

## STATISTICS.

FEDERAL REVENUE DURING THE FISCAL YEAR 1879 TO 1880,  
AS PRESENTED IN THE REPORT OF THE TREASURER  
OF THE NATION—\$21,936,165.39 DERIVED FROM  
THE FOLLOWING RESOURCES.

1. From custom-houses (imports alone \$12,338,- 771.87), . . . . .	\$13,438,284 35
2. Incomes from the District and Territory of Lower California, . . . . .	1,173,877 81
3. From stamp duties, . . . . .	3,725,036 73
4. " direct taxation, . . . . .	592,688 48
5. " products of national property, . . . . .	148,535 22
6. " " of mints, . . . . .	300,389 32
7. Renting of the following mints:— Guanaguato and Zacatecas, . \$300,000 Alamos, Culiacan and Herme- sillo, . . . . . 100,000 San Luis, . . . . . 100,000 Chihuahua, . . . . . 60,000 Durango and Guadalajara, . . 160,000	720,000 00
8. Fund belonging to public institutions, . . . . .	46,716 68
9. Post office, . . . . .	967,927 23
10. Smaller branches of revenue:— Rents, . . . . . \$22,221 75 Miscellaneous profits, . . . . . 188,136 04 General archives, . . . . . 108 71 Gift to the Treasury, . . . . . 120 00 Appointments of notary publics, . . . . . 600 00 Legalization of signatures, . . . . . 2,305 60 From telegraphs, . . . . . 119,890 15 " fines, . . . . . 11,104 16 Naval patents, . . . . . 1,385 31	

Premiums, . . . . .	7,306 26
Costs of courts, . . . . .	2,705 63
Redintegration, . . . . .	497 25
Salt mines, . . . . .	400 00
Public lands, . . . . .	33,061 49
Sale of useful objects, . . . . .	2,731 01
Privileges and patents . . . . .	565 00
Not specified, . . . . .	10,117 40
From consulates, . . . . .	70,366 00
	<hr/>
11. Products of property and capital, . . . . .	473,621 76
12. Ten per cent. tax upon lotteries, . . . . .	856 25
13. Product of the lottery of the Cuantitlan Railway, . . . . .	41,341 53
14. Duties on home manufactures, . . . . .	25,000 00
15. Balance of taxes, . . . . .	148,178 09
16. Donation to pay the American debt, . . . . .	90,320 09
	43,391 85
	<hr/>
Balance on hand from last year, . . . . .	\$21,936,165 39
	1,468,116 35
Total amount to meet the budget, . . . . .	<hr/> <hr/> \$23,404,281 74

STATEMENT OF THE REVENUE AND EXPENDITURES OF  
THE DIFFERENT STATES OF THE REPUBLIC OF  
MEXICO DURING THE FISCAL YEAR  
1879 TO 1880.

	Revenue.	Expenditures.
1. Aguascaliente, . . . . .	\$66,748 57	\$61,085 85
2. Campeche, . . . . .	126,301 32	183,061 21
3. Coahuila, . . . . .	57,116 66	57,116 66
4. Colima, . . . . .	96,365 43	90,357 44
5. Chiapas, . . . . .	79,958 55	78,400 00
6. Chihuahua, . . . . .	100,084 04	122,472 37
7. Durango, . . . . .	144,280 56	118,641 58
8. Guanajuato, . . . . .	927,576 30	819,053 93

