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ANNUAL INDUSTRY REPORT

CHEMICALS AND ALLIED PRODUCTS GROUP

THE ADHESIVES INDUSTRY, 1944

This report on the Adhesives Industry in Canada covers the operations of all factories which made glue, mucilage, paste or special adhesive cements as their chief products. In 1944 there were 24 establishments in this group, 15 being located in Ontario, 7 in Quebec and 2 in British Columbia.

Production declined 1.9 per cent in 1944 to \$5,626,892, the number of employees decreased 3.1 per cent to 631 and salaries and wages increased 2.8 per cent to \$1,123,129. The cost of fuel and electricity at \$232,435 was greater by 9.4 per cent than in 1943, and the value of materials used directly in manufacturing processes was 3.3 per cent higher at \$3,139,664.

The output of bone and hide glue declined to 2,347 tons worth \$927,820 from 2,651 tons at \$1,039,063 in 1943; vegetable glues increased to 9,563 tons at \$1,259,888 from 9,000 tons at \$1,198,399; and other glues totalled 6,280 tons valued at \$1,344-732 as against 6,271 tons at \$1,355,043 in the previous year and the value of mucilage and paste increased to \$376,161 from \$357,268 in 1943. Mucilage and paste were also made by concerns in other industries, particularly by the manufacturers of inks, and the total production from all sources amounted to \$474,225 in 1944 and to \$465-536 in 1943.

Table 1 - Principal Statistics of the Adhesives Industry 1934 - 1944

| Year | No. of plants | Average No. of employees | Salaries and wages | Cost of fuel and electricity at works | Cost of materials at works | Gross selling value of products at works |
|-------------------------------------|---------------|--------------------------|--------------------|---------------------------------------|----------------------------|--|
| 1934 | 16 | 332 | 566,008 | 77,198 | 587,535 | 1,307,393 |
| 1935 | 17 | 389 | 423,513 | 114,604 | 550,700 | 1,436,259 |
| 1936 | 19 | 420 | 457,170 | 123,865 | 813,291 | 1,799,200 |
| 1937 | 18 | 416 | 483,819 | 116,842 | 901,194 | 1,904,137 |
| 1938 | 19 | 415 | 496,950 | 115,972 | 851,529 | 1,904,258 |
| 1939 | 19 | 427 | 520,662 | 89,573 | 905,411 | 2,110,806 |
| 1940 | 21 | 497 | 621,451 | 146,661 | 1,120,288 | 2,789,389 |
| 1941 | 22 | 599 | 753,491 | 164,820 | 1,858,728 | 3,675,631 |
| 1942 | 21 | 559 | 842,026 | 200,142 | 2,265,181 | 4,630,667 |
| 1943 | 22 | 651 | 1,091,721 | 211,389 | 3,037,649 | 5,736,151 |
| 1944 | 24 | 631 | 1,123,129 | 232,435 | 3,139,664 | 5,626,892 |
| Per cent change, 1944 from 1943.... | | -3.1 | +2.8 | +9.4 | +3.3 | -1.9 |

NOTE: Profits or losses cannot be calculated from above figures as data are not available for general expense items, such as interest, rent, depreciation, taxes, insurance, advertising, etc.

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Adhesives

Table 2 - PRINCIPAL STATISTICS, BY PROVINCES, 1943 and 1944

| Year | Number of plants | Average number of em- ployees | Salaries and wages | Cost of fuel and electricity at works | Cost of materials at works | Gross sell- ing value of products at works |
|------------------|------------------------|--|--------------------------|--|----------------------------------|---|
| | | \$ | \$ | \$ | \$ | \$ |
| <u>1943</u> | | | | | | |
| Quebec..... | 7 | 183 | 243,533 | 56,606 | 545,971 | 1,254,763 |
| Ontario | 13) | | | | | |
| British Columbia | 2) | 468 | 848,188 | 155,283 | 2,491,678 | 4,481,388 |
| CANADA | 22 | 651 | 1,091,721 | 211,889 | 3,037,649 | 5,736,151 |

1944

| | | | | | | |
|------------------|-----|-----|-----------|---------|-----------|-----------|
| Quebec..... | 7 | 176 | 278,633 | 53,927 | 637,171 | 1,377,566 |
| Ontario | 15) | 455 | 844,496 | 178,508 | 2,502,493 | 4,249,526 |
| British Columbia | 2) | | | | | |
| CANADA | 24 | 631 | 1,123,129 | 232,435 | 3,139,664 | 5,626,892 |

