

## Investment in Chemical Education in the United States, 1920-1921

(Compiled by Research Information Service, National Research Council).

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At the request of the Chemical Foundation of New York City the Research Information Service of the National Research Council has compiled a series of tables showing the investment in chemical education in the United States for the collegiate year 1920-1921. This information was secured by sending questionnaires to the 600 universities and colleges listed in the Educational Directory of the U. S. Bureau of Education. Reports were received from about 450 institutions. This number, therefore, represents approximately three-fourths of all the colleges and universities in the United States. It represents, however, a much larger proportion of the amount of money invested, as practically all of the large colleges and universities responded. In nine states returns were complete; in practically all of the other states returns varied between two-thirds and three-fourths of the institutions listed.

The information was tabulated first by university or college grouped under the individual state, but on account of the length of these tables, the statistics have been summarized by state in Table I. The ten states leading in investment in chemical education for this period are listed in Table II. These figures include not only the actual money invested, but also the appropriations for new buildings and equipment under construction at this time. This latter amount, \$7,553,300, is divided between 17 states and 27 institutions. Of these institutions Cornell

leads with \$2,000,000 and Yale is next with \$1,866,900. The sums reported by the other institutions vary between \$5000 for Howard College, Alabama, and \$465,000 for the University of Minnesota. Twelve institutions reported a total of about \$2,000,000 worth of building under consideration.

TABLE II—TEN STATES LEADING IN INVESTMENT IN CHEMICAL EDUCATION, 1920-1921

New York	\$ 6,790,015	Minnesota	\$ 2,351,210
Massachusetts	4,146,917	Illinois	1,868,983
Ohio	3,196,204	California	1,490,587
Connecticut	2,786,495	Michigan	1,390,850
Pennsylvania	2,404,521	Indiana	1,098,726

Those states having over \$500,000 invested in buildings and equipment are shown in Table III. The cost of maintenance and the number of students are also given. From these figures one may roughly approximate the cost per student per year in the states listed.

TABLE III—STATES HAVING OVER \$500,000 INVESTED IN BUILDINGS AND EQUIPMENT FOR CHEMISTRY

State	Approximate Valuation of Buildings and Equipment	Cost of Maintenance of Chemical and Chemical Engineering Departments	Total Number of Students
New York	\$ 3,973,459	\$ 805,556	16,453
Massachusetts	2,793,873	1,345,571	5,954
Ohio	2,014,679	503,825	8,571
Pennsylvania	1,854,852	464,269	6,444
Minnesota	1,515,972	168,447	5,823
Illinois	1,490,272	370,782	7,779
California	1,217,045	271,192	3,869
Michigan	840,499	276,901	4,862
Oklahoma	773,000	88,800	1,786
Indiana	745,000	152,226	3,667
Texas	659,495	204,706	3,393
Connecticut	618,500	151,095	1,351
New Hampshire	605,000	43,500	711
Wisconsin	569,710	236,774	3,361
Missouri	550,105	135,044	2,932
Colorado	546,750	102,462	2,102

TABLE I—INVESTMENT IN CHEMICAL EDUCATION IN THE UNITED STATES, 1920-1921

STATE	Number of Institutions Reporting	Approximate Valuation of Buildings and Equipment	Valuation of New Buildings under Construction and Their Equipment	Funds Received for Chemical Endowment during Year	Cost of Maintenance of Chemical and Chemical Engineering Departments (Salaries, Chemicals, Supplies, Services, etc.)	Total Number of Students in Chemistry (All Courses)	Total Number of Students in Chemical Engineering (where Separate Department Is Maintained)
						Graduate	Undergraduate
Alabama.....	8	\$ 191,044	\$ 5,000	\$ 600	\$ 39,436	8	901
Arizona.....	1	60,000	.....	.....	17,500	3	250
Arkansas.....	5	45,500	.....	.....	22,000	8	514
California.....	12	1,217,045	.....	2,350	271,192	44	3,825
Colorado.....	8	546,750	.....	350	102,462	24	2,078
Connecticut.....	5	618,500	2,016,900	.....	151,095	47	1,304
Delaware.....	1	75,000	.....	.....	11,682	.....	156
Dist. of Columbia.....	6	410,233	.....	.....	121,443	70	1,258
Florida.....	3	97,000	.....	.....	28,450	2	536
Georgia.....	8	169,650	.....	.....	56,543	.....	1,255
Idaho.....	1	21,000	.....	.....	18,315	.....	291
Illinois.....	23	1,490,272	.....	7,929	370,782	1,093	6,686
Indiana.....	11	745,000	.....	201,500	152,226	42	3,625
Iowa.....	15	444,210	400,000	.....	133,545	19	2,720
Kansas.....	14	385,971	82,500	4,000	101,103	44	2,406
Kentucky.....	7	100,940	.....	75,800	34,929	17	786
Louisiana.....	5	374,630	.....	.....	75,114	23	1,157
Maine.....	4	329,679	.....	.....	49,210	2	563
Maryland.....	9	343,489	.....	.....	97,725	48	1,713
Massachusetts.....	16	2,793,873	.....	7,478	1,345,571	178	5,776
Michigan.....	9	840,499	265,000	8,450	276,901	114	4,748
Minnesota.....	9	1,515,972	665,000	1,800	168,447	132	5,691
Mississippi.....	5	451,000	275,000	22,000	48,650	12	1,165
Missouri.....	10	550,105	150,000	1,300	135,044	33	2,899
Montana.....	2	220,000	250,000	12,000	28,655	2	400
Nebraska.....	8	496,820	50,000	14,000	87,906	13	1,808
Nevada.....	1	30,000	.....	.....	11,800	1	120
New Hampshire.....	2	605,000	.....	.....	43,500	2	709
New Jersey.....	3	275,000	.....	.....	64,309	4	1,028
New Mexico.....	3	120,000	.....	.....	14,600	.....	178
New York.....	31	3,973,459	2,009,000	2,000	805,556	1,089	15,364
North Carolina.....	14	358,000	50,000	2,000	81,300	16	1,690
North Dakota.....	4	130,000	.....	.....	34,258	2	508
Ohio.....	31	2,014,679	675,000	2,700	503,825	139	8,432
Oklahoma.....	5	773,000	.....	.....	88,800	10	1,776
Oregon.....	5	59,600	.....	.....	33,423	5	1,047
Pennsylvania.....	33	1,854,852	79,900	5,500	464,269	112	6,332
Rhode Island.....	2	100,000	450,000	.....	36,006	20	833
South Carolina.....	11	323,620	.....	400	58,780	5	1,141
South Dakota.....	6	161,000	.....	.....	45,276	12	653
Tennessee.....	13	450,700	.....	.....	87,294	60	2,274
Texas.....	11	659,495	.....	1,000	204,706	36	3,357
Utah.....	2	196,093	.....	.....	20,780	6	714
Vermont.....	4	298,675	.....	100,000	39,234	2	782
Virginia.....	15	436,750	.....	52,000	116,501	28	3,101
Washington.....	4	263,969	.....	.....	108,777	18	1,031
West Virginia.....	3	43,000	100,000	.....	11,750	.....	199
Wisconsin.....	8	569,710	30,000	716	236,774	98	3,263
Wyoming.....	1	.....	.....	.....	6,500	.....	85
<b>TOTAL</b>	<b>417</b>	<b>\$28,230,784</b>	<b>\$7,553,300</b>	<b>\$525,868</b>	<b>\$7,739,970</b>	<b>3,643</b>	<b>109,128</b>
						<b>302</b>	<b>5,585</b>