A yield of 643 pounds per acre was reported in Saint Louis county, in latitude 46° 30′—an evidence of the peculiar climatic conditions of this region, and of the wonderful capacity of the plant to adapt itself to a new habitation. In Houston county, in the southeastern corner of the state, on the Mississippi river, a yield of 6,253 pounds on 12 acres was reported; in Meeker county, a degree and a half farther north, 6,403 pounds were grown upon 12 acres.

In Iowa tobacco was grown in eighty-seven of ninety-nine counties. Seven counties—Marshall and Grundy, in the central portion of the state; Decatur, Wayne, and Davis, on the Missouri border; Jones, in the central eastern part; and Madison, in the central southern part—together produced 160,391 pounds, 38 per cent. of the total product of the state. The yield per acre (in Marshall 953 pounds, and in Grundy 1,478 pounds) indicates a favorable soil and evidences good culture. The average yield of the state is 608 pounds, exceeding that of Virginia 40 pounds per acre. Experiments made with the White Burley tobacco have given satisfactory results.

In Kansas tobacco was planted in sixty-two counties. Two counties, Franklin and Chautauqua, produced more than 10,000 pounds each, the former averaging 778 and the latter 567 pounds per acre. The product is red, coarse, and of inferior quality, and is used only for home consumption.

In Otoe county, Nebraska, there were grown 10,065 pounds of tobacco on 11 acres, an average of 915 pounds, but nothing is known of the character of the product.

California produced some bright yellow tobacco of good quality in 1874; but the industry has not grown in importance: an indication that the culture has not been profitable. San Benito county reported 59,100 pounds grown in 1879 on 64 acres, an average of 923 pounds per acre; Los Angeles 8,200 pounds, grown on 10 acres. So far as can be ascertained only a few small crops were grown in 1880. Replies received to inquiries as to tobacco-growers in San Benito state that no tobacco was planted in that county, and that only two persons were known to be engaged in its production in Santa Clara.

Tobacco is grown to a small extent in Arizona, New Mexico, Nevada, Colorado, Idaho, Dakota, Oregon, and Washington territory, but the characteristics and capabilities of the soils of this vast region are comparatively unknown.

The following tabular statement shows the acreage, production, yield per acre, value of crop in farmers' hands or in primary markets, value per hundred pounds, value per acre, cost per hundred pounds and per acre, and profit per hundred pounds and per acre of the tobacco crop of 1879 in the states producing it as a staple, with the rank of each state in acreage, production, etc. Kentucky, Ohio, Missouri, and Illinois produce, in separate districts of their respective territory, two or more distinct classes of tobacco, differing widely in the character and in the value of the cured product. The figures are given in the table for these districts separately:

RANK OF EACH STATE.							STATES.	Acreage.	Production (pounds).	Value of crop in farmers' hands.	Value per 100 pounds.	Value per acre.	Cost of production per 100 pounds.	Difference between cost and value per 100 pounds.
Production.	Acreage.	Total value.	Value per acre.	Value per 100 pounds.	Cost per 100 pounds.	Difference of cost and value.								
1	1	1	9	13	13	12	Kentucky	226,120	171,120,784	$11,089,782	$0 48	$49 04	$4 90	$1 58
							White Burley district	53,474	46,862,687	4,920,613	10 50	92 02	6 60	3 90
							Shipping districts	170,421	123,428,119	6,169,169	5 00	36 20	4 25	0 75
							Remainder (a)	2,225	820,978	.....	.....	.....	.....	.....
2	2	2	14	12	10	13	Virginia	140,791	79,988,868	5,399,249	6 75	38 35	5 33	1 42
3	7	3	4	5	5	3	Pennsylvania	27,566	36,943,272	4,636,380	12 55	168 19	8 42	4 13
4	6	5	7	9	9	10	Ohio	34,676	34,735,235	2,670,484	7 69	77 01	5 91	1 78
							White Burley district	11,255	10,826,683	1,299,202	12 00	115 43	7 70	4 30
							Spangled district	7,551	6,328,040	316,402	5 00	41 90	4 60	0 31
							Seed-leaf district	15,460	17,302,783	1,054,830	6 10	68 23	5 27	0 83
							Remainder (a)	410	277,720	.....	.....	.....	.....	.....
5	4	8	16	14	14	18	Tennessee	41,532	29,365,052	1,538,287	5 24	37 04	4 50	0 74
6	3	4	8	2	4	2	North Carolina	57,208	26,986,213	3,805,056	14 10	66 51	9 33	4 77
7	5	7	10	11	11	9	Maryland (b)	38,174	26,082,147	1,825,750	7 00	47 83	5 01	1 99
8	11	6	2	3	2	4	Connecticut	8,666	14,044,652	1,929,982	13 74	222 71	9 85	3 89
9	8	12	13	17	17	15	Missouri	15,521	12,015,657	600,256	5 00	38 67	3 58	1 42
							Manufacturing district	2,977	1,701,391	136,114	8 00	45 72	5 25	2 75
							Shipping district	12,544	10,314,266	464,142	4 50	37 00	3 41	1 09
10	10	9	6	8	12	5	Wisconsin	8,810	10,608,423	899,118	8 48	102 06	4 95	3 53
11	9	13	15	16	16	16	Indiana	11,955	8,872,842	443,642	5 00	37 11	3 00	1 40
12	13	10	5	7	6	6	New York	4,937	6,481,431	721,059	11 12	146 05	8 00	3 12
13	15	11	3	4	3	7	Massachusetts	3,358	5,369,436	683,575	12 73	203 57	9 72	3 01
14	12	14	17	15	15	17	Illinois	5,612	3,935,825	202,661	5 15	36 11	4 17	0 98
							Seed-leaf district	752	1,043,975	87,036	8 34	115 74	4 01	3 73
							Shipping district	4,860	2,891,850	115,625	4 00	23 79	4 00	.....
15	14	15	12	10	8	14	West Virginia	4,071	2,296,146	170,374	7 42	41 85	6 00	1 42
16	17	16	18	18	18	11	Arkansas (c)	2,064	970,220	41,547	4 28	20 13	2 70	1 58
24	30	0	1	6	1	8	New Hampshire (d)	88	170,843	20,501	12 00	232 97	10 00	2 00
32	29	0	11	1	7	1	Florida (d)	90	21,182	3,995	18 86	44 39	7 50	11 36

a Not included in the districts as defined in this report. Very little of this tobacco is marketed, being retained by the growers for home consumption.
b A small amount of seed-leaf is grown.
c Not more than one-half the product of Arkansas is marketed.
d New Hampshire and Florida are introduced into this table as indicating extremes of price for the one and of yield per acre for the other. The results of tobacco culture in these two states afford a curious study.

The tables on the following pages show the acreage and tobacco crop of the year 1879.

TOBACCO CROP OF THE UNITED STATES, BY COUNTIES (CENSUS OF 1880).

ALABAMA.

County.	Acres.	Pounds.	County.	Acres.	Pounds.	County.	Acres.	Pounds.
Total	2,197	452,426	Crenshaw	33	6,256	Macon	6	680
			Cullman	41	8,888	Madison	224	36,356
Autauga	8	1,844	Dale	2	250	Marengo	43	7,479
Baldwin	1	350	Dallas	13	1,678	Marion	44	8,285
Barbour	22	3,512	De Kalb	19	4,322	Marshall	48	9,719
Bibb	36	5,248						
Blount	48	9,912	Elmore	12	2,585	Monroe	11	2,496
			Etowah	47	11,333	Montgomery	2	318
Bullock	3	833	Fayette	37	7,184	Morgan	52	17,795
Butler	7	2,559	Franklin	17	3,087	Perry	24	4,522
Calhoun	29	6,592	Geneva	4	948	Pickens	51	8,037
Chambers	39	8,055						
Cherokee	82	14,318	Greene	41	6,829	Pike	5	764
			Hale	16	5,540	Randolph	44	11,521
Chilton	4	537	Henry	24	4,499	Russell	2	303
Choctaw	23	4,322	Jackson	99	17,127	Saint Clair	53	11,208
Clarke	19	2,349	Jefferson	55	17,649	Shelby	10	2,298
Clay	85	13,468						
Cleburne	85	15,113	Lamar	46	10,420	Sumter	13	2,027
			Lauderdale	105	19,870	Talladega	30	5,520
Coffee	5	1,403	Lawrence	105	27,276	Tallapoosa	21	5,350
Colbert	34	8,626	Lee	11	1,766	Tuscaloosa	20	5,568
Conecuh	7	1,210	Limestone	107	32,034	Walker	69	10,900
Coosa	28	5,258						
Covington	8	1,764				Wilcox	15	2,695
						Winston	3	571

ARIZONA.

Pima	1	600						

ARKANSAS.

Total	2,064	970,220	Greene	8	5,735	Perry	14	5,910
			Hempstead	12	3,600	Phillips	12	11,172
Arkansas	15	5,952	Hot Spring	23	5,823	Pike	16	4,899
Ashley	15	4,194	Howard	23	7,749	Poinsett	4	2,470
Baxter	13	6,470	Independence	44	21,726	Polk	10	2,640
Benton	547	395,982						
Boone	81	34,089	Izard	31	13,212	Pope	33	12,570
			Jackson	11	4,790	Prairie	9	4,860
Bradley	23	1,433	Jefferson	2	250	Pulaski	13	4,965
Calhoun	8	1,470	Johnson	27	7,941	Randolph	27	13,348
Carroll	28	16,540	La Fayette	10	3,217	Saint Francis	21	9,276
Clark	18	3,732						
Clay	21	11,390	Lawrence	8	4,600			
			Lee	12	2,962	Saline	24	9,418
Columbia	40	13,333	Lincoln	9	3,276	Scott	13	5,896
Conway	24	8,591	Little River	10	2,747	Searcy	18	8,984
Craighead	44	24,942	Logan	98	18,977	Sebastian	27	8,576
Crawford	13	1,912				Sevier	23	6,284
Crittenden	13	6,105	Lonoke	17	6,107			
Cross	19	4,406	Madison	45	25,156	Sharp	33	10,073
Dallas	19	8,410	Marion	11	3,321	Stone	11	5,4[illegible]0
Desha	9	3,057	Miller	4	1,335	Union	49	10,[illegible]15
Dorsey	18	4,421	Mississippi	4	1,537	Van Buren	27	10,469
Drew	12	5,608				Washington	51	26,357
			Monroe	5	2,590			
Faulkner	44	11,974	Montgomery	13	2,685			
Franklin	9	2,404	Nevada	6	1,997	White	48	28,184
Fulton	4	3,400	Newton	34	12,466	Woodruff	5	2,435
Garland	21	4,751	Ouachita	13	3,588	Yell	16	4,070
Grant	22	9,310						

CALIFORNIA.

Total	84	73,317	Humboldt	1	850	Nevada	1	1,000
			Los Angeles	10	8,200	San Benito	64	59,100
Butte	1	200	Mendocino	1	360	San Joaquin	2	900
Calaveras	1	500	Merced	1	500	Sonoma	1	607
Del Norte	1	1,040						

CONNECTICUT.

County.	Acres.	Pounds.	County.	Acres.	Pounds.	County.	Acres.	Pounds.
Total	8,666	14,044,652	Litchfield	1,586	2,211,151	New London	19	29,622
Fairfield	802	973,933	Middlesex	573	906,753	Tolland	405	600,634
Hartford	5,112	9,039,514	New Haven	167	215,195	Windham	2	1,850

DAKOTA.

Total	5	1,897	Bonhomme	3	1,057	Clay	2	840

DELAWARE.

Total	4	1,278	Kent	3	740	New Castle	1	538

DISTRICT OF COLUMBIA.

Washington	2	1,400						

FLORIDA.

Total	90	21,182	Jackson	4	834	Orange	1	500
			Jefferson	5	507	Santa Rosa	7	910
Alachua	11	980	Lafayette	4	1,180	Sumter	1	290
Calhoun	3	915	Leon	10	3,095	Suwannee	2	715
Clay	1	300	Madison	5	1,045	Walton	3	467
Columbia	3	785	Marion	13	1,258	Washington	2	415
Gadsden	14	6,677	Monroe	1	300			

GEORGIA.

Total	971	228,590	Floyd	20	5,069	Murray	10	2,375
			Forsyth	26	7,570	Newton	1	235
Appling	7	1,089	Franklin	22	4,266	Oconee	3	995
Baldwin	1	420	Fulton	5	1,590	Paulding	34	7,286
Bartow	30	9,744	Gilmer	7	2,362	Pickens	22	6,040
Bulloch	6	380	Gordon	14	4,653			
Calhoun	2	311	Greene	7	1,940	Pike	6	1,339
			Gwinnett	40	11,588	Polk	22	6,130
Carroll	15	2,792	Habersham	10	2,963	Rabun	18	3,643
Catoosa	7	2,337	Hall	45	8,291	Spalding	3	582
Chattahoochee	3	510	Hancock	7	1,929	Stewart	1	390
Chattooga	4	980	Haralson	35	10,138			
Cherokee	35	17,900	Harris	5	1,108	Sumter	1	470
			Hart	29	5,204	Talbot	4	710
Clarke	1	445	Heard	11	1,630	Taliaferro	1	205
Clinch	1	275	Henry	2	420	Taylor	3	1,000
Cobb	4	740	Houston	3	374	Telfair	1	215
Coffee	5	1,093	Jackson	14	4,088			
Colquitt	5	1,166	Jasper	1	277	Thomas	2	656
			Jones	5	1,923	Towns	46	3,127
Coweta	13	2,454	Lincoln	10	4,030	Troup	5	2,135
Crawford	3	766	Lumpkin	46	10,921	Union	43	7,707
Dade	3	435	McDuffie	2	355	Upson	3	311
Dawson	19	3,902	Macon	1	355			
Decatur	2	863	Madison	1	486	Walker	7	2,377
			Marion	3	645	Walton	5	1,957
De Kalb	6	1,676	Meriwether	23	5,372	Ware	1	235
Dooly	2	387	Milton	6	975	White	24	4,738
Elbert	5	1,020	Monroe	4	1,009	Whitfield	29	5,207
Fannin	53	9,807	Montgomery	5	500			
Fayette	11	2,537				Worth	9	1,780

IDAHO.