Table 3 - EMPLOYEES, SALARIES AND WAGES, 1943 and 1944

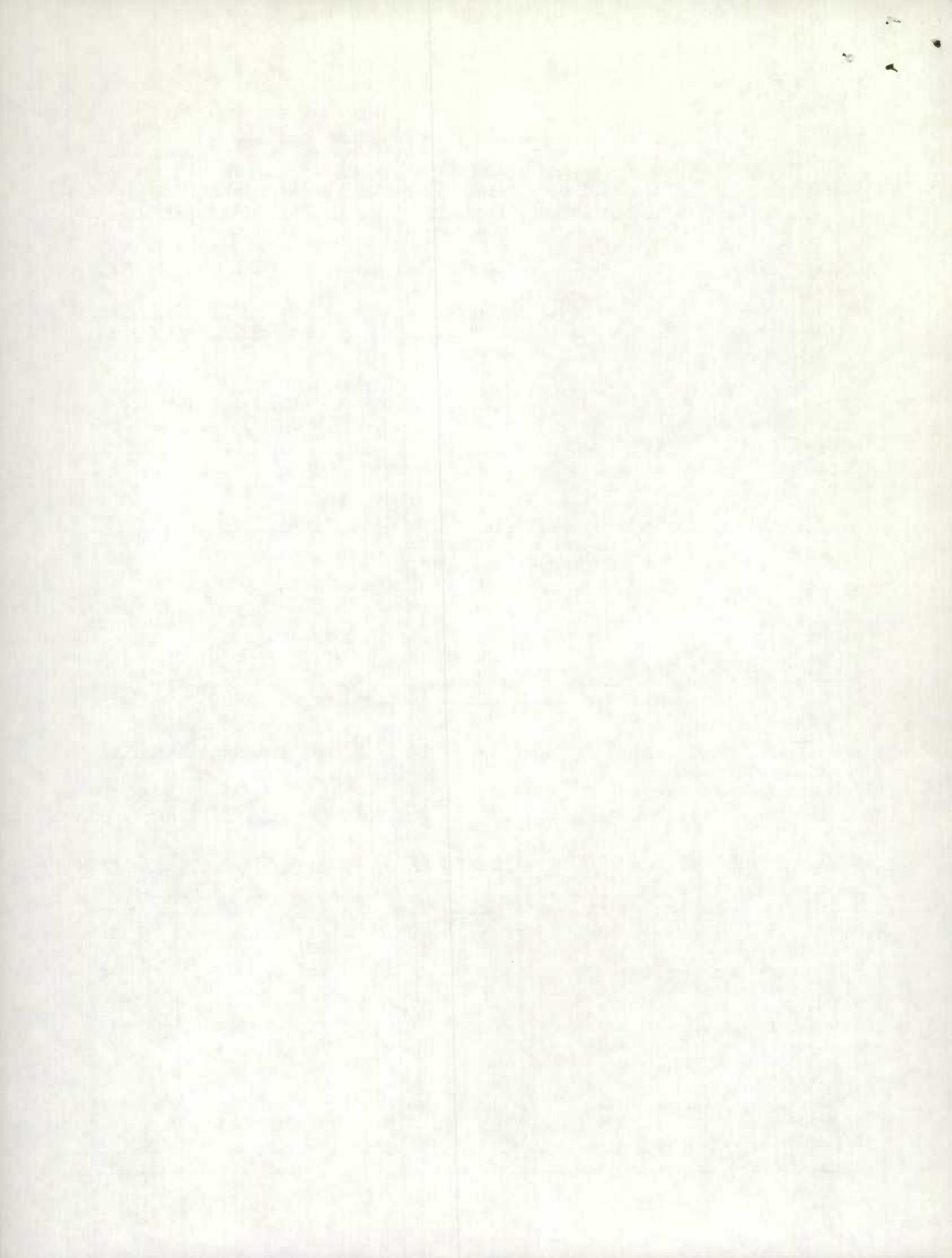
| | Average Number of Employees | | | | TOTAL | Salaries | Wages | TOTAL SALARIES and WAGES |
|------------------|-----------------------------|--------|----------|--------|-------|----------|---------|--------------------------------|
| | On Salaries | | On Wages | | | | | |
| | Male | Female | Male | Female | | | | |
| <u>1943</u> | | | | | | | | |
| Quebec | 55 | 18 | 104 | 28 | 183 | 105,295 | 138,238 | 243,533 |
| Ontario and | | | | | | | | |
| British Columbia | 96 | 35 | 310 | 27 | 468 | 313,170 | 535,018 | 848,188 |
| CANADA | 129 | 63 | 414 | 55 | 651 | 413,465 | 673,256 | 1,091,721 |