9. Guerrero, . . . . .	88,426 15	91,640 36
10. Hidalgo, . . . . .	382,385 39	361,026 00
11. Jalisco, . . . . .	307,540 51	325,050 27
12. Mexico . . . . .	415,633 40	449,734 09
13. Michoacan, . . . . .	271,555 69	233,763 42
14. Morelos, . . . . .	233,527 11	200,467 56
15. Nuevo Leon, . . . . .	97,460 23	96,083 00
16. Oaxaca, . . . . .	530,993 58	530,993 58
17. Puebla, . . . . .	688,155 00	688,155 00
18. Queretaro, . . . . .	178,831 20	178,728 83
19. San Luis Potosi, . . . . .	332,927 78	327,429 91
20. Sinaloa, . . . . .	123,969 30	122,369 04
21. Sonora, . . . . .	142,000 00	167,296 50
22. Tabasco, . . . . .	91,425 26	84,019 91
23. Tamaulipas, . . . . .	100,000 00	98,525 25
24. Tlaxcala, . . . . .	87,369 79	87,787 34
25. Vera Cruz, . . . . .	618,557 75	607,335 43
26. Yucatan, . . . . .	229,172 44	228,792 33
27. Zacatecas, . . . . .	493,600 00	477,383 06
Total, . . . . .	<u>\$7,011,962 01</u>	<u>\$6,825,684 07</u>

STATEMENT SHOWING THE EXPENDITURES OF THE DIFFERENT BRANCHES OF THE GOVERNMENT FOR THE FISCAL YEAR 1879-1880.

	Amount authorized to be expended.	Amount actually expended.
1. Legislative Department, . . . . .	\$983,242 00	\$901,897 69
2. Executive " . . . . .	48,832 40	42,170 48
3. Judicial " . . . . .	347,878 00	319,915 91
4. Exterior relations, . . . . .	273,711 46	255,290 88
5. Interior " . . . . .	2,831,648 24	2,432,168 14
6. Justice, . . . . .	1,152,347 36	1,057,183 00
7. Public works, . . . . .	3,018,119 42	2,179,088 57
8. Treasury, . . . . .	4,938,294 14	4,565,519 87
9. War and marine, . . . . .	9,938,224 10	8,678,562 66
Total, . . . . .	<u>\$23,532,297 12</u>	<u>\$20,431,797 20</u>

RECAPITULATION.

*Sums of Authorized Budget.*

For Federal Government, . . . . .	\$23,532,297 12
For divers State Governments, . . . . .	7,657,897 05
Total, . . . . .	<u>\$31,190,194 17</u>

Federal revenue according to Treasurer's Report for 1879-1880, . . . . .	\$21,936,165 39
Revenue of the different States as already stated, . . . . .	7,011,962 01
Total, . . . . .	<u>\$28,948,127 40</u>

*Sums Expended.*

For Federal Government, . . . . .	\$20,431,896 15
For the Government of the States, . . . . .	6,825,684 07
Total, . . . . .	<u>\$27,257,580 22</u>

THE VALUE OF REAL ESTATE.

The number of estates or farms in the Republic of Mexico in 1856 amounted to 13,000, according to documents on file with the collector of direct contributions, and the value of the same was assessed at \$720,000,000, and the value of city property was set down at \$635,000,000, making together the total value of real estate in Mexico at that time amount to \$1,355,000,000.

The majority of the population of Mexico resided in 1856 in 26,468 cities, towns, villages, plantations and ranches, most of them situated on the plateau and on the planes of the Cordilleras or the inclined plane leading from the plateau to the coasts.

It was estimated that in 1856 over one hundred millions of dollars was in circulation in the Republic.

STATEMENT SHOWING THE VALUE OF REAL ESTATE IN THE  
REPUBLIC OF MEXICO IN 1881.