Nez Percé	2	400						

ILLINOIS.

County.	Acres.	Pounds.
Total	5,612	3,935,825
Adams	17	8,320
Alexander	13	2,150
Bond	14	4,060
Boone	1	1,050
Brown	8	3,137
Bureau	1	460
Calhoun	5	3,150
Carroll	24	33,505
Cass	9	4,460
Champaign	10	4,070
Christian	11	5,060
Clark	44	19,321
Clay	42	21,085
Clinton	12	4,657
Coles	36	13,850
Cook	21	20,100
Crawford	83	65,213
Cumberland	30	15,464
De Witt	6	3,490
Douglas	7	3,840
Edgar	35	15,326
Edwards	1	425
Effingham	31	14,078
Fayette	29	14,156
Franklin	184	98,072
Fulton	25	18,289
Gallatin	35	19,830
Greene	14	6,538
Grundy	3	880
Hamilton	382	244,600
Hancock	6	1,655
Hardin	4	2,810
Henry	2	795
Iroquois	30	9,825
Jackson	19	6,770
Jasper	77	37,317
Jefferson	43	22,101
Jersey	15	5,649
Jo Daviess	462	636,539
Johnson	366	188,294
Kankakee	3	1,550
Knox	3	1,778
La Salle	3	955
Lawrence	15	10,985
Lee	7	2,414
Livingston	2	685
Logan	2	710
McDonough	17	8,491
McHenry	4	3,160
McLean	2	845
Macon	6	2,140
Macoupin	22	9,742
Madison	11	6,825
Marion	38	20,117
Marshall	2	1,075
Massac	120	89,280
Menard	2	620
Mercer	1	345
Montgomery	21	8,625
Morgan	6	2,214
Moultrie	11	4,430
Ogle	2	1,335
Peoria	3	1,219
Perry	13	6,705
Piatt	2	1,580
Pike	10	12,053
Pope	102	63,013
Pulaski	76	46,800
Randolph	8	3,091
Richland	16	8,114
Rock Island	1	510
Saint Clair	1	485
Saline	1,070	785,897
Sangamon	4	2,652
Schuyler	4	1,665
Scott	6	3,043
Shelby	56	25,022
Stephenson	266	373,031
Tazewell	5	2,575
Union	6	2,155
Vermilion	18	8,405
Wabash	15	6,040
Warren	1	450
Washington	9	4,020
Wayne	42	28,865
White	47	37,780
Williamson	1,363	752,904
Woodford	2	1,030

INDIANA.

County.	Acres.	Pounds.
Total	11,955	8,872,842
Adams	7	2,635
Allen	19	17,093
Bartholomew	40	37,364
Blackford	3	1,100
Boone	25	16,912
Brown	251	190,265
Carroll	10	5,159
Cass	3	483
Clark	37	24,165
Clay	13	5,300
Clinton	15	7,979
Crawford	20	10,920
Daviess	35	20,280
Dearborn	1	200
Decatur	7	2,347
De Kalb	1	387
Delaware	5	2,231
Dubois	1,144	776,924
Elkhart	3	1,075
Fayette	9	6,450
Floyd	1	295
Fountain	25	8,404
Franklin	5	1,097
Fulton	5	1,814
Gibson	123	91,615
Grant	4	1,775
Greene	125	92,350
Hamilton	9	4,579
Hancock	6	3,110
Harrison	10	6,536
Hendricks	12	5,826
Henry	13	11,225
Howard	11	6,670
Huntington	6	3,035
Jackson	19	10,602
Jasper	7	4,627
Jay	4	2,110
Jefferson	33	23,821
Jennings	21	10,535
Johnson	5	3,935
Knox	7	4,945
Kosciusko	5	3,302
Lagrange	1	610
La Porte	2	735
Lawrence	20	11,542
Madison	9	4,745
Marion	5	2,256
Marshall	8	2,624
Martin	20	10,671
Miami	4	1,630
Monroe	28	16,237
Montgomery	13	6,249
Morgan	14	6,499
Newton	2	850
Noble	2	863
Ohio	1	1,000
Orange	57	41,330
Owen	42	21,090
Parke	26	11,582
Perry	232	164,480
Pike	974	687,674
Porter	3	1,417
Posey	43	25,035
Pulaski	11	6,060
Putnam	29	11,624
Randolph	21	8,601
Ripley	20	11,340
Rush	2	1,110
Saint Joseph	2	925
Scott	14	4,780
Shelby	47	40,791
Spencer	3,355	2,593,559
Starke	2	1,357
Steuben	1	360
Sullivan	48	22,125
Switzerland	79	79,298
Tippecanoe	7	3,045
Tipton	21	9,821
Union	4	2,325
Vanderburgh	9	4,355
Vermillion	10	5,565
Vigo	8	4,245
Wabash	29	20,280
Warren	13	5,850
Warrick	4,273	3,253,323
Washington	76	50,606
Wayne	248	268,024
Wells	9	6,402
White	6	4,215
Whitley	1	800

IOWA.

County.	Acres.	Pounds.	County.	Acres.	Pounds.	County.	Acres.	Pounds.
Total	692	420,477	Delaware	7	3,954	Marion	9	7,250
			Des Moines	3	1,427	Marshall	24	22,875
Adair	2	1,126	Dubuque	10	7,020	Mills	3	1,315
Adams	4	2,486	Fayette	7	3,404	Mitchell	3	1,534
Allamakee	8	4,531	Floyd	4	1,920	Monona	4	1,630
Appanoose	12	6,841	Franklin	4	2,630	Monroe	4	1,855
Audubon	3	1,542	Fremont	11	6,699	Montgomery	3	1,265
			Greene	1	631	Muscatine	2	899
Benton	3	1,590	Grundy	22	32,525	O'Brien	1	704
Black Hawk	3	1,280	Guthrie	6	3,210	Page	6	3,885
Boone	6	4,197	Hamilton	3	1,584	Palo Alto	1	425
Bremer	2	571	Hancock	1	263	Polk	3	1,725
Buchanan	3	1,952	Hardin	2	555	Pottawattamie	4	2,485
			Harrison	5	2,805	Poweshiek	7	3,430
Buena Vista	1	550	Henry	12	7,396	Ringgold	11	6,026
Butler	10	7,875	Howard	4	1,709	Sac	1	550
Calhoun	1	700	Iowa	8	4,746	Shelby	8	3,171
Cass	1	370	Jackson	8	3,222	Story	13	4,599
Cedar	4	3,468	Jasper	12	6,228	Tama	13	3,854
			Jefferson	17	3,155	Taylor	4	1,765
Cerro Gordo	8	5,520	Johnson	5	3,470	Union	5	1,020
Cherokee	8	5,000	Jones	31	31,507	Van Buren	22	9,173
Chickasaw	12	7,666	Keokuk	13	8,220	Wapello	8	5,175
Clarke	14	8,655	Kossuth	2	1,237	Warren	7	3,402
Clayton	10	4,135	Lee	15	4,256	Washington	5	3,040
			Linn	8	4,277	Wayne	31	19,835
Clinton	1	250	Louisa	3	1,070	Webster	7	1,462
Crawford	1	982	Lucas	11	7,000	Winnebago	7	9,692
Dallas	6	4,556	Madison	37	14,175	Winneshiek	3	1,513
Davis	10	12,186	Mahaska	11	5,795	Worth	6	2,816
Decatur	47	27,288						

KANSAS.

Total	353	191,669	Ellis	6	4,565	Montgomery	4	2,010
			Franklin	15	11,670	Morris	1	770
Allen	5	1,886	Greenwood	4	3,050	Nemaha	4	1,892
Anderson	3	1,425	Harper	1	300	Neosho	12	7,250
Atchison	10	6,088	Harvey	3	1,625	Osage	6	2,651
Barton	1	610				Osborne	1	585
Bourbon	8	2,655	Jackson	5	2,890	Ottawa	1	805
Brown	2	830	Jefferson	8	5,145	Phillips	2	1,458
Butler	7	4,785	Jewell	6	3,120	Pottawatomie	9	5,040
Chase	1	360	Johnson	5	2,460	Republic	12	7,090
Chautauqua	20	11,345	Kingman	4	5,000	Riley	2	295
Cherokee	7	2,285	Labette	8	4,837	Rush	9	5,575
Clay	4	1,700	Leavenworth	6	3,785	Sedgwick	1	320
Cloud	7	4,415	Lincoln	1	266	Shawnee	2	850
Coffey	4	2,565	Linn	6	5,560	Smith	3	2,412
Cowley	3	960	Lyon	6	2,925	Sumner	1	540
Crawford	7	4,580				Wabaunsee	3	1,495
Davis	1	705	McPherson	1	600	Washington	11	5,660
Dickinson	1	500	Marion	2	800	Wilson	7	4,005
Doniphan	9	8,335	Marshall	6	2,070	Woodson	5	3,045
Douglas	11	2,718	Miami	14	6,600			
Elk	9	5,216	Mitchell	2	675	Wyandotte	8	5,150

KENTUCKY.

Total	226,120	171,120,784	Bath	112	70,319	Boyle	13	6,262
			Bell	24	4,567	Bracken	7,159	6,126,635
Adair	1,142	696,748	Boone	1,706	1,770,058	Breathitt	54	8,160
Allen	283	160,355	Bourbon	19	17,601	Breckinridge	5,444	3,932,565
Anderson	43	22,436	Boyd	42	19,711	Bullitt	28	8,508
Ballard	5,195	3,760,743						
Barren	3,120	2,305,580						

KENTUCKY—Continued.

County.	Acres.	Pounds.	County.	Acres.	Pounds.	County.	Acres.	Pounds.
Butler	1,652	1,030,029	Henry	4,371	4,015,708	Muhlenburgh	3,856	2,731,716
Caldwell	4,272	3,215,602	Hickman	658	461,946	Nelson	14	4,722
Calloway	5,035	3,477,520	Hopkins	6,744	5,028,435	Nicholas	938	750,115
Campbell	801	704,527	Jackson	41	9,288	Ohio	4,767	3,187,999
Carroll	2,789	2,584,115	Jefferson	26	11,632	Oldham	365	295,860
Carter	59	22,403	Jessamine	6	1,355	Owen	7,097	5,765,351
Casey	125	67,449	Johnson	50	12,566	Owsley	20	9,005
Christian	18,475	12,577,574	Kenton	2,358	2,322,771	Pendleton	5,302	4,072,201
Clark	38	17,187	Knox	37	16,068	Pike	100	18,048
Clay	51	12,274	La Rue	593	350,350	Powell	38	8,549
Clinton	143	77,408	Laurel	68	23,202	Pulaski	106	30,516
Crittenden	2,368	1,647,936	Lawrence	101	23,392	Robertson	2,305	1,722,398
Cumberland	885	671,070	Lee	29	10,679	Rockcastle	52	17,181
Daviess	12,260	9,523,451	Leslie	11	2,956	Rowan	41	24,430
Edmonson	727	450,676	Letcher	23	2,907	Russell	119	75,469
Elliott	112	35,683	Lewis	1,516	1,036,996	Scott	210	160,535
Estill	58	18,386	Lincoln	97	35,214	Shelby	661	620,262
Fayette	2	702	Livingston	1,127	769,578	Simpson	2,240	1,668,055
Fleming	1,548	1,366,855	Logan	8,104	6,039,983	Spencer	41	28,185
Floyd	73	12,845	Lyon	1,855	980,403	Taylor	1,526	932,020
Franklin	1,208	880,361	McCracken	3,377	2,419,825	Todd	8,456	5,808,425
Fulton	537	410,337	McLean	4,934	3,729,616	Trigg	8,481	5,667,143
Gallatin	1,249	1,265,367	Madison	82	36,173	Trimble	2,070	1,658,307
Garrard	30	45,612	Magoffin	73	11,464	Union	3,634	2,996,293
Grant	2,436	2,130,215	Marion	171	101,980	Warren	3,565	2,605,388
Graves	11,318	8,901,434	Marshall	2,085	1,411,692	Washington	87	43,800
Grayson	1,779	1,065,244	Martin	30	6,484	Wayne	50	20,264
Green	2,345	1,417,070	Mason	5,405	6,261,385	Webster	6,447	4,740,082
Greenup	42	21,693	Meade	694	483,256	Whitley	10	3,498
Hancock	3,037	2,155,180	Menifee	30	18,368	Wolfe	50	20,520
Hardin	540	374,302	Mercer	20	14,360	Woodford	1	530
Harlan	2	790	Metcalfe	942	614,577			
Harrison	1,657	1,201,972	Monroe	332	187,141			
Hart	3,027	2,220,626	Montgomery	123	123,472			
Henderson	12,468	10,312,631	Morgan	60	9,931			

LOUISIANA.