1944

| | | | | | | | | |
|------------------|-----|----|-----|----|-----|---------|---------|-----------|
| Quebec | 26 | 16 | 108 | 26 | 176 | 105,137 | 173,496 | 278,633 |
| Ontario and | | | | | | | | |
| British Columbia | 89 | 41 | 293 | 32 | 455 | 304,003 | 540,493 | 844,496 |
| CANADA | 115 | 57 | 401 | 58 | 631 | 409,140 | 715,989 | 1,123,129 |

Table 4 - WAGE-EARNERS, BY MONTHS, 1943 and 1944 (On the last work-day of each month)

| Month | 1943 | | | 1944 | | |
|-----------------|------|--------|-------|------|--------|-------|
| | Male | Female | TOTAL | Male | Female | TOTAL |
| January | 425 | 40 | 465 | 417 | 57 | 474 |
| February | 426 | 44 | 470 | 397 | 60 | 457 |
| March | 423 | 42 | 465 | 397 | 61 | 458 |
| April | 416 | 49 | 465 | 414 | 58 | 472 |
| May | 418 | 53 | 471 | 398 | 59 | 457 |
| June | 419 | 57 | 476 | 415 | 55 | 470 |
| July | 429 | 62 | 491 | 412 | 65 | 477 |
| August | 411 | 60 | 471 | 404 | 62 | 466 |
| September | 391 | 67 | 458 | 390 | 55 | 445 |
| October | 405 | 65 | 470 | 386 | 58 | 444 |
| November | 424 | 59 | 483 | 405 | 51 | 456 |
| December | 411 | 60 | 471 | 393 | 46 | 439 |
| AVERAGE | 414 | 55 | 469 | 401 | 58 | 459 |



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Table 5 - HOURS WORKED PER WEEK BY WAGE-EARNERS, 1943 and 1944 (In one week of highest employment; overtime included)