Name of State.	Value of City Property.	Value of Rural Property.	Total Value of Real Estate.
	\$	\$	\$
1 Aguascalientes	1,700,000 00	3,342,000 00	5,042,000 00
2 Campeche	552,509 00	691,286 00	1,243,795 00
3 Coahuila	1,140,828 00	1,809,865 00	2,950,693 00
4 Colima	1,891,790 00	800,852 00	2,692,642 00
5 Chiapas	439,994 00	1,836,286 00	2,276,280 00
6 Chihuahua	1,646,730 00	3,007,200 00	4,653,930 00
7 Durango	2,653,331 00	4,404,548 00	7,057,879 00
8 Guanajuato	8,572,982 88	21,285,290 89	29,858,273 77
9 Guerrero	1,993,304 00	11,503,400 00	13,496,704 00
10 Hidalgo	2,559,311 22	11,825,426 37	14,384,737 59
11 Jalisco	10,085,295 75	12,980,953 77	23,066,249 52
12 Mexico	4,444,651 43	18,946,445 46	23,391,096 89
13 Michoacan	7,299,057 00	13,650,657 00	20,949,714 00
14 Morelos	1,064,059 07	4,193,315 32	5,257,374 39
15 Nuevo Leon	5,029,463 00	4,555,327 00	9,584,790 00
16 Oaxaca	6,178,534 00	5,262,766 00	11,441,300 00
17 Puebla	18,411,678 55	14,609,865 91	33,021,544 46
18 Queretaro	4,861,238 00	5,699,245 00	10,560,483 00
19 San Luis Potosi	5,625,608 58	7,928,048 14	13,553,656 72
20 Sinaloa	2,996,313 00	1,611,477 00	4,607,790 00
21 Sonora			6,898,000 00
22 Tabasco	1,001,309 00	1,856,940 00	2,858,249 00
23 Tamaulipas	4,264,665 00	1,950,270 00	6,214,935 00
24 Tlaxcala	713,157 00	5,069,457 00	5,782,614 00
25 Vera Cruz	18,139,822 14	5,793,565 00	23,933,387 14
26 Yucatan	1,449,604 44	1,728,573 62	3,178,178 06
27 Zacatecas	5,774,416 42	9,841,235 59	15,615,652 01
28 Ter. of L. Cal.			7,598,682 00
29 Federal districts	49,194,724 04	5,689,697 97	54,884,422 01
Total	169,684,376 52	181,873,994 04	366,055,052 56

The estimated value of real estate in Mexico, without regard to its taxable value, sums up for the year 1881 to the amount of \$432,000,000. The author of the present work, from his own observations in traveling through the country, believes that the above sum does not actually represent more than one-fourth of the true value of real estate in Mexico.

MINING STATISTICS.

During the time that Mexico was a colony of Spain, that is from 1537 to 1821, the sum of \$2,086,269,703 silver and \$68,768,411 gold, making a total of \$2,155,038,124, was produced by the Mexican mines; and after independence was effected, from 1822 to 1880, the mines produced in silver \$900,658,309, and in gold \$49,413,786, making a total of \$950,072,095, which amounts in all to the sum of \$3,105,110,219. This immense amount of coin is about the sum in round numbers that *France* lost in the Franco-Prussian war. What is mining compared with industry?

TABLE SHOWING THE EXPORTS OF TIMBER TO FOREIGN  
COUNTRIES FROM THE REPUBLIC OF MEXICO  
THE FISCAL YEAR ENDING IN 1875.

Quality of Timber.	Total value exported through all the ports, in dollars.	Amount of duties paid the Mexican Government.
Mahogany,	\$877,973 97	\$103,455 78
Cedar,	79,859 00	8,114 25
Lumber,	3,963 14	8 64
Palo Moral,	105,555 20	—
Palo de tinte (dye wood),	543,378 06	—
Tapinceran,	150 00	3 00
	<u>\$1,610,879 37</u>	<u>\$111,581 67</u>

TOTAL IMPORTS FROM FOREIGN COUNTRIES INTO THE  
REPUBLIC OF MEXICO DURING THE FISCAL  
YEAR ENDING IN 1875.