	Acres.	Pounds.		Acres.	Pounds.		Acres.	Pounds.
Total	253	55,054	Iberia	2	516	Sabine	12	2,333
PARISH.			Jackson	9	2,480	Saint Helena	1	225
Avoyelles	30	5,262	La Fayette	24	2,334	Saint James	64	14,680
Bossier	4	1,005	Lincoln	6	2,060	Saint Landry	7	1,262
Caddo	3	1,268	Livingston	3	835	Saint Martin	7	775
Calcasieu	9	2,910				Tangipahoa	2	275
Caldwell	8	1,780				Union	2	665
Catahoula	1	370	Morehouse	1	380	Vermillion	5	1,112
De Soto	14	4,286	Natchitoches	1	405	Vernon	1	210
East Baton Rouge	1	400	Ouachita	1	445	Webster	8	1,155
Franklin	2	585	Point Coupée	1	500			
Grant	1	220	Red River	1	375	Winn	22	4,846

MAINE.

	Acres.	Pounds.		Acres.	Pounds.		Acres.	Pounds.
Sagadahoc	1	250						

MARYLAND.

	Acres.	Pounds.		Acres.	Pounds.		Acres.	Pounds.
Total	38,174	26,082,147	Carroll	162	137,171	Montgomery	1,053	800,036
COUNTY.			Cecil	43	59,036	Prince George's	9,037	6,575,246
Allegany	2	1,115	Charles	7,913	5,145,509	Saint Mary's	5,528	4,429,316
Anne Arundel	6,271	4,441,010	Frederick	429	370,840	Somerset	2	1,355
Baltimore	12	9,601	Garrett	4	1,927	Washington	5	7,050
Calvert	6,848	3,886,845	Harford	52	68,085	Wicomico	3	1,388
Caroline	1	1,422	Howard	208	138,930	Worcester	1	265

MASSACHUSETTS.

County.	Acres.	Pounds.	County.	Acres.	Pounds.	County.	Acres.	Pounds.
Total	3,358	5,369,436	Franklin	1,211	1,926,233	Hampshire	1,448	2,305,442
Berkshire	60	85,747	Hampden	638	1,051,474	Norfolk	1	540

MICHIGAN.

County.	Acres.	Pounds.	County.	Acres.	Pounds.	County.	Acres.	Pounds.
Total	170	83,969	Ingham	2	768	Muskegon	1	240
			Ionia	2	1,135	Newaygo	2	1,354
Allegan	4	1,983	Isabella	1	425	Oakland	2	345
Antrim	3	1,925	Jackson	5	3,171	Oceana	3	1,735
Barry	3	2,160	Kalamazoo	1	485	Ottawa	3	1,378
Bay	1	286						
Benzie	1	965	Kent	4	3,147	Saginaw	4	1,873
Berrien	6	2,126	Lapeer	5	2,608	Saint Clair	7	2,908
Branch	4	2,213	Leelanaw	5	1,937	Saint Joseph	2	1,376
Calhoun	3	730	Lenawee	10	6,863	Sanilac	4	2,257
Cass	6	3,460	Macomb	8	1,385	Shiawassee	3	2,225
Eaton	5	2,850						
Emmet	3	2,080	Manistee	1	287			
Genesee	2	540	Manitou	2	322	Tuscola	8	5,303
Gratiot	4	1,537	Midland	1	230	Van Buren	9	4,586
Hillsdale	9	2,189	Monroe	11	5,757	Washtenaw	2	963
Huron	4	1,554	Montcalm	1	550	Wayne	3	1,756

MINNESOTA.

County.	Acres.	Pounds.	County.	Acres.	Pounds.	County.	Acres.	Pounds.
Total	163	69,922	Goodhue	2	405	Ramsey	2	1,320
			Hennepin	3	966	Redwood	1	310
Anoka	3	1,025	Houston	12	6,253	Renville	2	377
Becker	1	333	Isanti	3	2,090	Rice	7	2,496
Benton	3	639	Kandiyohi	4	2,010	Saint Louis	3	1,930
Blue Earth	2	690				Scott	4	2,480
Brown	3	936	Le Sueur	6	3,401	Sherburne	5	2,817
Carver	8	2,661	Lincoln	1	212	Sibley	3	536
Chippewa	2	1,276	McLeod	4	1,573	Stearns	6	3,265
Chisago	1	442	Meeker	12	6,403	Steele	3	1,050
Cottonwood	2	610	Morrison	4	1,071	Swift	2	1,625
Dakota	1	390				Todd	1	706
Dodge	2	1,070	Mower	4	1,075	Waseca	3	1,512
Douglas	6	2,305	Nicollet	4	545	Washington	1	930
Faribault	1	300	Olmsted	1	355	Watonwan	1	430
Fillmore	7	2,525	Otter Tail	4	1,965	Winona	2	690
Freeborn	2	575	Polk	1	210	Wright	8	2,237

MISSISSIPPI.

County.	Acres.	Pounds.	County.	Acres.	Pounds.	County.	Acres.	Pounds.
Total	1,471	414,663	Itawamba	32	7,520	Noxubee	96	8,249
			Jasper	17	3,649	Oktibbeha	15	2,700
Adams	5	1,264	Jefferson	9	2,027	Panola	19	3,347
Alcorn	40	14,852	Jones	17	4,683	Pike	1	400
Amite	16	3,230	Kemper	16	6,716	Pontotoc	41	15,207
Attala	32	10,711				Prentiss	38	13,406
Benton	33	10,634	La Fayette	21	5,803	Rankin	20	5,798
Bolivar	1	600	Lauderdale	27	7,586	Scott	34	11,044
Calhoun	27	7,926	Lawrence	35	5,288	Simpson	4	1,329
Carroll	7	2,460	Leake	56	13,680	Smith	20	10,492
Chickasaw	83	10,926	Lee	45	11,109	Sumner	27	5,732
Choctaw	38	12,300				Tallahatchie	9	1,924
Claiborne	3	1,010	Le Flore	3	907	Tate	6	1,030
Clarke	28	8,870	Lincoln	32	5,442	Tippah	71	25,127
Clay	29	11,750	Lowndes	6	1,734	Tishomingo	44	13,526
Copiah	22	5,449	Madison	28	10,966	Union	25	7,578
Covington	13	4,743	Marion	2	437	Warren	1	207
De Soto	27	12,026	Marshall	33	9,733	Wayne	12	3,204
Franklin	13	3,082	Monroe	90	16,864	Wilkinson	2	628
Grenada	7	2,113	Montgomery	26	6,853	Winston	27	9,489
Hinds	17	3,568	Neshoba	27	6,091	Yalobusha	14	5,323
Holmes	11	4,321	Newton	20	8,525	Yazoo	8	1,300

MISSOURI.

County.	Acres.	Pounds.	County.	Acres.	Pounds.	County.	Acres.	Pounds.
Total	15,521	12,015,657	Franklin	147	94,154	Osage	66	52,010
			Gasconade	16	8,024	Ozark	20	19,577
Adair	37	26,838	Gentry	23	16,800	Pemiscot	3	2,190
Andrew	16	12,257	Greene	40	16,528	Perry	16	6,694
Atchison	18	12,098	Grundy	24	11,755	Pettis	26	13,719
Audrain	34	20,477	Harrison	74	42,952	Phelps	40	18,706
Barry	63	42,500	Henry	20	9,543	Pike	653	408,473
Barton	16	10,135	Hickory	13	4,562	Platte	11	6,260
Bates	28	15,649	Holt	23	18,397	Polk	44	24,575
Benton	19	10,390	Howard	795	604,704	Pulaski	22	10,910
Bollinger	20	9,189	Howell	18	9,904	Putnam	57	34,143
Boone	66	40,056	Iron	7	2,021	Ralls	12	6,683
Buchanan	23	12,035	Jackson	56	41,986	Randolph	889	701,052
Butler	28	12,530	Jasper	4	2,420	Ray	41	22,844
Caldwell	4	1,939	Jefferson	9	5,861	Reynolds	14	6,867
Callaway	1,175	570,231	Johnson	25	13,625	Ripley	20	8,957
Camden	11	4,838	Knox	42	20,983	Saint Charles	90	52,452
Cape Girardeau	33	17,222	Laclede	17	8,533	Saint Clair	22	12,101
Carroll	670	639,325	La Fayette	22	16,060	Saint François	36	15,088
Carter	5	3,595	Lawrence	19	10,305	Sainte Genevieve	18	7,320
Cass	7	2,310	Lewis	8	4,330	Saint Louis	4	1,388
Cedar	53	36,683	Lincoln	498	308,090	Saline	633	540,175
Chariton	4,674	4,384,924	Linn	420	382,133	Schuyler	43	32,252
Christian	11	7,601	Livingston	322	305,073	Scotland	26	15,284
Clark	13	6,278	McDonald	23	11,045	Scott	30	16,846
Clay	3	1,243	Macon	865	728,584	Shannon	9	3,370
Clinton	20	13,972	Madison	27	10,640	Shelby	148	126,507
Cole	11	5,430	Maries	7	4,135	Stoddard	79	54,182
Cooper	20	21,252	Marion	51	40,060	Stone	25	5,626
Crawford	18	7,400	Mercer	57	29,770	Sullivan	59	30,200
Dade	10	5,422	Miller	27	13,543	Taney	8	3,685
Dallas	18	11,219	Mississippi	23	21,010	Texas	20	10,745
Daviess	25	13,330	Moniteau	17	7,810	Vernon	20	12,122
De Kalb	10	6,550	Monroe	527	421,232	Warren	155	86,672
Dent	14	9,075	Montgomery	283	181,761	Washington	34	8,995
Douglas	28	13,139	Morgan	32	8,660	Wayne	33	14,005
Dunklin	26	14,051	New Madrid	29	14,243	Webster	42	38,885
			Newton	29	13,404	Worth	7	3,009
			Nodaway	45	23,874	Wright	57	40,588
			Oregon	51	19,530			

NEBRASKA.

Total	101	57,079	Douglas	2	1,700	Otoe	11	10,065
			Fillmore	1	248	Pawnee	3	1,455
Antelope	1	340	Franklin	1	750	Platte	1	270
Boone	2	1,380	Furnas	1	445	Red Willow	1	225
Burt	4	1,835	Gage	4	2,740	Richardson	9	4,861
Cass	9	3,925	Hamilton	2	1,475			
Cedar	1	380	Harlan	1	670			
			Holt	5	2,540	Saline	4	2,467
			Jefferson	2	1,145	Saunders	3	1,110
			Johnson	1	510	Sherman	1	620
						Thayer	1	400
Clay	2	890	Kearney	1	446	Washington	1	944
Cuming	2	600	Lancaster	3	1,287			
Custer	1	425	Merrick	1	575			
Dawson	6	2,600	Nemaha	4	2,100	Webster	5	3,886
Dixon	1	300	Nuckolls	1	480	York	2	1,899

NEVADA.

Washoe	2	1,500						

NEW HAMPSHIRE.

Total	88	170,843	Coos	1	1,000	Sullivan	15	28,625
Cheshire	72	141,218						

NEW JERSEY.

County.	Acres.	Pounds.	County.	Acres.	Pounds.	County.	Acres.	Pounds.
Total	152	172,315	Gloucester	2	570	Passaic	1	318
			Hunterdon	2	590	Salem	1	560
Bergen	1	250	Mercer	60	69,810	Sussex	1	400
Burlington	76	94,487	Morris	2	1,700	Warren	1	330
Essex	5	3,300						

NEW MEXICO.

Taos	7	890						

NEW YORK.

Total	4,937	6,481,431	Greene	1	355	Otsego	3	2,183
			Hamilton	2	710	Putnam	42	55,399
Allegany	2	800	Herkimer	1	340	Saint Lawrence	4	1,649
Broome	53	67,510	Jefferson	5	1,850	Saratoga	2	840
Cattaraugus	2	823	Lewis	3	1,072	Schenectady	6	6,850
Cayuga	299	407,769				Schoharie	2	1,014
Chautauqua	4	1,783	Livingston	1	457	Schuyler	7	8,250
Chemung	1,102	1,571,885	Madison	53	50,064	Steuben	698	904,125
Chenango	16	12,049	Monroe	12	20,250	Suffolk	2	495
Clinton	20	7,430	Niagara	5	2,705	Sullivan	3	1,099
Columbia	4	5,670	Oneida	8	1,692	Tioga	25	20,433
Cortland	1	283				Tompkins	102	115,771
Delaware	3	1,612	Onondaga	1,760	2,346,257	Ulster	1	500
Duchess	279	407,156	Ontario	1	587	Warren	1	615
Erie	2	1,212	Orange	9	5,350	Wayne	13	14,710
Essex	1	684	Orleans	98	110,385	Westchester	3	1,825
Franklin	10	4,084	Oswego	256	312,341	Yates	1	418

NORTH CAROLINA.