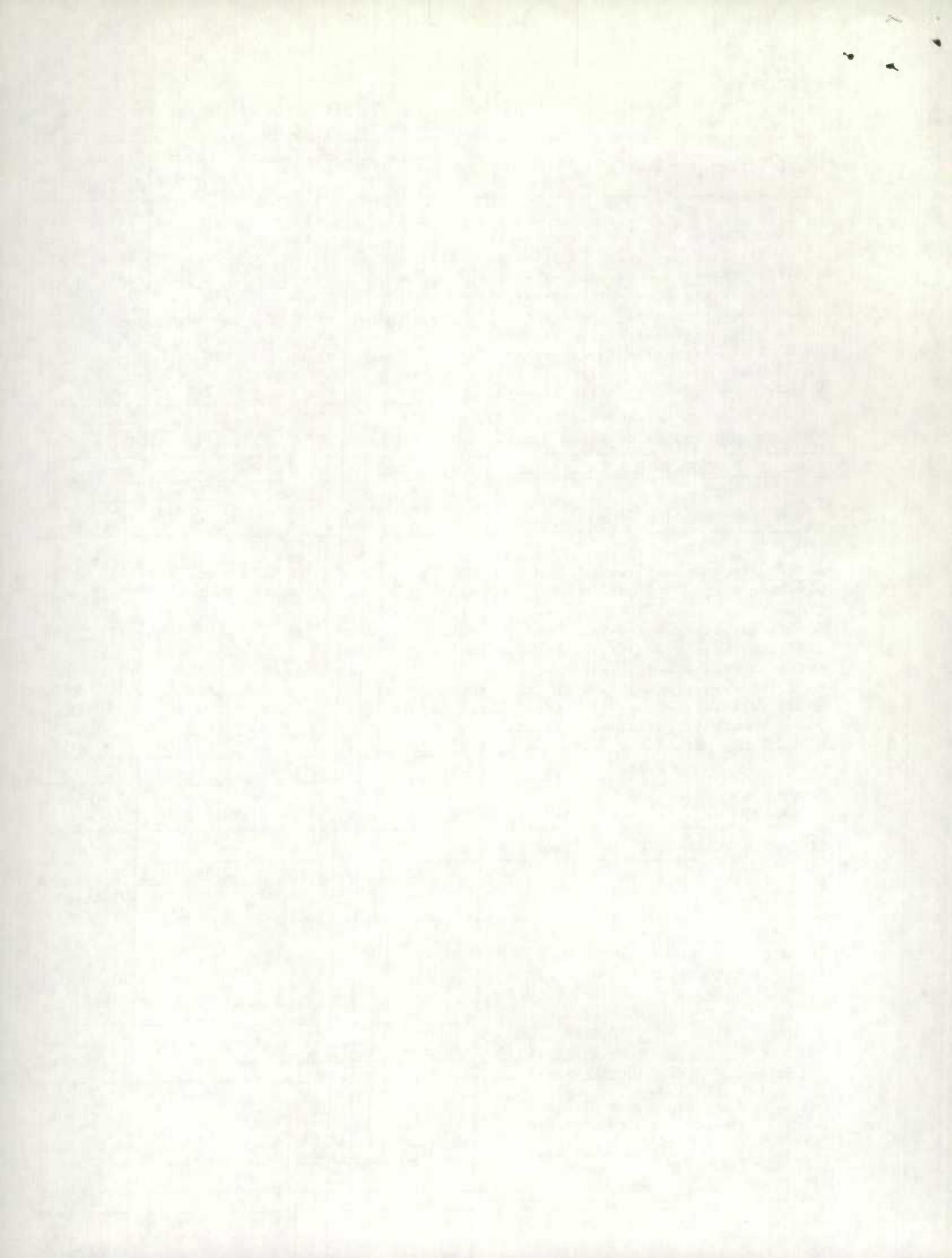
| Hours worked per week | Number of Wage-Earners | | | | | | | |
|-------------------------------------|------------------------|--------|---------|--------|------|--------|------|--------|
| | 1 9 4 3 | | 1 9 4 4 | | Male | Female | Male | Female |
| | Male | Female | Male | Female | | | | |
| 30 hours or less | 32 | 13 | 38 | 12 | | | | |
| 31-43 hours | 42 | 9 | 34 | 1 | | | | |
| 44 hours | 56 | 15 | 72 | 22 | | | | |
| 45-47 hours | 61 | 28 | 56 | 39 | | | | |
| 48 hours | 58 | 1 | 114 | - | | | | |
| 49-50 hours | 13 | ... | 19 | 1 | | | | |
| 51-54 hours | 77 | ... | 51 | - | | | | |
| 55 hours | 16 | ... | 16 | - | | | | |
| 56-64 hours | 55 | ... | 52 | - | | | | |
| 65 hours and over | 49 | 1 | 21 | - | | | | |
| TOTAL | 459 | 67 | 453 | 75 | | | | |
| Total wages paid in selected week.. | \$ 12,861 | 1,187 | 13,911 | 1,046 | | | | |

TABLE 6 - FUEL AND ELECTRICITY USED, 1943 and 1944

| Kind | Unit of measure | 1 9 4 3 | | 1 9 4 4 | |
|---|-----------------|-----------|---------------|-----------|---------------|
| | | Quantity | Cost at works | Quantity | Cost at works |
| Anthracite coal | ton | 22 | \$ 283 | 15 | \$ 186 |
| Bituminous coal - Canadian | ton | 4,330 | 40,701 | 2,454 | 22,063 |
| Foreign | ton | 18,103 | 132,238 | 19,894 | 159,604 |
| Coke | ton | 124 | 1,523 | 49 | 635 |
| Gasoline | Imp.gal. | 53,659 | 9,844 | 39,685 | 12,092 |
| Kerosene | Imp.gal. | 100 | 22 | 140 | 25 |
| Fuel oil | Imp.gal. | 18,034 | 1,329 | 151,883 | 9,854 |
| Wood | cord | 30 | 325 | 45 | 600 |
| Gas - Manufactured | M cu.ft. | 1,526 | 1,280 | 3,482 | 2,072 |
| Electricity purchased.... | K.W.H. | 1,918,171 | 24,344 | 1,865,957 | 25,304 |
| TOTAL.... | ... | ... | 211,889 | - | 232,435 |
| Electricity generated for own use | K.W.H. | 603,200 | ... | 446,400 | - |