From what countries imported.	Invoice value.	Value at Mexican ports.	Custom House duties.
England, . . .	\$8,657,168 68	\$12,523,745 77	\$5,157,476 92
France, . . .	3,096,990 17	4,453,327 26	1,811,713 42
Germany, . . .	1,005,763 33	1,658,394 12	721,912 75
Spain, . . .	914,908 58	1,329,527 02	610,738 42
South America, .	90,031 94	202,553 93	74,869 89
United States,	5,028,635 91	7,133,307 83	3,444,822 09
	<u>\$18,793,493 61</u>	<u>\$27,300,855 93</u>	<u>\$11,821,523 49</u>

TABLE INDICATING THE COST OF RAISING AND GATHERING ONE "ARROBA," OR 25 POUNDS, OF COTTON IN THE DIVERS STATES OF THE MEXICAN REPUBLIC, AND ITS COST LAID DOWN AT THE NEAREST PORT OF EXPORTS, AND THE PROFIT ITS CULTIVATION WILL GIVE TO THE AGRICULTURIST.

Taken from a memoir upon the culture of cotton in Mexico by Señor Don José Andrando in August, 1864.

(Since that time other States have been created out of the State of Mexico: Puebla, Tamaulipas, San Luis Potosi, etc., and Yucatan.)

The price of freight given in this table is at present much reduced, but it must be remembered that in 1864 nearly all the means of transportation was engaged in hauling cotton from Texas to Mexico, and that all the facilities for transportation were inadequate to the task.

The price of 18 cents is a fair average price as is also the cost of raising the same.

Cotton gathered in the following States.	Transported to the following-ports.	Cost of raising cotton per 25 pounds.	Cost of freight per arroba of 25 pounds.	Total expense to port of embarkation.	Average Value per 25 pounds.	Profit per 25 pounds.	Profit per fanego or 7 acres.
Aguascalientes	San Blas,	\$ 1 38	2 25	3 63	4 50	\$ 87	264 00
Baja California	{ Any port in that territory }		37 1 75			2 75	836 00
Chiapas	Tonala		55 1 93			2 57	781 00
Chihuahua	Altata	2 50	3 88			62	188 00
Coahuila	Matamoros	1 62	3 00			1 50	456 00
Colima	Manzanillo		37 1 75			2 75	836 00
Durango	Mazatlan	1 12	2 50			2 00	608 00
Guanajuato	Tampico	1 37	2 75			1 75	532 00
Gerrero	Acapulco		62 2 00			2 50	760 00
Island of Carmen	Carmen		25 1 63			2 87	872 00
Jalisco	San Blas	1 50	2 88			1 62	492 00
Mexico	Vera Cruz	1 25	2 63			1 87	568 00
Michoacan	Zacatula	1 70	3 08			1 42	431 00
Nuevo Leon	Matamoros	1 25	2 63			1 87	568 00
Oaxaca	Huatula		84 2 22			2 28	693 00
Puebla	Vera Cruz		87 2 25			2 25	684 00
Queretaro	Tampico	1 10	2 48			2 02	614 00
San Luis Potosi	do.	1 37	2 75			1 75	532 00
Sierra Gorda	do.	1 10	2 48			2 02	614 00
Sinaloa	Altata		87 2 25			2 25	684 00
Sonora	Guaymas		62 2 00			2 50	760 00
Tabasco	Frontera		50 1 88			2 62	796 00
Tamaulipas	Tampico		52 1 90			2 60	790 00
Tehuantepec	{ Tehuantepec or Minatillan }		24 1 62			2 88	875 00
Tlaxcala	Vera Cruz		87 2 25			2 25	684 00
Vera Cruz	do.		37 1 75			2 75	836 00
Yucatan	Campeche		45 1 83			2 67	811 00
Zacatecas	San Blas	2 00	3 38			1 12	340 00

TABLE SHOWING THE NUMBER OF PUBLIC SCHOOLS IN THE STATES AND THE TERRITORY OF LOWER CALIFORNIA, AND THE COST OF THEIR MAINTENANCE FOR THE YEAR 1880.