Total	57,208	26,986,213	Gates	3	620	Pender	3	690
			Graham	4	1,095	Perquimans	1	400
Alamance	1,688	695,013	Granville	8,941	4,006,358	Person	5,808	3,012,387
Alexander	28	11,799	Greene	8	1,955	Pitt	3	598
Alleghany	8	2,049	Guilford	910	422,716	Polk	4	931
Anson	11	4,880						
Ashe	60	11,064	Halifax	21	8,487	Randolph	45	11,101
Beaufort	17	5,263	Harnett	32	9,510	Richmond	6	1,305
Bertie	2	554	Haywood	100	39,516	Robeson	2	577
Bladen	6	1,040	Henderson	29	4,087	Rockingham	9,332	4,341,259
Brunswick	7	2,502	Hertford	7	2,160	Rowan	216	115,251
Buncombe	947	475,428						
Burke	58	20,079	Hyde	4	517	Rutherford	38	12,908
Cabarrus	12	3,289	Iredell	465	242,714	Sampson	28	14,352
Caldwell	75	25,384	Jackson	21	4,801	Stanley	8	1,735
Carteret	1	303	Johnston	36	12,881	Stokes	4,690	2,131,161
Caswell	10,174	4,336,664	Jones	1	250	Surry	2,136	905,250
Catawba	49	26,380	Lenoir	45	13,500			
Chatham	141	49,837	Lincoln	15	6,085	Swain	11	1,166
Cherokee	42	8,411	McDowell	100	30,541	Transylvania	10	3,853
Chowan	1	398	Macon	46	9,154	Union	9	3,467
Clay	25	5,771	Madison	1,626	807,911	Wake	230	94,354
Cleaveland	26	5,122	Martin	1	211	Warren	1,759	992,256
Columbus	15	3,866	Mecklenburg	10	2,291			
Craven	6	2,732	Mitchell	77	29,647	Washington	4	685
Davidson	484	260,538	Montgomery	54	14,370	Watauga	23	7,210
Davie	1,205	633,339	Moore	70	15,724	Wayne	198	102,979
Duplin	16	4,655	Nash	27	7,562	Wilkes	110	33,211
Edgecombe	3	550	Northampton	36	20,484	Wilson	17	8,745
Forsyth	1,693	822,788	Onslow	2	730			
Franklin	118	58,932	Orange	2,323	1,178,732	Yadkin	425	177,595
Gaston	7	2,180	Pamlico	12	1,520	Yancey	84	33,898

OHIO.

County.	Acres.	Pounds.
Total	34,676	34,735,235
Adams	1,179	1,054,076
Allen	4	5,125
Ashland	5	6,450
Ashtabula	11	12,325
Athens	167	140,812
Auglaize	13	8,751
Belmont	1,206	1,047,926
Brown	6,181	6,244,956
Butler	500	554,275
Carroll	1	535
Champaign	11	2,347
Clarke	45	64,642
Clermont	[illegible]	3,524,151
Clinton	36	33,098
Columbiana	21	1,850
Coshocton	6	2,374
Crawford	6	1,985
Cuyahoga	1	254
Darke	1,778	2,244,576
Defiance	145	151,270
Delaware	4	2,464
Fairfield	4	1,295
Fayette	6	3,631
Franklin	4	640
Fulton	3	2,121
Gallia	163	99,170
Geauga	4	2,405
Greene	538	591,748
Guernsey	435	372,309
Hamilton	21	15,200
Hancock	2	1,255
Hardin	7	2,302
Harrison	11	14,180
Henry	12	10,625
Highland	119	95,899
Hocking	10	4,125
Holmes	3	1,103
Jackson	6	2,425
Jefferson	1	650
Knox	2	2,601
Lake	15	21,500
Lawrence	36	23,906
Licking	7	3,075
Logan	4	2,835
Lorain	1	510
Lucas	1	551
Madison	4	849
Mahoning	2	1,380
Marion	1	580
Medina	44	55,502
Meigs	6	3,729
Mercer	13	7,900
Miami	499	640,223
Monroe	2,037	1,571,008
Montgomery	8,604	9,314,372
Morgan	872	766,872
Morrow	6	2,347
Muskingum	3	1,067
Noble	1,957	1,655,156
Paulding	15	7,611
Perry	23	12,871
Pickaway	9	5,180
Pike	14	8,588
Preble	1,895	2,225,861
Putnam	4	1,077
Richland	1	750
Ross	10	3,670
Scioto	20	10,633
Seneca	1	1,283
Shelby	110	83,130
Stark	6	9,200
Summit	1	2,472
Trumbull	1	770
Tuscarawas	1	448
Union	5	4,111
Van Wert	9	6,776
Vinton	77	62,627
Warren	1,001	1,125,254
Washington	733	751,744
Wayne	52	65,344
Williams	2	932
Wood	1	450
Wyandot	4	3,165

OREGON.

Total	43	17,325
Benton	1	879
Clackamas	8	2,640
Clatsop	1	275
Coos	1	671
Douglas	2	785
Jackson	6	3,625
Josephine	1	1,075
Lane	17	5,149
Linn	3	1,389
Tillamook	2	305
Yam Hill	1	942

PENNSYLVANIA.

Total	27,566	36,943,272
Adams	58	56,107
Allegheny	6	2,360
Armstrong	5	2,730
Beaver	5	2,627
Bedford	4	2,793
Berks	220	240,027
Bradford	132	173,142
Bucks	934	1,160,970
Butler	5	4,224
Cambria	5	2,454
Cameron	7	6,550
Centre	22	27,733
Chester	487	633,632
Clarion	1	454
Clearfield	1	490
Clinton	680	993,401
Columbia	21	3,196
Crawford	6	3,297
Cumberland	346	448,118
Dauphin	544	614,362
Delaware	11	12,347
Elk	2	1,347
Erie	4	2,730
Fayette	8	5,575
Forest	1	283
Franklin	77	68,005
Fulton	4	3,172
Greene	12	7,333
Huntingdon	12	14,045
Indiana	15	10,181
Jefferson	2	1,378
Juniata	78	80,609
Lackawanna	2	563
Lancaster	16,992	23,946,326
Lawrence	3	1,080
Lebanon	624	703,488
Lehigh	31	35,620
Luzerne	29	35,736
Lycoming	319	463,686
McKean	1	335
Mercer	9	4,110
Mifflin	49	55,025
Monroe	1	425
Montgomery	16	20,930
Montour	61	58,179
Northampton	8	4,073
Northumberland	488	539,541
Perry	52	49,120
Philadelphia	52	49,000
Pike	2	513
Potter	4	2,872
Schuylkill	9	6,704
Snyder	98	115,060
Somerset	2	906
Sullivan	1	470
Susquehanna	2	1,530
Tioga	234	292,198
Union	90	109,414
Venango	1	421
Warren	1	730
Washington	3	2,065
Wayne	2	783
Westmoreland	54	62,096
Wyoming	35	39,875
York	4,567	5,753,766

RHODE ISLAND.

County.	Acres.	Pounds.	County.	Acres.	Pounds.	County.	Acres.	Pounds.
Providence	2	785						

SOUTH CAROLINA.

Total	169	45,679	Edgefield	9	1,768	Oconee	13	4,775
			Greenville	33	9,638	Orangeburgh	1	310
Abbeville	16	3,289	Horry	19	7,251	Pickens	10	2,400
Aiken	3	800	Lancaster	2	298	Spartanburgh	12	2,153
Anderson	14	3,539	Laurens	8	2,709	Sumter	1	352
Charleston	1	250	Marion	7	1,085	Union	9	1,949
Darlington	2	929	Newberry	2	645	York	7	1,539

TENNESSEE.

Total	41,532	29,365,052	Hamblen	81	34,930	Meigs	13	4,159
			Hamilton	12	4,045	Monroe	95	11,810
			Hancock	51	7,541	Montgomery	11,591	8,206,461
Anderson	26	7,878	Hardeman	84	23,102	Moore	17	7,425
Bedford	51	21,649	Hardin	88	26,300	Morgan	20	6,537
Benton	389	278,721				Obion	1,432	1,133,472
Bledsoe	16	5,373	Hawkins	100	42,781	Overton	64	42,947
Blount	21	4,362	Haywood	62	32,991	Perry	20	8,981
Bradley	23	6,110	Henderson	123	43,446	Polk	26	5,295
Campbell	23	6,077	Henry	2,726	1,902,979	Putnam	94	75,384
Cannon	43	19,808	Hickman	51	21,858	Rhea	17	5,347
Carroll	100	60,167				Roane	22	6,165
Carter	37	12,932	Houston	306	206,026	Robertson	6,016	4,342,588
Cheatham	1,343	950,352	Humphreys	33	21,326	Rutherford	47	24,199
Claiborne	43	12,736	Jackson	201	233,072	Scott	35	5,935
Clay	198	67,776	James	9	2,190	Sequatchie	8	2,149
Cocke	45	13,161	Jefferson	19	6,045	Sevier	30	9,819
Coffee	48	21,190				Shelby	41	15,178
Crockett	35	16,099	Johnson	26	9,935	Smith	1,819	1,799,981
Cumberland	15	2,585	Knox	45	16,366	Stewart	2,848	1,876,773
Davidson	41	19,690	Lake	5	1,750	Sullivan	207	70,009
Decatur	50	31,759	Lauderdale	58	36,952	Sumner	495	280,326
De Kalb	55	26,514	Lawrence	31	15,169	Tipton	46	16,139
Dickson	775	494,428	Lewis	7	3,870	Trousdale	1,041	882,895
Dyer	364	313,365	Lincoln	39	17,948	Unicoi	65	23,022
Fayette	66	20,901	Loudon	24	6,517	Union	15	4,026
Fentress	23	7,867	McMinn	2	615	Van Buren	14	6,470
Franklin	61	25,061	McNairy	95	34,863	Warren	77	28,455
Gibson	56	32,086	Macon	1,212	893,592	Washington	49	27,312
Giles	66	26,814	Madison	67	32,419	Wayne	63	16,844
Grainger	48	13,121	Marion	22	6,944	Weakley	4,770	3,596,707
Greene	77	26,192	Marshall	47	24,583	White	72	31,094
Grundy	2	430	Maury	72	36,384	Williamson	197	134,196
						Wilson	361	306,479

TEXAS.

Total	685	221,283	Camp	3	635	Freestone	16	5,943
			Cass	9	2,219	Gillespie	1	217
			Cherokee	13	4,715	Gonzales	1	280
Anderson	13	5,140	Collin	1	270	Grayson	29	7,655
Angelina	23	6,495	Colorado	4	631	Gregg	5	905
Austin	8	2,049	Comal	2	505	Grimes	7	2,297
Bastrop	5	1,287	Cooke	8	3,500	Guadalupe	1	350
Bowie	12	3,798	Delta	8	4,085	Hardin	3	795
			Denton	1	255	Harris	5	1,584
			De Witt	3	700	Harrison	9	3,691
Brazoria	2	610	El Paso	1	225	Hayes	1	200
Brazos	4	1,865	Falls	4	1,142	Henderson	14	3,800
Burleson	4	1,510	Fannin	23	8,495	Hopkins	25	9,057
Burnet	1	200	Fayette	4	1,720	Houston	14	4,898
Calhoun	3	450	Franklin	2	1,165	Hunt	11	4,044

TEXAS—Continued.

County.	Acres.	Pounds.	County.	Acres.	Pounds.	County.	Acres.	Pounds.
Jasper	30	2,800	Nacogdoches	24	8,124	Smith	12	5,059
Kaufman	2	700	Newton	9	2,622	Tarrant	1	480
Kendall	2	755	Panola	9	3,000	Titus	6	2,410
Lamar	29	15,003	Polk	1	797	Trinity	18	5,273
Lavaca	8	3,632	Rains	11	4,645	Tyler	10	1,590
Leon	2	932				Upshur	23	5,822
Liberty	2	690	Red River	7	1,945	Van Zandt	14	3,217
Limestone	12	6,869	Robertson	4	1,502	Victoria	3	350
Madison	6	900	Rusk	7	1,635	Walker	8	2,756
Marion	3	520	Sabine	4	1,105	Waller	1	600
Matagorda	2	1,162	San Augustine	21	4,231	Washington	7	4,134
Montgomery	13	2,635	San Jacinto	5	1,406	Wharton	2	650
Morris	7	2,712	Shelby	33	9,313	Wood	24	9,025

VERMONT.

Total	84	131,432	Chittenden	2	886	Washington	1	206
			Franklin	1	393	Windham	74	127,219
Addison	1	440	Lamoille	1	1,025	Windsor	1	200
Bennington	1	303	Rutland	2	760			

VIRGINIA.