TABLE 7 - POWER EQUIPMENT, 1943 and 1944

| | 1 9 4 3 | Ordinarily in Use | | In Reserve or Idle | |
|---|---------|-------------------|-------------------------|--------------------|-------------------------|
| | | Number of units | Total rated horse power | Number of units | Total rated horse power |
| <u>1 9 4 3</u> | | | | | |
| Steam engines and steam turbines | 6 | 610 | 2 | 90 | |
| Electric motors run by purchased power | 301 | 1,402 | 28 | 174 | |
| TOTAL | 307 | 2,012 | 30 | 264 | |
| Electric motors run by power generated in establishment.... | 19 | 258 | 8 | 61 | |
| Stationary boilers | 12 | 1,465 | 11 | 60 | |
| <u>1 9 4 4</u> | | | | | |
| Steam engines and steam turbines | 6 | 610 | 2 | 90 | |
| Electric motors run by purchased power | 312 | 1,528 | 21 | 127 | |
| TOTAL | 318 | 2,138 | 23 | 217 | |
| Electric motors run by power generated in establishment | 19 | 258 | 5 | 61 | |
| Stationary power boilers | 14 | 1,521 | 1 | 60 | |



Adhesives

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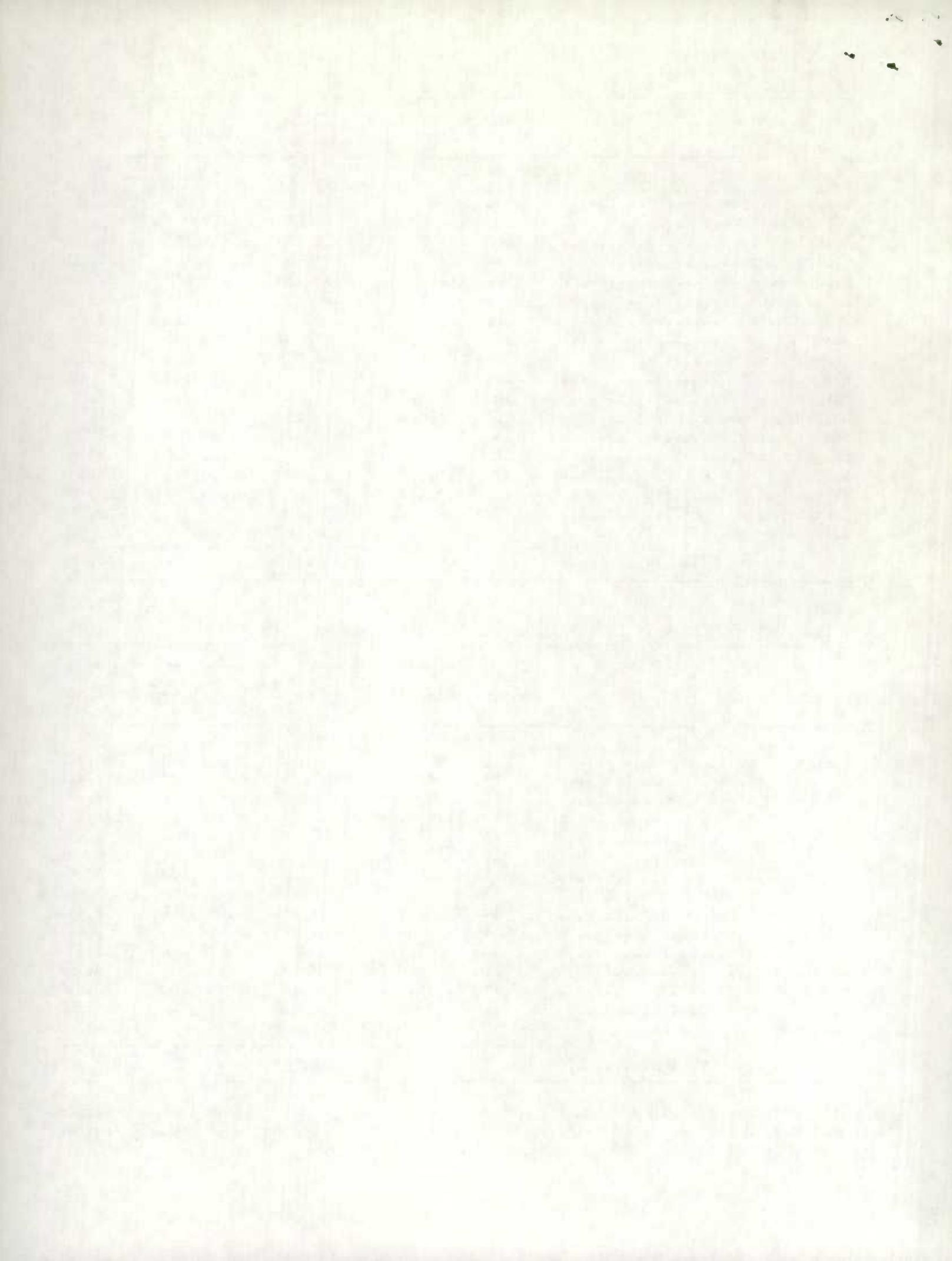
Table 8 - MATERIALS USED IN MANUFACTURING, 1943 and 1944