STATES.	Male schools.	Female schools.	Total.	Number of male pupils.	Number of female pupils.	Total number of pupils.	Annual cost of the schools
1. Aguascalientes	53	26	79	4,800	1,200	6,000	10,000
2. Campeche	43	14	57	3,600	700	4,300	15,000
3. Coahuila	70	30	100	5,230	2,127	7,357	26,000
4. Colima	18	17	35	1,452	1,502	2,954	18,000
5. Chiapas	78	12	90	2,125	500	2,625	10,000
6. Chihuahua	73	40	113	3,350	928	4,278	28,473
7. Durango	95	30	125	3,102	1,350	4,452	20,000
8. Guanajuato	176	145	321	10,754	7,045	17,799	81,386
9. Guerrero	392	28	420	13,006	1,755	14,761	34,965
10. Hidalgo	442	76	518	15,819	3,371	19,190	82,287
11. Jalisco	439	275	714	28,376	11,160	39,536	100,000
12. Mexico	887	181	1,068	41,321	10,245	51,566	187,216
13. Michoacan	154	89	243	7,000	3,200	10,200	52,756
14. Morelos	47	40	87	8,209	5,387	13,596	22,866
15. Nuevo Leon	181	104	285	8,928	4,732	13,660	68,000
16. Oaxaca	234	47	281	16,420	3,296	19,716	50,982
17. Puebla	889	118	1,007	50,320	15,000	65,320	153,000
18. Queretaro	101	62	163	6,271	2,922	9,193	30,000
19. San Luis Potosi	183	56	239	9,486	3,690	13,176	40,000
20. Sinaloa	238	42	280	6,600	2,600	9,200	58,000
21. Sonora	80	25	105	3,500	740	4,240	20,000
22. Tabasco	48	17	65	2,695	525	3,220	20,000
23. Tlaxcala	176	18	194	8,100	1,550	9,650	20,000
24. Tamaulipas	60	—	60	4,000	—	4,000	10,000
25. Vera Cruz	580	149	729	20,021	5,937	25,958	218,935
26. Yucatan	163	39	202	8,659	2,643	11,302	50,000
27. Zacatecas	311	178	489	13,738	6,653	20,391	72,000
Ter. of Lower California	17	9	26	677	367	1,044	10,000
Total	6,228	1,867	8,095	307,559	101,125	408,684	1,510,446

In 1874, according to a statement presented by Señor José Covarrubias, in a laborious report that he made upon public instruction in the Republic of Mexico, there were 8,103 primary schools, attended by 349,001 scholars of both sexes. According to the latest data received in the Secretary of State's office in 1880, there were in the Republic 8,536 primary schools, attended by 435,953 scholars. This shows in six years an augmentation in favor of public schools of 433, and of 86,952 children more attending the same.

TABLE SHOWING THE ALTITUDES OF SOME IMPORTANT POINTS IN THE REPUBLIC.

Names of Places.	Latitude.	Latitude west of Greenwich.	Altitude in feet.
Fort Brown, Texas.	25° 53' 16"	97° 26' 22" 5'	165.5
Edinburgh, Texas.	26° 5' 53" 9'	98° 13' 37" 5'	422.4
Ringold Barrack, Texas.			521.6
Laredo, Texas.	27° 30' 22" 75'	99° 28' 47" 47'	—
Eagle Pass, Texas.	28° 42' 43" 67'	100° 30' 26" 7'	—
Presidio del Norte, Texas.	29° 33' 53" 12'	104° 26' 27" 7'	2,779.0
San Eleazario, Texas.	31° 35' 12" 62'	106° 16' 15" 1'	3,607.3
El Paso, Texas.	31° 44' 15" 7'	106° 29' 5" 4'	3,795.0
El Paso Plaza, Mexico.			bank of river
Laguna Encenilla.			3,814.0
Camp between Encenilla and Chihuahua.			5,317.0
Curhuiriachic.	28° 12'		4,940.0
Mining town 90 miles west of Chihuahua.			6,275.0
La Bufa Mountain, west of Curhuiriachic.			7,918.0