Total	140,791	79,988,808	Giles	199	122,056	Page	8	5,237
			Gloucester	25	13,829	Patrick	1,645	714,073
Albemarle	3,216	2,466,972	Goochland	1,052	656,624	Pittsylvania	22,680	12,271,593
Alleghany	11	6,862	Grayson	32	10,485	Powhatan	1,479	914,132
Amelia	3,524	1,726,317	Greene	529	382,402	Prince Edward	4,357	2,462,326
Amherst	4,610	3,111,801						
Appomattox	3,198	1,965,937	Greensville	11	5,075	Prince George	27	20,500
			Halifax	15,042	7,653,842	Prince William	5	1,292
Augusta	4	1,827	Hanover	1,489	1,064,735	Pulaski	211	122,776
Bath	8	5,815	Henrico	106	101,155	Rappahannock	12	3,330
Bedford	9,174	5,315,500	Henry	6,336	2,955,036	Richmond	14	7,322
Bland	10	4,164						
Botetourt	1,187	742,953	Highland	1	567	Roanoke	1,022	585,410
Brunswick	2,734	1,538,101	Isle of Wight	5	420	Rockbridge	517	360,065
Buchanan	10	2,186	King and Queen	30	14,711	Rockingham	14	9,564
Buckingham	3,973	2,136,529	King George	20	9,775	Russell	34	11,405
Campbell	6,446	3,027,333	King William	97	63,065	Scott	135	49,659
Caroline	1,264	991,437						
			Lee	54	15,286			
Carroll	83	29,375	Loudoun	6	2,454	Shenandoah	5	3,106
Charlotte	5,922	3,226,448	Louisa	2,978	1,921,488	Smyth	40	17,850
Chesterfield	804	523,696	Lunenburg	3,409	1,976,265	Southampton	5	775
Clarke	10	9,555	Madison	132	101,697	Spotsylvania	554	396,668
Craig	58	38,540				Stafford	7	4,280
			Mecklenburg	6,439	3,436,408			
Culpeper	6	2,470	Middlesex	4	1,512			
Cumberland	2,979	1,814,674	Montgomery	1,333	654,496	Sussex	5	4,715
Dinwiddie	2,752	1,540,395	Nansemond	1	215	Tazewell	48	18,357
Essex	13	5,015	Nelson	3,497	2,660,295	Warren	2	2,303
Fairfax	4	5,370				Washington	679	353,457
			New Kent	14	11,860	Westmoreland	14	13,450
Fauquier	17	6,077	Northampton	12	1,740			
Floyd	827	342,250	Northumberland	11	6,745	Wise	6	3,308
Fluvanna	1,391	917,561	Nottaway	2,911	1,582,670	Wythe	16	7,383
Franklin	6,862	3,529,833	Orange	372	260,715	York	5	1,061
Frederick	1	705						

WASHINGTON TERRITORY.

Total	8	6,930	Pierce	6	6,165	Whatcom	1	355
King	1	410						

WEST VIRGINIA.

County.	Acres.	Pounds.	County.	Acres.	Pounds.	County.	Acres.	Pounds.
Total	4,071	2,296,146	Harrison	18	10,131	Preston	10	5,255
			Jackson	259	193,146	Putnam	322	193,864
Barbour	25	10,737	Jefferson	2	510	Raleigh	32	10,795
Berkeley	2	1,471	Kanawha	329	186,713	Randolph	22	5,738
Boone	26	6,057	Lewis	26	8,445	Ritchie	185	138,461
Braxton	13	5,620	Lincoln	231	128,417			
Brooke	1	700	Logan	78	7,813	Roane	30	11,967
			McDowell	21	5,342	Summers	230	120,015
			Marion	25	5,250	Taylor	4	1,008
Cabell	140	89,757	Marshall	12	4,713	Tyler	207	147,096
Calhoun	22	9,222	Mason	54	25,685	Tucker	7	2,001
Clay	20	5,640	Mercer	356	150,813			
Doddridge	30	18,608	Mineral	3	1,826	Upshur	22	7,300
Fayette	397	253,460	Monongalia	22	11,330	Wayne	135	70,539
			Monroe	154	70,590	Webster	9	2,751
Gilmer	43	23,133	Morgan	1	515	Wetzel	197	136,781
Grant	4	1,723	Nicholas	46	15,610	Wirt	108	74,078
Greenbrier	12	5,936	Pendleton	5	1,741			
Hampshire	11	6,787	Pleasants	18	14,562	Wood	103	72,062
Hardy	3	1,555	Pocahontas	8	4,095	Wyoming	31	7,502

WISCONSIN.

Total	8,810	10,608,423	Grant	37	34,350	Polk	12	3,694
			Green	122	117,571	Portage	2	692
Adams	13	9,685	Green Lake	6	2,249	Richland	10	11,814
Barron	7	3,565	Iowa	6	3,127	Rock	3,803	4,643,870
Brown	5	1,728	Jackson	4	1,904	Saint Croix	4	742
Buffalo	5	1,393	Jefferson	209	262,501			
Burnett	2	350	Juneau	9	4,734	Sauk	5	2,316
			Kewaunee	4	2,096	Shawano	3	810
			La Crosse	1	800	Sheboygan	2	455
Calumet	1	225	La Fayette	10	13,800	Taylor	2	875
Chippewa	7	4,002	Langlade	1	480	Trempealeau	9	4,847
Clark	5	2,575	Lincoln	1	344			
Columbia	5	2,630	Marathon	7	2,984	Vernon	39	35,170
Crawford	28	14,645	Marinette	2	836	Walworth	13	9,360
			Marquette	5	2,612	Washington	3	447
						Waukesha	2	2,000
Dane	4,331	5,371,242	Monroe	4	1,872	Waupaca	8	5,290
Dodge	18	6,440	Oconto	3	1,524			
Dunn	5	3,183	Outagamie	2	868	Waushara	3	1,090
Eau Claire	3	1,135	Pepin	9	2,878	Winnebago	3	2,271
Fond du Lac	1	441	Pierce	3	752	Wood	2	1,135

RECAPITULATION BY STATES.

The United States	638,841	472,661,158	Kentucky	220,120	171,120,784	North Carolina	57,208	26,980,213
			Louisiana	253	55,954	Ohio	34,076	34,735,235
Alabama	2,197	452,426	Maine	1	250	Oregon	43	17,325
Arizona	1	600	Maryland	38,174	26,082,147	Pennsylvania	27,506	36,943,272
Arkansas	2,004	970,220	Massachusetts	3,358	5,369,436	Rhode Island	2	785
California	84	73,317						
Connecticut	8,666	14,044,652	Michigan	170	83,969			
Dakota	5	1,897	Minnesota	163	69,922	South Carolina	169	45,679
Delaware	4	1,278	Mississippi	1,471	414,663	Tennessee	41,532	29,365,052
District of Columbia	2	1,400	Missouri	15,521	12,015,657	Texas	685	221,283
Florida	90	21,182	Nebraska	101	57,979	Vermont	84	131,432
Georgia	971	228,590				Virginia	140,791	79,988,868
Idaho	2	400	Nevada	2	1,560			
Illinois	5,612	3,935,825	New Hampshire	88	170,843			
Indiana	11,055	8,872,842	New Jersey	152	172,315	Washington	8	6,930
Iowa	692	420,477	New Mexico	7	890	West Virginia	4,071	2,296,146
Kansas	333	191,660	New York	4,937	6,481,431	Wisconsin	8,810	10,608,423

CHAPTER II.

CLASSIFICATION—TYPE MAPS—VARIETIES OF THE TOBACCO PLANT.

CLASSIFICATION.

The various types of tobacco produced in different sections are treated locally in the districts in which they are severally grown. They are here grouped into a distinct classification, according to differences in character and use, the modes and forms of manufacture, and of consumption. While each distinct soil formation gives peculiar qualities to the plant as to texture, color, flavor, and general structure, these may be modified by culture and curing into still greater variations of character. A knowledge of what quality or property is wanting may enable the grower so to apply his fertilizers, or to manage the curing process, as greatly to enhance the value of the product; and a want of this knowledge may also cause the grower to destroy, by imperfect cultivation or curing, the very quality which gives the product its highest value.

Commercial circles recognize classes, types, and grades. The basis of a class is its adaptation to a certain purpose; the basis of a type is the combination of certain qualities or properties in the leaf, as color, strength, elasticity, body, flavor, etc., or in the methods of curing, as sun-cured, air-cured, flue-cured, etc. Grades represent the different degrees of excellence in a type, as low, medium, good, or fillers, binders, and wrappers. In the yellow fancy type there may be ten or twelve of these grades, while in some heavy, coarse shipping tobacco only two are made, leaf and lugs. A district may produce only one type, which may be referred to several classes. The yellow tobacco, for instance, is one type, yet it is used both for smoking and for chewing, and is therefore put into two classes; if exported, it would be put into three classes. A district may also produce many types of the same class, as in New England, where several types of seed-leaf and Havana seed are produced, yet they all belong to cigar tobacco, and are used solely for that purpose. Again, a locality may produce one type of one class.

In the following schedule of classification no attempt is made to divide into separate classes that portion of the crop taken for exportation. All this is thrown together into one class, called export tobacco, though the types suited for the different countries are given.

CLASSES, TYPES, AND SUB-TYPES.

CLASS I.—DOMESTIC CIGAR TOBACCO AND SMOKERS.

Seed-leaf and Havana seed.

Connecticut Seed-Leaf.
"New England" Seed-Leaf.
Pennsylvania Seed-Leaf.
New York Seed-Leaf.
Ohio Seed-Leaf.
Wisconsin and Illinois Seed-Leaf.
Florida Seed-Leaf.

Other cigar and smoking tobacco.

White Burley lugs.
American-grown Havana.
Perique.
Common Virginia, North Carolina, Missouri, Eastern Ohio, Maryland, Tennessee, Kentucky, Indiana, and Illinois lugs.
Kentucky and Indiana cheroot and stogie wrappers and fillers.
Fine-fibered Clarksville wrappers.
Indiana Kite-Foot.

CLASS II.—CHEWING TOBACCO.

Fine-cut and plug fillers.

Fine-cut Burley.
Fine-cut Mason county.
White Burley fillers.
Red Burley fillers.
Virginia sun- and air-cured fillers.
Virginia flue-cured fillers.
Missouri air-cured fillers.
Kentucky, Indiana, Tennessee, Virginia, Maryland, and West Virginia fire-cured fillers.
Tennessee and Kentucky air-cured fillers.

Plug wrappers.

Virginia yellow and mahogany.
North Carolina yellow and mahogany.
Western Kentucky yellow.
Hart county (Kentucky) bright and yellow.
Henry county (Tennessee) yellow.
Missouri and Arkansas yellow.
West Virginia yellow.
Clarksville and Missouri dark and red.
Mason county (Kentucky) Burley.

CLASS III.—EXPORT TOBACCO.

English shippers.

Bird's-eye cutting leaf.
Brown roll wrapper.
Spinning leaf.
Shag—a heavy cutter.
Plug wrapper.
Plug fillers.

Navy leaf.
Irish filler.
Scotch Elder.
Scotch and Irish spinners.
Strips—used for same purposes as above.

Continental shippers.

French Regie—A, B, and C.
Italian Regie—A, B, and C.
Austrian Regie.
Spanish Regie.
Snuff-leaf and lugs.
Germany:
- German saucer.
- German spinner.
- Ohio, Maryland, and West Virginia spangled.
- Smokers—fat lugs.

Switzerland:
- Swiss wrappers.
- Swiss fillers.

Holland:
- Dutch saucer.

Belgium:
- Belgian cutter.

Denmark, Norway, and Sweden:
- Heavy Kentucky and Tennessee types

African shippers.

Liverpool African.
Boston African.

Gibraltar African.

Mexico, South America, and West Indies.

Baling wrapper.

Baling filler.

CLASS I.—CIGAR AND SMOKING TOBACCO.

SEED-LEAF AND HAVANA SEED.

CONNECTICUT SEED-LEAF.—This includes both the seed-leaf and the Havana seed. The seed-leaf of Connecticut valley is a very large, fine-fibered, light-colored leaf, sweetish to the taste, soft, and silky, and when light tobacco was fashionable it outstripped all rivals. It burns with a solid, yellowish ash, a little reduced from the original size, the ash having a beautifully granulated or oölitic surface. Havana seed, grown from seed acclimated for four years, has a thin leaf, fine in texture and delicate in flavor, and very glossy and silky. The seed-leaf in Housatonic valley grows darker in color and has more body than that grown in Connecticut valley. It burns well, and is stronger than the Connecticut-valley tobacco, having a larger content of nicotine. Altogether, this is probably the most valuable seed-leaf grown. The whole product of Connecticut sweats well, that in Housatonic valley coming out of that process greatly improved in color, having a very dark chestnut-brown hue. This tobacco burns probably better than any other seed-leaf, but not with so white an ash as many other kinds. The soils are abundantly supplied with salts whose base is potash, which renders the carbon in burning porous, and causes it to burn well. Connecticut seed-leaf will make five thousand cigar wrappers to the one hundred pounds.

NEW ENGLAND SEED-LEAF is the name given to the product of Massachusetts, New Hampshire, and Vermont. It differs from the growth of Connecticut in being coarser in texture and heavier in body, and therefore is not so well suited for wrappers as the Connecticut Seed-Leaf. It is deficient in oily substance, and does not sweat to a good rich color; nor are the burning qualities so good. The ash is not so firm or light, but appears to be more humid. A large proportion of the crop grown in the last-named states is of the variety known as Havana seed, which, though not so large, makes far better fillers for cigars than the seed-leaf varieties.