| | Unit of measure | 1943 | | 1944 | |
|----------------------------------|-----------------|------------|------------------|------------|------------------|
| | | Quantity | Cost at works | Quantity | Cost at works |
| Bones | ton | 7,105 | \$100,858 | 12,988 | \$84,973 |
| Hides and hide trimmings | ton | 15,660 | 324,544 | 17,007 | 320,524 |
| Casein | lb. | 1,221,088 | 275,207 | 727,016 | 160,831 |
| Dextrine | lb. | 6,750,596 | 322,390 | 6,411,415 | 384,594 |
| Flour, tapioca | lb. | 969,097 | 69,769 | 1,238,198 | 103,732 |
| Flour, soya bean | lb. | 1,313,270 | 52,806 | 1,095,307 | 51,333 |
| Flour, other | lb. | 8,277,531 | 252,218 | 10,152,559 | 280,061 |
| Glycerine | lb. | 93,967 | 14,685 | 150,411 | 25,490 |
| Gums | lb. | 160,832 | 27,008 | 79,058 | 13,686 |
| Lime | ton | 1,016 | 10,573 | 814 | 8,475 |
| Resin | lb. | 458,678 | 81,296 | 497,704 | 87,828 |
| Rubber | lb. | 75,441 | 14,013 | 119,853 | 33,547 |
| Solvents (benzol, naphtha, etc) | gal. | 158,895 | 47,432 | 248,995 | 61,580 |
| Starch | lb. | 1,174,031 | 60,821 | 1,235,266 | 64,235 |
| Sulphur | lb. | 185,000 | 2,847 | 139,600 | 2,058 |
| Sulphuric acid 66° Bé | lb. | 1,625,040 | 14,679 | 1,608,771 | 13,981 |
| Tallow and fat | lb. | 4,321,651 | 217,880 | 4,564,558 | 229,733 |
| Containers and packing materials | ... | ... | 198,436 | - | 201,603 |
| All other materials | ... | ... | 950,187 | - | 1,013,600 |
| TOTAL | ... | ... | 3,037,649 | - | 3,139,664 |

Table 9 - PRODUCTS MADE IN THE ADHESIVES INDUSTRY 1943 and 1944

| Product | Unit of Measure | 1943 | | 1944 | |
|------------------------------|-----------------|------------|------------------------|------------|------------------------|
| | | Quantity | Selling value at works | Quantity | Selling value at works |
| Cements - Linoleum | lb. | 901,530 | \$45,842 | 473,636 | \$54,473 |
| Other..... | lb. | 867,220 | 180,800 | 1,079,500 | 287,222 |
| Glue - Bone and hide | lb. | 5,301,646 | 1,059,063 | 4,695,408 | 927,820 |
| Casein | lb. | 1,103,664 | 254,399 | 551,176 | 121,701 |
| Fish | lb. | 26,180 | 18,776 | 12,700 | 8,486 |
| Flexible | lb. | .790,693 | 117,620 | 764,864 | 116,998 |
| Soya bean | lb. | 1,506,000 | 92,570 | 1,222,900 | 76,454 |
| Synthetic resin | lb. | 8,977,932 | 963,876 | 9,783,555 | 1,005,493 |
| Vegetable - dry | lb. | 2,253,957 | 195,051 | 3,340,816 | 259,447 |
| liquid | lb. | 15,745,718 | 1,003,348 | 15,784,506 | 1,000,441 |
| Other | lb. | 137,533 | 11,002 | 210,000 | 15,600 |
| Mucilage | lb. | 74,000 | 40,900 | 117,350 | 59,580 |
| Paste - Dry | lb. | 4,214,912 | 276,043 | 4,584,165 | 299,918 |
| Liquid | lb. | 913,200 | 40,525 | 757,720 | 16,663 |
| All other products (x) | | - | 1,459,936 | - | 1,376,596 |
| TOTAL,.... | | | 5,786,151 | - | 5,626,892 |

(x) Includes sealing wax, casein, buttermilk powder, grease, tallow, tankage, blended starches, dextrines, cold water paints, steamed bone, and other such products which were reported by only one or two firms in this industry.