Names of Places.	Latitude.	Longitude west of Greenwich.	Altitude in feet.
Chihuahua,			7,918.0
San Bernardo, spring route of Coahuila to Mapimi,			4,700.0
San Sebastian, Nazas River,			3,785.0
San Lorenzo, near Rio de Nazas,			3,815.0
San Juan, Valley of Nazas,			3,775.0
Pozo,			3,990.0
Parras (city),	25° 25'		4,987.0
Encantada, rancho near the road to Parras and San Luis Potosi Fork,			6,104.0
Rinconada Hacienda, at the descent of plateau,			3,381.0
Montery (city),	20° 40' 13"	100° 25' 36"	1,626.0
Cerralvo,			1,000.0
Pontiaguado,			700.0
Reynosa (Rio Bravo),			184.0
Catorce,			7,193.68
Cerro de los Angels,			10,467.60
Charcas,			6,994.0
San Luis Potosi,			6,018.48

## MEXICAN STAMP DUTY—ABRIDGED.

This work does not permit us to give in full the stamp duty law (ley del timbre), but we make such abstracts as will be found most interesting to foreigners.

Article 1st of the law says: "The Federal Revenue, known as stamp duty, shall be made effective by means of stamps, according to the disposition of this law."

Article 2d.—The stamp shall consist of three different classes, first, stamps for documents and books; second, stamps for goods, and, third, stamps for Federal contributions.

Article 3d.—The stamps shall only be valid for the year mentioned in their faces, or during the time the executive may determine, changing their value, if necessary.

Article 4th.—*The stamps for documents and books* shall be of the following denominations:

- I.—First, ten dollars.
- Second, five dollars.
- Third, one dollar.
- Fourth, fifty cents.
- Fifth, twenty-five cents.
- Sixth, ten cents.
- Seventh, five cents.
- Eighth, three cents.
- Ninth, one cent.

II.—The stamps for merchandise shall be of the following denominations, viz., one, three, five and ten cents.

III.—The stamps to be used for the payment of Federal contributions shall be of the following denominations, viz.:

- First, five dollars.
- Second, one dollar.
- Third, twenty-five cents.
- Fourth, five cents.
- Fifth, one cent.

IV.—The stamp duty may be paid with the stamps specified in this law, or with several stamps together amounting to the value required.

## E.

42.—*Public documents (testimonio), titles, etc.*

A.—When no sum is expressed or determined in the first page, five dollars, and for each additional page, fifty cents.

B.—When sums are mentioned or expressed on every page, fifty cents.

And for each one hundred dollars, and every fraction of a hundred dollars, ten cents.

C.—When sums are mentioned, and at the same time include objects whose value cannot be determined: for the first page, five dollars, and each additional page, fifty cents.

And for each one hundred dollars or fraction thereof, ten cents.

D.—Contract of rent or yearly lease, for each page, fifty cents, and for each hundred dollars or fraction of one hundred dollars mentioned in the same, *ten cents*.

E.—For a division or partition sale, for each leaf, fifty cents; and *one cent* on all sums from one to twenty dollars, and *one cent* for each additional twenty dollars or fractions thereof.

43.—*Titles to Mines*, for each page, fifty cents.

## I.

50.—*Inventories*, taken by order of court, per page, fifty cents.

## L.

51.—*For each legalization of signature*, ten cents.

52.—*Bills of exchange*.

From one to twenty dollars, one cent; over that sum, for each twenty dollars or fraction thereof, one cent.

53.—*For drafts*, as above.

## M.

58.—*Memorials, petitions, etc., before any authority*, for each leaf, fifty cents.

65.—*Promissory notes*, from one to twenty dollars, one cent; exceeding that amount, for each and every twenty dollars or fraction thereof, one cent.

67.—*Patent rights*—Shall be written upon special paper and contain stamps to the amount of twenty dollars.