PENNSYLVANIA SEED-LEAF is of a dark-brown color, has a rich leaf, and gives from six to eight thousand wrappers to the hundred pounds. The flavor is not so good as that of Connecticut Seed-Leaf, and it has an acrid taste, leaving a disagreeable bitter in the mouth after smoking. It sweats to a beautiful brown color, and burns with a white ash, which, however, splits and falls like snowflakes; is very oily and elastic, strong and smooth, and is in great demand by cigar-makers. It rarely suffers injury from sweating, and its strength of tissue enables it to bear the strain required in wrapping cigars.

NEW YORK SEED-LEAF.—This type does not rank as high as those of Pennsylvania and Connecticut. The flavor is excellent, and some of the very best wrappers are made from Wilson's hybrid and one or two other varieties. It burns compactly, with a white ash, except when raised on swamp muck or heavy clay soils, when it is liable to burn black and to curl and roll in burning. This defect in a portion of the crop has kept the standard low. Considerable quantities are exported to Bremen, and some to other foreign markets. The product shrinks about 10 per cent. in sweating. Two types are recognized in New York: Big Flats and Onondaga. The first is of a large growth, is at times very popular, and stands sweating well. Onondaga is short, very substantial, and makes excellent fillers.

OHIO SEED-LEAF is noted for its exceeding dryness. It is a leafy product, and is in more demand for exportation than any other seed-leaf. It burns well, with a white chalky ash, which is sometimes a little flaky; has usually a good dark-brown color, and the type is more uniform in character than that of Pennsylvania. The handsomest seed-leaf produced in Ohio is grown in Medina and Wayne counties. It is large, fine, and very much resembles that grown in Connecticut, but is rather light in color. Generally, the Ohio seed-leaf ranks third as to quality among the seed-leaf products of the United States. While its color is not equal to that of Pennsylvania, nor its texture so fine as that of Connecticut, in burning qualities that from the Miami valley is superior to both, burning with an ash as white as that of Pennsylvania and with a solidity equal to that of Connecticut.

LITTLE DUTCH, a very sweet variety, is grown to some extent in Miami valley. It has a sleek, glossy surface, silky fiber, dark-brown in color, is very highly prized by cigar manufacturers on account of its delicate flavor, and burns well; but having a very thin, fine leaf, it is very sensitive to fermentation, and is easily injured during that process. If put in boxes before the stems are thoroughly cured it "butt-rots" and injures very rapidly. It has a decided tendency to produce white veins, but, being mainly used for fillers and binders, these veins are not so objectionable as in the ordinary seed-leaf. In the market this variety ordinarily brings double the price of the same grades of seed-leaf. Indiana grows some seed-leaf around Richmond, which is classed with the Ohio product.

WISCONSIN AND ILLINOIS SEED-LEAF is noted for its capacity for absorbing and retaining water, being always limp, even in the dry, cold weather of winter. It has a thin leaf, is the most tender of all the seed-leaf products, and requires to be handled with great care. In consequence of its tenderness and the careless manner in which it is generally handled it does not stand high in the estimation of manufacturers. Much of this type is injured on passing through the sweat, by which process it loses about 20 per cent. in weight, while other types of seed-leaf lose from 9 to 12 per cent. The product of Wisconsin and Illinois has great uniformity of color, and in this respect is a superior type. It resembles the Connecticut seed-leaf, and when resweated has a fine finish; burns with a solid ash, especially after it has been resweated, and contains very little nicotine.

FLORIDA SEED-LEAF.—This type is distinguished by the large number of white specks which cover the leaf. These specks, though the result of disease and blemish, are a sure indication of fineness of texture. The color is rather light for the present requirements of the manufacturer. At one time it was exceedingly popular, and commanded very high prices, both in this country and in Germany. When thoroughly sweated it burns well. The Havana sorts have a great delicacy of flavor and fineness of leaf, much like the tobacco grown in Cuba.

Havana seed is a type intermediate between the seed-leaf and that grown from imported Havana seed. It is smaller in size, richer in glossiness, finer in texture, and sweeter in flavor than the seed-leaf proper, and though yielding a third less per acre, the higher prices paid for it seem to make it equally as profitable to cultivate as the seed-leaf. In the West it is called Spanish or Sweet-scented, and in Connecticut, New York, and Pennsylvania it is called Havana seed. It is very valuable, because it furnishes a large percentage of wrappers, while the lower grades make very sweet cigar fillers, second in quality only to the Little Dutch and Havana tobacco. This type may be grown on thin, poor soil, and made profitable when the larger varieties of seed-leaf grown upon such soils would entail loss to the producer.

OTHER CIGAR AND SMOKING TOBACCO.

WHITE BURLEY LUGS.—This sub-type is fine, bright, of good flavor, thin in leaf, light or yellowish brown in color, inclined to be trashy and chaffy, and makes, with the North Carolina and Virginia bright lugs, the finest grades of smoking-tobacco for pipes. It is very popular on account of its mildness, and is composed of the lower leaves of the plant and those badly mutilated by worm-cuts. Some of this sub-type, of a bright, thin character, is granulated for making cigarettes.

AMERICAN-GROWN HAVANA.—Experiments have been made in almost every part of the country with tobacco grown from seed imported from Cuba. The first year the product is small, and emits, even while growing, a strong, sweet flavor, and the leaves rarely attain a length of over ten or twelve inches. It cures up a dark-brown color when grown upon heavy clay soils; but, grown upon sandy soils, the color is a lighter hue, and the flavor is thought to be superior in not having so much rankness. Florida produces a small quantity for market, and little patches are common in every part of the country for domestic use. It deteriorates rapidly in flavor when grown successively from seed matured in this country, but increases in size and usefulness as a wrapper. Its deterioration in aroma is not so rapid in the extreme southern states as in the more northerly ones. Some experiments in cultivating and curing this type are given at the close of the chapter on Tennessee.

PERIQUE.—This type is grown in Louisiana, and is cured in its juices under heavy pressure. It is very black and glossy in appearance, emits a strong spirituous flavor, makes a very strong smoking-tobacco, and is not popular except with those habituated to its use. Some of the product of Louisiana is air-cured, and is used in making very strong cigars, as further detailed in the chapter on Louisiana.

COMMON LUGS FROM THE HEAVY TOBACCO DISTRICTS.—This sub-class is made up from the lower grades of many types. It is trashy, earth-burned, of every conceivable color, deficient in body and weight of leaf, and milder

than the better grades of the types from which it comes. By a due admixture of colors and strength of leaf many brands of smoking-tobacco are made, as bright and dark, brown and red, spangled and yellow, mild and strong. Some air-cured lugs of this sub-class are granulated for cigarettes, the stock being furnished from light, thin products from Kentucky, Tennessee, Indiana, Illinois, Missouri, Eastern Ohio, and Maryland. The lugs selected for this purpose are as light in color as possible.

STOGIE WRAPPERS AND FILLERS.—For stogie wrappers a short western leaf of full breadth and light body, fine fiber, and uniformly dark color is selected. To a very small extent a red or cinnamon color is required. It must be air-cured or entirely free from any flavor imparted by fire, and it is necessary that it shall have passed through the sweat and become somewhat soured in flavor. This particular style of leaf is used at Pittsburgh and at Wheeling—very largely at the latter point—for wrappers in the manufacture of a specific class of common cigars, technically called stogie cigars. A stogie filler consists of a leaf of the same quality as the wrapper, but is of lower grade, too narrow or otherwise unfitted for wrappers. What are technically called "self-workers" are largely used in this trade. They consist of packages or casks with a proper proportion of wrappers and fillers packed in them, each for working the other.

FINE-FIBERED CLARKSVILLE WRAPPER.—This type has great smoothness and delicacy of general structure, great elasticity and strength, with a moderate supply of oily substances, good breadth of leaf, and is of a port-wine color. It is used largely in the United States and in Canada, in connection with the red wrapper, in the manufacture of plug tobacco for smoking as well as for chewing. A large proportion of these wrappers is exported. They are not popular for making cigars in the United States, because they impart a rank flavor to the cigar. Wrappers of the same character are produced in Virginia and are used for like purposes. A few are taken for the manufacture of stogie cigars.

INDIANA KITE-FOOT.—This is a broad, short leaf, grown in Owen and Clark counties, Indiana. It is cured with fire, and the color is generally brown, sprinkled with yellow spots. The fibers are small, and the leaves are very elastic. It is employed for making common cigars.

CLASS II.—CHEWING-TOBACCO.

FINE-CUT AND PLUG FILLERS.

WHITE BURLEY.—This is the product of a new variety which within the past decade has come into profitable and extensive cultivation. It is bright brown or golden in color, of thin tissue, good breadth and length of leaf, comparatively free from gums and oils, possessed of great absorptive capacity, and is of a mild and pleasant flavor. It is exceedingly popular with the manufacturers of plug and cutting tobacco. There are two sub-types of the White Burley, known as cutters and fillers. Cutters are almost entirely destitute of gums and oils, and therefore are stiff and harsh. Fillers have more body and more gum than the cutters, and are, consequently, softer and more elastic. Their popularity with manufacturers arises from their capacity to absorb a very large percentage of the sauces with which they are treated. Dr. Moore reports that the Owen county (Kentucky) plug fillers will absorb over two and a half times their weight of water without dripping when done up in a roll. The product is popular with consumers when manufactured into plug or fine-cut, because it is very mild, and can be used without producing the nervous irritation consequent on the use of stronger tobacco. It is not so sweet naturally as the flue- and sun-cured tobacco of Virginia, or of the air-cured product of Missouri. The chapters on Ohio and Kentucky give further details.

FINE-CUT MASON COUNTY.—This type only differs from the White Burley grown in other districts in having very little gum, less body and elasticity, and is used for a cutting leaf mainly.

RED BURLEY FILLERS.—These differ from the White Burley fillers only in not having such bright colors, the color being rather a dark cinnamon. The product of the Red Burley is also of a somewhat lighter and more flimsy character when grown upon similar soils.

VIRGINIA SUN- AND AIR-CURED FILLERS.—These are made chiefly in Caroline, Hanover, Louisa, and Spotsylvania counties, Virginia. The product is of medium size as to leaf, light-brown as to color, very sweet and fragrant, with a fair proportion of gums and oils, and popular as a chewing-tobacco. The air-cured fillers of Missouri approximate those of Virginia in the qualities of sweetness and fragrance.

VIRGINIA FLUE-CURED FILLERS.—These are of medium size, brown or mahogany in color, oily and elastic, fine in texture, delicate in fiber, and have a liveliness of appearance not observable in the White Burley product. They are made principally in Henry county, Virginia, and command very high prices on account of their exceeding natural sweetness.

MISSOURI AIR-CURED FILLERS.—These are distinguished chiefly on account of their sweetness, and are frequently mixed with the product of other states to give a pleasant taste to the manufactured article. They also make a very tough "chew".

FIRE-CURED FILLERS OF THE HEAVY TOBACCO DISTRICTS.—These are employed in making a coarse, strong chewing-tobacco for the consumption of miners, sailors, and lumbermen, who prefer an article with a rank tobacco taste, strong in nicotine, and of great toughness of leaf.

TENNESSEE AND KENTUCKY AIR-CURED FILLERS.—This type is of light to medium weight, free of coarseness in texture and fiber, not gummy or waxy, of sweet and mild natural flavor, clear of any bitterness, generally porous in structure, and of bright or pale-red color. It is entirely air-cured. Its natural absorbing capacity is fully preserved by air-curing. Curing by artificial heat would not only impair its flavor, but impart a highly injurious odor of smoke. Length or breadth of leaf is not an essential. This product is generally grown upon the sandstone lands or siliceous soils, and is distinguished from the White Burley fillers by having heavier body, less delicacy of structure, and by being less colored.

PLUG WRAPPERS.

NORTH CAROLINA AND VIRGINIA YELLOW AND MAHOGANY.—The yellow and mahogany wrappers may be considered grades of the yellow type. The highest grade is small in size, with a lemon-yellow color, soft and silky, and has a surface which sparkles in the sunlight, the minute golden grains scattered over the upper portions of the leaf adding to the brilliancy of its appearance. Other grades follow this, such as orange, dull yellow, and on by imperceptible gradations to the mahogany. The lemon-yellow leaf stands at the head as a wrapper for plug. The chief distinguishing characteristic of the yellow leaf of North Carolina and Virginia is that it will not blacken under pressure when subjected to the processes of manufacturing, but retains its golden luster. The mahogany wrapper is larger than the yellow leaf, displaying a ground of yellow, spotted with red or brown. It usually has more oily substances in its composition, and therefore blackens more under pressure. Western Kentucky, Hart county, Kentucky, and Henry county, Tennessee, produce a leaf unexcelled in the beauty of its yellow color. It is generally larger than the North Carolina and Virginia yellow tobacco, but will not maintain its color in the manufacturing process. The yellow tobacco of Ohio and West Virginia is intermediate in character between that of North Carolina and the West, the former having more oil in its composition than the latter. The yellow tobacco of Missouri and Arkansas very much resembles that grown in Kentucky. It has a brilliant hue, but is open to the objection of blackening under pressure. The yellow wrappers stand very high in absorptive capacity.