Adhesives

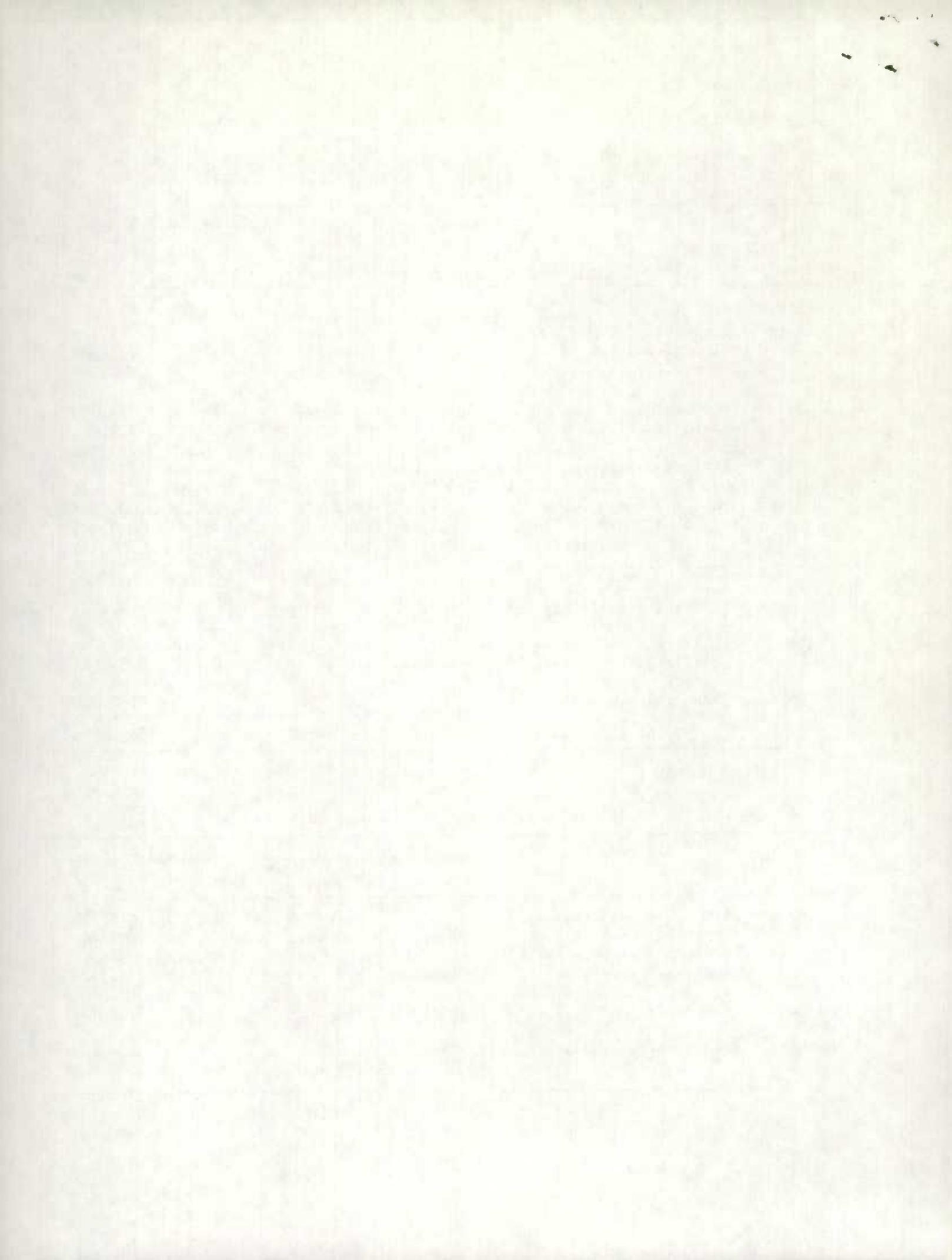
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Table 10 - TOTAL PRODUCTION OF ADHESIVES IN CANADA - 1943 and 1944
(From all industries)