76.—*Private power of attorney*.

A.—In which no sum is specified, and in which none can be determined, for each page, fifty cents.

B.—If any quantity is determined, in all cases where it is legally admissible from one to twenty dollars, one cent; exceeding that amount, for each and every twenty dollars or fraction thereof, one cent.

77.—*For a judicial power*.

A.—On the first page of the document, five dollars, and each succeeding one, fifty cents.

B.—For substitution of powers of attorney, for each page, fifty cents.

80.—*Protest*, for each page, fifty cents.

81.—*Protocol*, for each page, fifty cents.

## R.

82.—*Receipts, or any document given to prove payment or deposit of goods or money*. For sum of twenty dollars or less one cent; exceeding the sum of twenty dollars or fraction, one cent.

## T.

For each will or testament, for the first page, five dollars, and fifty cents for each additional page.

89.—*Testimonio*.

A.—For any legalized document, each page, fifty cents.

B.—And for each and every hundred dollars or fraction of a hundred dollars mentioned in the sum, *ten cents*.

C.—If no sum of money is mentioned in the document, and the same is not determined on the first page, for the first page, five dollars, and each succeeding page, fifty cents. And for each and every hundred dollars or fraction, *ten cents*.

## 90.—Professional titles

A.—Titles and license tax shall be extended on special paper, and the following stamp duty shall be attached to the same:—

For lawyer, . . . . .	\$20 00
Business agent, . . . . .	10 00
Agriculturist, . . . . .	5 00
Broker, 1st class, . . . . .	10 00
“ 2d “ . . . . .	5 00
Dentist, . . . . .	5 00
Notary public ( <i>fial</i> ), . . . . .	15 00
Apothecary, . . . . .	20 00
Flebotomist, . . . . .	5 00
Engineer, . . . . .	15 00
Teacher, professor, . . . . .	5 00
Doctor, . . . . .	20 00
Midwife, . . . . .	5 00
Scientific professors not mentioned in the tariff, . . . . .	10 00

## 91.—Titles to lands.

When value does not exceed two hundred dollars, for each title, *fifty cents*.

## 92.—Titles to mines.

A.—When no quantity or sum is expressed, nor can be determined on first page, five dollars, and fifty cents for each following page.

B.—When a sum is mentioned. For each page *fifty cents*, and *ten cents* for each one hundred dollars or fraction of a hundred dollars mentioned in the same.

Penalties for not complying with this law are very heavy.

## THE MAGUEY PLANT,

OR AGAVE AMERICANA.

The maguey plant is a true vegetal spring. When the plant is about to bloom it is anxiously watched by the patient Indian, who, as soon as he discovers the true signs, which consist in the stem beginning to shoot up, the leaves, which are usually bent toward the ground, close up, and the appearance of the plant changes completely. The stem is then cut short and an incision made with a sharp spoon into the heart of the plant, and the leaves tied close over it; the sap or juice is then gathered as often as three times a day. One Indian can attend to three hundred plants, usually called a *quebra*. A plant will commonly furnish, in twenty-four hours, four cubic decimetres (or 242 cubic inches, English measure), equal to eight Mexican quartillos. Of this total quantity they obtain three quartillos at sunrise, two at midday, and three at six in the evening. A very vigorous plant will yield as much as fifteen quartillos, or 454 cubic inches, English, per day, for four to five months, which amounts to the enormous volume of more than 1,100 cubic decimeters, or 67,130 inches. This abundance of juice, produced by a single maguey of scarcely a yard in height, is so much more astonishing from the fact that the plantations are generally situated on arid ground where nothing else will grow except yuca. It is well to add that the produce of the maguey, like the produce of the vine, varies very much according to the latitude and the atmosphere, etc.