CLARKSVILLE AND MISSOURI DARK AND RED.—This type is found in leaf of full weight of body, strong and elastic texture, with good supply of oils and "fat", soft, smooth, and flexible in structure, of fine stem and fiber, and the dark wrapper has a port-wine color. The leaf must be of good width, of well-rounded proportions, and free of all blemish, such as spot and worm-cut. Length of leaf has no specific standard, for some forms of manufacturing full length being required, and for others short length being preferred. The highest value of the type is found in the leaf of full length. Red wrapper has the same essential qualities as those described for dark wrappers, except that of color, which must be a full, deep, and solid red. These wrappers are used largely in Canada.

MASON COUNTY (KENTUCKY) BURLEY WRAPPERS.—For many years the wrappers grown in this county have been noted for their great fineness, softness, silkiness, and elasticity. They are of medium size, running from a reddish yellow in color to a dark brown. The substitution of the White Burley variety for those previously grown has improved rather than impaired the character of the wrappers. They are used both for plug and for cigars.

CLASS III.—EXPORT TOBACCO.

ENGLISH SHIPPERS.

ENGLISH SHIPPERS consist of leaf and strips, which are used, with a single exception, for identical purposes. Until within a short period the larger consumption was of strips or stemmed tobacco, the stem being removed as a special preparation to avoid the payment of duty on it. Recently, however, the consumption of leaf has increased in the United Kingdom, under an arrangement by which the manufacturer is allowed to return the stem into the hands of the proper officers for destruction or for export. In some forms of manufacture, however, the stem is pressed in the leaf into a thin plate and then split, so as to divide the leaf into two parts, as in making strips. For these reasons the consumption of leaf in the different forms of manufacturing in England is increasing.

BIRD'S-EYE CUTTING LEAF.—This is the only type used exclusively in the leaf in English consumption, and consists of a very bright, smooth, thin, and clean leaf, with as little gum and oil as possible. The essential peculiarities of quality are that the color of both the inside and the outside surfaces of the leaf shall be of uniform and similar shades of bright color, and that the stem shall be of a brightish brown color on the outside and white on the inside. Each section into which the stem is cut presents in appearance on its cut surface the eye of a bird. This type was formerly scarce, and was furnished chiefly by the Lower Green River district, in Kentucky; but since the production of light and colored types it has largely increased in the Burley district, and especially in Virginia and North Carolina.

BROWN-ROLL WRAPPER.—This is a bright red or full bright leaf, thin and smooth in texture, of good breadth, resembling in general structure the leaf used for cutting into fine-cut by our domestic manufacturers. It is used in England as a wrapper for spinning brown roll. By filling the wrapper properly with suitable fillers a continuous strand is made and spun of about one inch in diameter, which is packed into a coil, similar to a coil of rope, from which sections are cut for retail. For this purpose it is always stemmed. The brown-roll filler is the material with which the wrapper is filled, and consists of stock of the same type as the wrapper, except that it is of lower grade.

SPINNING-LEAF OR STRIPS.—This type consists of a long, rich, and oily leaf, of full brown color, good weight of body, strong and elastic texture, and of general smoothness in structure. Recently brighter colors have been more in demand for this purpose than formerly. The types used in England for this purpose were of the heavy, oily, and "fatty" descriptions grown in the Clarksville district, until recently these became so much appreciated in value on account of the German demand for them that the heavy but less oily types of the Lower Green River district were substituted. The recent improvements in machinery used in spinning enable manufacturers to use material of a lower grade. The purpose for which this type is used is similar to that for which the brown-roll wrapper is used, except that the strand into which it is spun is of smaller size. This is put up and cut for retail in the same manner as the brown roll. A still smaller strand is spun, called lady's twist, but to much less extent now than formerly. The strand of this twist was not larger than the point of the little finger, and was consumed principally in Scotland, Ireland, and the north of England. The wrapper for this consisted of a smaller and shorter leaf of the same general qualities as those used for the larger strand.

SHAG.—This is a coarsely-cut English manufactured product. The supply is drawn chiefly from Indiana and the Green River district in Kentucky. It has but little gum, yet more than the cutting leaf used in the United States. Shag tobacco is really a heavy cutting leaf, and it finds substitutes from Japan, Java, Paraguay, and the Dutch possessions. The principal requisite is that it shall be low in price, so that manufacturers may sell it for the same price as that obtained before the increase of duty.

PLUG WRAPPERS.—This type consists of a rich, dark-brown leaf, smooth in structure, medium in size, and strong and elastic in texture. Its consumption is very small, as plug tobacco is used to a very limited extent in the United Kingdom.

PLUG FILLERS.—These consist of a short, common, and imperfect leaf of the same type as the wrapper.

NAVY LEAF.—The "navy plug", in quarters, half pounds, and pounds, is a style of tobacco which gained its reputation during and after the war. The best of Green river redried fillers were the material used for its manufacture, but during the past few years the fashion has turned toward White Burley fillers, and they now compose the largest portion of leaf tobacco used for manufacturing "navy plug" in its various sizes.

IRISH FILLER.—To a very limited extent a short, well-ripened, clean, and oily leaf is used in Ireland for fillers. The Bird's-eye and Irish filler are sold in English markets in the leaf for the special consumption to which they are adapted, and all other types either in strips or leaf. If in the latter, the stem is removed from the leaf by the manufacturer in preparation for manufacturing, or so prepared as to be used with the rest of the leaf. The consumption of strips is much larger than that of leaf.

SCOTCH ELDER.—Scotch Elder is a type of great absorptive or drinking qualities, having a leaf of good size, very porous, with but little gum, reddish in color, and with medium texture. Mr. Todd is authority for saying that, since the tax in the United Kingdom has been increased, 100 pounds of tobacco will be so heavily watered as to make 155 pounds when sold to consumers.

SCOTCH AND IRISH SPINNERS.—These are almost or quite identical in type with English spinners, and the description made of the latter may be applied to the former.

CONTINENTAL SHIPPERS.

FRENCH TYPES may be reduced to two distinct lines of classification, as heavy and light, with considerable irregularity as to grade and deficiency in distinctness as to type.

TYPE A.—This consists of a leaf 23 to 25 inches in length, of moderately smooth appearance, dark-brown color, and not of so much weight of body and substance as the Italian Regie.

TYPE B.—Of the same qualities for both light and heavy as type A, except that the length is 22 to 23 inches.

TYPE C.—This consists of good, sound, clear lugs or common leaf, of moderately heavy body, or running from the Clarksville and western Kentucky type of medium weight of body to lower Green river product of medium weight of substance. These types are used for cigar wrappers, fillers, and binders, for the manufacture of snuff, and for cutting into smoking-tobacco. The heavy types are generally taken from the nondescript part of the Clarksville and western Kentucky districts, and the lighter types from nondescript of the Lower Green River district, of Illinois, and of Indiana. The types vary so much in the French orders that in some years the whole of it may be supplied by the product of the latter-named districts. Those made in the orders of 1880 and 1881 do not class, on an average, much, if at all, above the grade and quality required in former years in the lowest type, C. France is taking from good lugs up to medium leaf, but no very fine tobacco, from the United States.

ITALIAN REGIE TYPES.

TYPE A.—This is a large, showy, smooth, and silky leaf, 25 to 26 inches long, of fine fiber and texture, and of solid dark-brown color. Moderate weight only is required in this type, and just enough oil and fat to create elasticity and strength of texture. It is used by the Italian Monopoly Company as wrappers in the manufacture of cigars.

TYPE B.—This type varies between heavy and light tobacco, sometimes the former and sometimes the latter being required by the annual orders of the Monopoly Company. When the former is required, the type consists of leaf of heavy body, dark-brown color, and of more general richness and weight of substance than type A, and 22 to 25 inches in length. This type is used largely in the manufacture of snuff. Type B, light, consists of leaf of second and third grades, of the same length and showy appearance, of light-brown or red color, and of moderate weight of body and substance. This type is used in the manufacture of cigars of milder flavor than those made of the heavier types, and also largely for cutting into smoking-tobacco.

TYPE C.—This consists of choice lugs or short common leaf, 18 to 20 inches in length, and of moderate weight of body, and is used as fillers and binders in the manufacture of cigars. Of these several types, A is chiefly selected from the lighter-bodied and smooth product of the Clarksville district and the western Kentucky district; B heavy, from the heavier-bodied products of these districts; B light, chiefly from the product of moderate weight of substance of the Lower Green River district and Indiana and Illinois; and C from the lighter-bodied lugs and common leaf of the heavy-producing districts and the heavier bodied of the light producing districts.

AUSTRIAN REGIE.

The Austrian Regie takes only one type or grade from the United States. This is a wrapping leaf, very smooth and fine in fiber, of very solid, firm, and glossy texture, above medium heavy body, but not of the heaviest and most fleshy type, and of a perfectly uniform brown color. A very essential quality is toughness and "stretchiness" of texture, and it must be well cured by fire, but not injured in curing. The length of the leaf is not an essential part of the fitness, but good length is much preferred. This type is used in Austria as wrappers in the manufacture of cigars, and is supplied chiefly from Virginia, and in smaller part from the Clarksville district. Large crops of tobacco are raised in Hungary, more than enough to supply Austria with the lower grades.

SPANISH REGIE.

No classification of the tobacco bought by the Spanish Regie is made. It consists of sound and common lugs of all types and districts, except the Burley and bright-producing districts of Kentucky and North Carolina, and of the low and nondescript leaf of light type. The order is generally made for one-third of leaf of low grade and two-thirds of lugs. It is all used for smoking, the better grades for wrappers, binders, and fillers in the manufacture of cigars, and the lower for granulation for the manufacture of cigarettes.

SNUFF LEAF AND LUGS.

Snuff leaf is heavy, very rich and fat, of fine fiber and dark color, and is used for making the finer grades of snuff. The leaf described as German spinner is used partly in Germany for making the best grades of snuff. Snuff lugs are of the same qualities as the leaf, heavy, fat, and dark in color, considerably fermented, and are used for making the common grades of snuff.

GERMAN TYPES.

GERMAN SAUCER.—This is a sweet, fair-bodied leaf, of fine fiber and stem, gummy without fatness, and either clear, cherry-red in color, or mottled with yellow, or what is technically called piebald. It is generally a leaf of good length and weight of body, with gummy surface. It is prepared for consumption in Germany by the application of sauce of a peculiar description. The fiber must be yellow after saucing, and the leaf black. The largest proportion of this type is taken from Virginia.

GERMAN SPINNER.—This consists of leaf of the heaviest body, 24 to 26 inches in length, full in width, of fine fiber and stem, very oily and fat, so that it will sweat supple and strong, tough and elastic in texture, and of a very deep or dark-brown color. This type is used in Germany and the north of Europe for spinning into strand. It is supplied chiefly from the Clarksville district, but in part also from the Upper Green River district, and to a very small extent from the Lower Green River district. German spinning fillers are of the same type as the wrappers used in spinning, but consist of very fat, clean, and heavy-bodied lugs, which are supplied from the Clarksville and Upper Green River districts.

OHIO, MARYLAND, AND WEST VIRGINIA SPANGLED.—This is a leaf of moderate length, full breadth, and small stem. It has a medium strength in texture, is rather deficient in oil, and is in color yellow, yellow spangled with red, red spangled with yellow, and fine red. It is cured with fire, but has a mild, sweet flavor. The fine yellow and yellow spangled goes to Bremen, where it is rehandled, put in lighter casks, and sent to Russia for consumption, a portion, however, being taken to Austria and England, the latter countries taking also the red spangled. England takes, besides, the fine red. Germany takes all grades for consumption except fine yellow and dark brown, which latter are taken by France and Italy, and Spain takes the unsound and nondescript qualities. Scraps of this type are used in this country for smoking-tobacco.

SMOKERS—FAT LUGS.—The very fat, heavy, and oily lugs of the Clarksville and other heavy tobacco-producing districts, beside being used in the manufacture of common snuff in the United States and Germany, for baling fillers, and for spinning fillers, as noted elsewhere, are also taken on the continent for making common cigars.

SWITZERLAND.

SWISS WRAPPER.—This is a long and broad leaf, 26 to 30 inches in length, silky, of fine fiber and stem, and of a dark-brown or chestnut color. It is desirable that the spaces between the small or lateral stems should be broad, and the combination of thin with strong and elastic texture is desired, that a maximum supply of wrapper may be obtained from a given weight of product. It is used in Switzerland as a wrapper in the manufacture of cigars, and is supplied chiefly from the Clarksville district, but to a small extent from other heavy-producing districts.

HOLLAND.

DUTCH SAUCER.—This is similar in all respects to the German saucer, except that it is thinner and more silky in texture. It is exported exclusively to Rotterdam.

BELGIUM.

BELGIAN CUTTER.—This is a short leaf of a mottled or piebald color, and of fair body, without fat or oil. The general quality and structure are such as have been described for German and Dutch saucers, except that the grade is lower than is used for those purposes. It is used in Belgium for cutting.

DENMARK, NORWAY, AND SWEDEN.

A bright, mottled or red, fleshy, sweet leaf, not fat, prepared in Germany from the product usually of Virginia and the Kentucky and Tennessee districts, is a great favorite in Denmark, Norway, and Sweden. In addition to this the heavy Clarksville types, cured with fire, are largely consumed in these countries.

AFRICAN SHIPPERS.