| | | 1943 | | 1944 | |
|------------------------------------|------|------------|---------------------------|------------|---------------------------|
| | | Quantity | Selling value at works \$ | Quantity | Selling value at works \$ |
| Cements - Linoleum | - | 51,642 | | - | 64,475 |
| Rubber | - | 415,036 | | - | 485,684 |
| Other | - | 198,724 | | - | 288,387 |
| Glue - Bone and hide | lb. | 5,301,646 | 1,039,065 | 4,693,408 | 927,820 |
| Casein | lb. | 1,103,664 | 254,399 | 551,176 | 121,701 |
| Fish | gal. | 80,237 | 192,230 | 84,500 | 167,264 |
| Flexible | lb. | 790,693 | 117,620 | 764,864 | 116,998 |
| Soya bean | lb. | 1,506,000 | 92,370 | 1,222,900 | 76,454 |
| Synthetic resin | lb. | 8,977,932 | 963,876 | 9,783,555 | 1,005,493 |
| Vegetable - dry | lb. | 2,253,957 | 195,051 | 3,340,816 | 259,447 |
| liquid ... | lb. | 15,745,748 | 1,003,543 | 15,784,506 | 1,000,441 |
| Other | - | 47,214 | | - | 34,951 |
| Mucilage | lb. | 194,530 | 84,904 | 221,210 | 99,611 |
| Paste - Dry | lb. | 4,214,912 | 276,043 | 4,659,870 | 309,003 |
| Liquid | lb. | 1,159,069 | 104,589 | 896,396 | 65,611 |
| Adhesives, other (kind not stated) | - | 169,760 | | - | 189,836 |
| TOTAL | - | 5,205,869 | | - | 5,213,174 |

Table 11 - IMPORTS OF ADHESIVES INTO CANADA, 1943 and 1944

| | | 1943 | | 1944 | |
|----------------------------------|---|-----------|---------|-----------|---------|
| | | Pounds | \$ | Pounds | \$ |
| Glue - Animal | | 2,426,898 | 401,713 | 2,601,445 | 435,957 |
| Synthetic resin | | 144,070 | 38,158 | 1,029,237 | 290,348 |
| Vegetable | | 15,220 | 1,749 | 19,206 | 1,668 |
| Other | | 342,255 | 102,093 | 138,717 | 46,083 |
| Mucilage and Adhesive paste | | 330,991 | 42,178 | 388,078 | 47,060 |
| Rubber cement | - | 132,614 | | - | 194,450 |



LIST OF FIRMS IN THE ADHESIVES INDUSTRY, 1944

| Name | Location of Plant |
|---|---------------------------------------|
| QUEBEC - | |
| B. B. Chemical Co. of Canada Limited | 2610 Bennett Ave., Montreal |
| Bulldog Grip Cement Co. Inc. | 2101 Bennett Ave., Montreal |
| Dominion Flour Paste Co., The | 2135 Maisonneuve, Montreal |
| Hercules-Laux-Merritt Ltd. | Stanbridge |
| Le Page's Inc. | 6892 Notre Dame St. E., Montreal |
| Marquis, F. Canac, Limited | 3 Courcelette St., Quebec |
| Meredith, Simmons & Co. Limited | 5565 Cote St. Paul Road, Montreal |
| ONTARIO - | |
| Butterworth, A. C. | 103 Oak Crest Ave., Toronto |
| Canada Glue Co. Limited | Mohawk Road, Brantford |
| Dominion Glues Limited | 1 Strange St., Kitchener |
| Dominion Starch Products Limited | 133 Jefferson Ave., Toronto |
| Harris, W., & Co. Limited | 200 Keating St., Toronto |
| McCormick & Co. (Canada) Limited | 218 Front St. W., Toronto |
| Machon Sealing Wax Company, The | 678 Parliament St., Toronto |
| Meredith Simmons & Co. Limited | 263-379 Wallace Ave., Toronto |
| Perkins Glue Company of Canada, Limited | 629 Queen St., S., Kitchener |
| Poole Adhesives Limited | 741 Talbot Street, London |
| Toronto Adhesive Company | 27 Jarvis Street, Toronto |
| Stuart & Foster Limited | 361 King St. E., Toronto |
| Stein-Hall Limited | 250 Van Horne Street, Toronto |
| Wolverine Cement Company. | 200 Grand River Ave., Brantford |
| BRITISH COLUMBIA | |
| Laucks, I. F., Ltd. | Granville Island, Vancouver |
| Hasco Products Limited | 13th Ave. & Kingsway, New Westminster |

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