After the plant has furnished its crop of juice it dies off. Then out of the leaves a very good paper can be manufactured; the point of the leaves are used by the Indians as needles. Out of the leaves is made a kind of hemp called istle, which is worth as much as 12½ cents per pound, and is exported to manufacture rope, brushes, etc. The plant is prevented from blooming, because all that nature destined to produce, the growth of the stems, flowers and fruit is to become the favorite beverage of the Mexicans, *pulque*. The plant which has until then been abandoned to itself as the wild tree of the



forest, when it is about to blossom, becomes an object of the greatest care and vigilance. The Mexican Indian, with the patience that characterizes his race, watches the appearance of the indications of the growth of the stem, the straightening and closing of the leaves, and, in fact, the general appearance of the plant; he inspects carefully the field and marks each plant that is about to bloom. It is then that the sap is gathered, which is called in Mexico *agua miel* (honey-water) on account of its sweet flavor, and with it the *pulque* is prepared. After cutting the sprout or stem of the plant and taking away the leaves surrounding it with the spoon, the stem is hollowed out six or seven inches in diameter, and four to six inches in depth. It is in this cavity that the sap is gathered; the hole or wound made in the plant, enlarged gradually, is covered by closing the leaves growing around the stem, tying them together at the points, or bending them by placing a flat rock over them. The liquid sap is carried off two or three times a day, and in order to facilitate the flow of sap, the cavity made in the plant is rasped with a sharp instrument each time that it is emptied, something like a spoon with sharp edges. To gather this sweet sap the Indians use an instrument acting like a pipette, which they call *Acocote*. It consists of a long gourd, to each end of which are affixed two pieces of sharp horn: while one end is plunged in the liquid, the other placed in the mouth draws the liquid, which is then emptied in an earthen jar and then carried into the cellar where the fermentation is to take place.

Although the maguey will grow in soil where no other plant will; it matures with more precocity when planted in good soil and is cultivated, and in some localities watered occasionally. In some soil the agave will mature in five years. Heat has great influence over the expansion of the growth of the stem and its blooming. Experience shows that the maguey acclimated in Africa and in South America will travel over the cycle of its vegetation much more rapidly than on the table lands of Mexico and Peru. This rapid growth is, however, unfavorable to the accumulation of the sweet sap, and that is probably the reason why in Spain and Italy the agave is not, as in the plateau of Anahuac, cultivated as a produce.

In northern climes the maguey vegetates but rarely matures. That is probably the reason that has caused the popular belief that

it only blossomed in a hundred years. In the State of Oaxaca, in the Republic of Mexico, at an altitude of 10,000 feet, the *furcraea longava* being forty-two to forty-five feet in height, bearing leaves from six to nine feet long, only brings forth its yellow flower once in every hundred years—if the Indian's statement can be relied on. In the vicinity of Toluca and Cacanumecan, State of Mexico, and Cholula, State of Puebla, the cultivated maguey reaches its maturity in eight years. In that section of the country a plant furnishes a gallon of liquid daily, and a vigorous plant will furnish as much as seven quarts in every twenty-four hours, during four or five months; this is the maximum yield. In bad soils a plant will not render in the same period of time more than 112 quarts of juice (*agua miel*).

Dr. Dreyer, military apothecary in the French army, has observed that one plant during three months yielded one to two quarts daily; altogether, 136 quarts. The difference in the yield of this plant is attributed to the locality, the quality of the soil, and the culture or the care taken of the plant when the first signs of maturity are shown, and, above all, of the choice in the variety of the plant to be cultivated. In the State of San Luis Potosi the maguey matures in from four to eight years, according to locality; five years are considered a fair average. The cost of planting 100,000 magueys in that State is from \$400 to \$600. A large maguey can produce twenty-five pounds of istle, worth from \$2.50 to \$3.00.

The maguey stands at the head of the alcohol producing plants, producing fifty per cent. more alcohol than corn, sugar-cane, Irish potatoes, grapes, and in fact of all plants on an equal space of ground. It excels all other products in its production of alcohol.