African shippers may be divided into three classes, as follows:

1. Suitable for southern Africa, should be of long, dark leaf, strong body, small tie, put in hogsheads of small size, and prized to weigh about 1,550 pounds gross; neatly handled.
2. Suitable for the intermediate portion of the country, should be of long leaf, medium to light color, fine fibers, handled as class one, and weigh about 1,450 pounds gross.
3. Suitable for the more northern part of Africa, should be of light leaf, not so long as classes one and two, and handled in medium-sized hogsheads, weighing not more than 1,450 pounds gross. It is better that this class should not be overhandled.

During the past few years tobacco has also been packed in boxes for shipment to the coast of Africa. The quality is the same as described above, about 400 pounds going into a box by hard prizing, and the tobacco is more subject to atmospheric influences than when prized in hogsheads.

While most of the tobacco shipped to Africa is first rehandled in this country, still there is a fair proportion of leaf of suitable quality and handling sent to market direct by farmers. This is mainly taken for account of merchants in Boston, Massachusetts, who send cargoes of various articles to the African coast.

MEXICO, SOUTH AMERICA, AND THE WEST INDIES.

BALING WRAPPERS.—This is a heavy leaf, 28 to 30 inches in length, of fair width, very fat and oily, of heavy texture, and of very dark color. A necessary condition of this class is that it should be neatly tied in small bands, neatly and strongly packed in casks, and moderately pressed. It is used as wrappers in preparing stock for the trade of the several markets named, and is packed in bales weighing from 100 to 200 pounds, and covered with cloth, so that two bales may be balanced across the back of a pack mule for transportation across the mountainous regions of the districts in which it is consumed.

BALING FILLERS.—Common rich and heavy leaf and fine lugs of heavy body and full supply of oils and fatness are used for this purpose. Some of the exports to the West Indies are called "black fats", and are made dark by very heavy pressure and by the application of water, clear or tobacco-stained.

Nondescript leaf is incapable of classification. It has the merit of cheapness, and is usually bought and held by speculators, who take advantage of the scarcity of some well-defined type to put a nondescript variety on the market approaching in general qualities the type in demand.

The lowest and commonest grades of lugs are often used in the United States, especially if air-cured, in the manufacture of the cheapest grade of pipe-smoking tobacco. With this product a large proportion of stems is frequently mixed to increase the bulk and to reduce the cost. Some of this low grade is also used in making sheep-wash.

Julius Bien & Co. Lith. N.Y.

Stems or midribs used to be exported in large quantities to Germany for the manufacture of cheap grades of snuff and smoking tobacco, and were also employed as manure or for the protection of fruit trees from the borer and other insect enemies. Since the tax was raised in Germany on tobacco and stems the consumption of the latter, except the finest bright from Virginia leaf, has fallen off considerably, and for a year or two past the article has become almost valueless, stemmers and manufacturers being unable to obtain the cost of prizing and casks. Large quantities of stems, with the trash and sweepings of stemmeries, are now used for manurial purposes.

TYPE MAPS.

In the map which accompanies this chapter the localities in which the leading types are produced are designated by colors. It must not be inferred, however, that no other types than those indicated are made in the districts to which particular types are referred, but only that those types predominate or give character to the district. The types run into each other by such imperceptible gradations that it is often difficult to define with precision the line of separation.

The portions of the maps colored blue indicate that a heavy shipping leaf, either air-cured or fire-cured, is produced. Red indicates a lighter shipping leaf, red and colored, also cured by fire; dark yellow the regions in which the yellow tobacco is grown in greater or smaller quantities. Light yellow shows the main White Burley district, though this variety is grown in many other localities, as in West Virginia, eastern Ohio, Missouri, and Indiana, but was not the prevailing type in 1879. A yellow ground, spangled with red, shows where the spangled tobacco, taken in Germany, Russia, England, and France, is grown—a fine, showy article, with but little gum and body. A neutral tint, or drab color, as is shown in the center of the yellow-tobacco growing region of North Carolina and Virginia, shows where flue- and air-cured fillers are made, probably the most highly prized fillers, on account of sweetness and flavor, produced in the United States. The same kind of fillers, though not so decided in character, is produced in Missouri, as indicated by the color. Green shows the locality of sun- and air-cured sweet fillers. Some of these are also produced in Missouri, along with the flue-cured. Seed-leaf and Havana districts are represented on the maps by a chestnut-brown color. In many places within the limits of the blue air-cured fillers are produced suitable for use in domestic plug, but they do not constitute the predominating type.

It would be impossible to represent by colors the almost infinite varieties of types and sub-types produced in the shipping district, for these types frequently differ in the same township or civil district.

A county is seldom colored unless it produces as much as 100,000 pounds, though there are a few exceptions, as in the case of West Virginia, where a peculiar type is grown over a widely extended district. Strips of other counties that lie contiguous to a well-known tobacco district, as in Wisconsin and in the Miami valley, are frequently colored when the limits of culture are well known.

VARIETIES OF TOBACCO.

More than a hundred varieties of the tobacco plant are named in the schedules returned to this office. Of these more than half are either synonyms or designations descriptive of different peculiarities of the same variety. For instance, the Little Orinoco of Virginia is called Brittle Stem in West Virginia and Missouri and Narrow Leaf in Maryland.

Below are given the names of fifty of the best known varieties, with description of certain marked peculiarities of style, growth, character of leaf, etc., the uses for which they are best adapted, and the states in which they are mainly grown:

Varieties.	Description.	Uses.	Where grown.
Adcock	Wide space between leaves; ripens uniformly from top to bottom.	Wrappers and fillers for plug; excellent fine smokers.	North Carolina.
Baden	Short leaves, light; inclined to be chaffy; cures a fine yellow, but liable to green spots.	Plug wrappers and fillers; smokers	Maryland.
Baltimore Cuba	Long leaf; good body; fine, silky texture; tough; yields well; sweats a uniform color; disseminated by the U. S. Agricultural Department.		Ohio (Miami valley).
Bay	Large, heavy leaf; red spangled and yellow when cured.	Manufacturing and shipping	Maryland.
Beat-all (same as Williams)	Large, spreading leaf; fine fiber; dark, rich, and gummy.	Export to Great Britain and Germany; well cured; makes fine wrappers.	Tennessee, Virginia.
Belknap	Sub-variety of Connecticut Seed-Leaf	Same as Connecticut Seed-Leaf	Connecticut, Massachusetts, New York.
Bull-face	Sub-variety of the Pryor; large, heavy leaf, oval shaped; tough; small stems and fibers; a luxuriant grower.	Heavy shipping; makes good wrappers for plug.	Virginia, North Carolina, Tennessee.
Burley—Red	Thin leaf, narrowing toward the tip from center	Cutting tobacco	Kentucky, Virginia, Ohio.
Burley—White	Long, narrow leaf; white in appearance while growing; grows flat, with points of leaves hanging down.	Fancy wrappers, and for cutting purposes	Ohio, Kentucky, Virginia, Maryland, Missouri, Indiana.
Clardy	Large, smooth, heavy leaf, extremely broad; stalks long; a hybrid.	Common plug; exported for Swiss wrappers.	Kentucky, Tennessee.
Connecticut Seed-Leaf	Broad leaf; strong, thin, elastic, silky; small fibers.	Cigar wrappers; lower grades for binders and fillers.	Connecticut, New Hampshire, New York, Pennsylvania, Ohio, Wisconsin, Minnesota; also in Indiana, Illinois, and Florida.

Varieties.	Description.	Uses.	Where grown.
Connecticut Broad Leaf	Modification of above; leaves broader in proportion to length; fibers more at right angles to midrib.	Same as above	Connecticut, New York, Wisconsin.
Cuba	Small leaf, grown from imported seed; retains much of the aroma of Cuba-grown tobacco.	Cigar wrappers, fillers, and binders	Pennsylvania, New York, Wisconsin, Florida, Louisiana.
Cunningham	Short, broad leaf; thick and stalky growth	Fillers and smokers	North Carolina.
Duck Island	Broad leaf; fine appearance; full grower; originated from Havana seed.	Cigar work	New York, Pennsylvania.
Flannagan	Similar to Little Orinoco, but broader leaf, finer fiber; silky and tough.	Fancy wrappers; plug fillers	Virginia.
Florida Leaf	Fine texture, silky and elastic; becomes spotted with white when ripening.	Cigar wrappers, binders, and fillers	Florida.
Frederick	Akin to White Stem; rough leaf; heavy and rich; stands up well.	Mainly for export to Europe	Virginia, Tennessee.
Glessner	Large handsome leaf; fine texture; soft and elastic	Cigar wrappers and fillers; smokers	Pennsylvania, New York, Wisconsin.
Gooch	Broad, round leaf; leaves thick on stalk; yellow on hill when ripe; cures easily.	Fancy wrappers and smokers	Virginia, North Carolina.
Gourd Leaf	Broad, short, fine, and silky leaf; yellows on the hill	Plug wrappers and fillers; smokers	Virginia.
Governor Jones	Long, narrow leaf, of good body	Plug wrappers and fillers, and for common smoking.	Kentucky.
Havana Seed	Very thin, fine leaf; fine texture; delicate flavor	Cigar wrappers	Connecticut, Massachusetts, Pennsylvania, Wisconsin.
Hickory Leaf	Fine fiber and texture; cures up very bright	Plug work, smokers, and shipping	West Virginia.
Johnson Green	Said to be a cross of Orinoco and White Stem; large, heavy leaf; strong flavor.	Strips and shipping leaf	Virginia.
Kite-Foot	Rather short, wide leaf; thin; apt to cure a greenish color unless fully ripe.	For very common cigars; culture decreasing.	Indiana.
Little Dutch	Narrow leaf, small and short; in flavor resembling Yara tobacco.	For binders and fillers for cigars; very popular.	Ohio (Miami valley).
Long Green	Coarse and heavy; vigorous grower	Heavy shipping leaf	Virginia.
Lancaster Broad Leaf	Upright grower; delicate silky fiber	Cigar wrappers, binders, and fillers; smokers.	Pennsylvania, Wisconsin.
Lovelady	Long, dark, narrow leaf; very heavy	Export; grown for African shippers	Virginia, Tennessee, Indiana.
Mann	Leaf of good body; heavy and gummy	Plug wrappers and fillers; export	North Carolina.
Orinoco	Short, broad leaf; upright growth and open habit; light colored; much ruffled.	Plug wrappers and fillers; for strips and for export leaf.	Virginia, Missouri.
Orinoco—Big	Short, broad leaf; doubtless same as last named	Sweet plug wrappers and fillers; export	Virginia, Missouri, North Carolina, Tennessee, West Virginia.
Orinoco—Little	Long, narrow, tapering leaf; fine texture; stands up well.	Principally for plug work and smokers; sweetest variety grown.	Virginia, North Carolina, Tennessee, West Virginia, Missouri.
Pennsylvania Seed-Leaf	Same as Connecticut Seed-Leaf	Same as Connecticut Seed-Leaf	Same as Connecticut Seed-Leaf.
Perique	Medium-sized leaf; fine fiber; small stem; tough, gummy, and glossy.	Smoking; cigars and cigarettes; for mixing with other kinds.	Louisiana.
Pittsylvania Yellow	Medium-size; leaves elongated, good distance apart; fine texture; small tough stems.	Fine wrappers and fillers; good export variety.	West Virginia.
Pryor—Blue	Large, fine leaf, long, and well proportioned; good color; slightly ruffled.	Cigar and plug fillers; stemmers for export.	Virginia, North Carolina, Kentucky, Tennessee, Missouri, Indiana.
Pryor—Yellow	Heavy, wide leaf; fine texture; fine bright color; tough; weighs well.	Cigar and plug wrappers and fillers; stemmers for export.	Same as last.
Pryor—White (or Medley Pryor).	Very broad leaf; soft and silky texture, and tough fiber; a beautiful grower.	Plug wrappers and fillers	Virginia.
Shoestring	Heavy leaf; rather narrow; long and large stem	Dark navy plug; good stripping leaf	Tennessee, Kentucky, Missouri, Virginia.
Sleek-stem	Large, long leaf; heavy weigher; no ruffles	Heavy dark fillers; shipping leaf	Tennessee.
Spanish Seed	Uniform dark color; medium size leaf; ripens ten days earlier than other varieties.	Highly prized for dark cigar wrappers	New York, Illinois, Wisconsin.
Thickset	Leaf long, pointed, narrow; coarse fiber; very short stalk; coarse and heavy.	Common plug work and shipping	Kentucky, Missouri, Maryland, West Virginia, Tennessee, eastern Ohio.
Twist-bud	Heavy, large leaf; screw-shaped terminal stem	Export mainly; also for plug fillers	Kentucky, Missouri, Maryland.
Vallandigham	Large, pointed, smooth leaf	Cigar wrappers and fillers; smokers	Wisconsin.
White Stem	Leaf long, slender, drooping; tough and fibrous; largest leaf grown.	Plug wrappers, strips, and shipping leaf.	Virginia.
Wilson's Hybrid	Said to be an improved Havana; erect habit; easy of cultivation.	Cigar wrappers, binders, and fillers	New York.
Yellow Mammoth	Very large leaf; rapid grower; yields largely	Stemmed for export, for Swiss wrappers	Tennessee.
Williams	Same as Beat-all, grown in Tennessee for twenty-five years as Williams.	British and German export	Tennessee.