



NORTH CENTRAL FOREST EXPERIMENT STATION  
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# TIMBER VOLUME IN KANSAS COUNTIES, 1981

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**ABSTRACT.**—The third forest inventory of Kansas shows a growing-stock volume of 711.3 million cubic feet and a sawtimber volume of 2,566.2 million board feet in 1981. Hardwoods make up over 99 percent of these totals.

**KEY WORDS:** Growing stock, sawtimber, softwoods, hardwoods.

Kansas's 1,207,900 acres of commercial forest land supported 711.3 million cubic feet in growing-stock trees in 1981 (table 1). Included in the total volume of growing stock are 2,566.2 million board feet<sup>1</sup> of saw-log material (table 2). This compares with 1,191,500<sup>2</sup> acres of commercial forest land in 1965<sup>3</sup> that supported 502.6 million cubic feet, for an increase of 42 percent in total volume. Growing-stock volume per acre increased from 422 cubic feet in 1965 to 589 cubic feet in 1981, a gain of 40 percent. Sawtimber volume on commercial forest increased 31 percent—from 1,954.5 million board feet in 1965 to 2,566.2 million board feet in 1981 (table 3).

Kansas is divided into Northeastern, Southeastern, and Western inventory units (fig. 1). Seventy-nine percent of the growing-stock volume and 75 percent of the sawtimber volume is in the two eastern units. Hardwoods make up 99 percent of both growing-stock and sawtimber volume in Kansas. Cottonwood accounts for the largest volume of grow-

ing stock on commercial forest land (19 percent), followed by hackberry (12 percent), ash and bur oak (9 percent each), and black walnut (8 percent). Sawtimber species distribution is similar to the growing-stock distribution: cottonwood (24 percent), red oak (12 percent), hackberry (12 percent), bur oak (11 percent), and ash and black walnut (7 percent each).

Elm growing-stock volume dropped drastically from 89.2 million cubic feet in 1965 to 30.6 million cubic feet in 1981. The drop in board-foot volume of elm was even more significant—from 358.3 million board feet in 1965 to less than 69.5 million board feet in 1981. This loss was due to Dutch elm disease.

The volume of all timber on commercial forest land in Kansas in 1981 was 927.0 million cubic feet—711.3 million in growing-stock trees, 211.3 million in rough and rotten trees, and 4.4 million in salvable dead trees. An additional 100.6 million cubic feet were found in growing-stock and short-log trees on wooded strips.

The total board-foot volume on commercial forest land in 1981 was 2,566.2 million board feet in sawtimber and 147.9 million board feet in short log<sup>4</sup> trees. An additional 315.5 million board feet were found in sawtimber and short-log trees on wooded strips.<sup>5</sup>

<sup>1</sup>International 1/4-inch rule.

<sup>2</sup>Nine hundred acres that were called commercial forest land in 1965, but were Christmas tree plantations (productive-reserved) in 1981, have been subtracted.

<sup>3</sup>Figures have been adjusted from those published for the 1965 survey to conform to 1981 volumes because of changes in survey definitions and procedures.

<sup>4</sup>A live sawtimber-sized tree of commercial species that was at least one 8-foot log, but less than a 12-foot log, that meets minimum log grade specifications and therefore is not classified as growing stock.

<sup>5</sup>An acre or more of continuous forest land that meets the definition of commercial forest land except that it is less than 120 feet wide and is therefore classified as nonforest.

Table 1.--Net volume of growing stock<sup>1/</sup> on commercial forest land by county and species group, Kansas, 1981  
(In thousand cubic feet)

| County            | Species group |                   |         |                 |         |       |            |        |             |              |        | Other hardwoods |           |          |
|-------------------|---------------|-------------------|---------|-----------------|---------|-------|------------|--------|-------------|--------------|--------|-----------------|-----------|----------|
|                   | All species   | Easter'n redcedar | Bur oak | Other white oak | Red oak | Pecan | Soft maple | Ash    | Cotton-wood | Black walnut | Elm    |                 | Hackberry | Sycamore |
| Atchison          | 15,257        | 154               | 1,511   | 1,444           | 2,228   | --    | 366        | 740    | 1,792       | 1,430        | 529    | 2,112           | 614       | 2,337    |
| Brown             | 10,457        | 132               | 985     | 1,312           | 1,930   | --    | 173        | 517    | 517         | 1,075        | 345    | 1,177           | 420       | 1,874    |
| Clay              | 10,580        | 49                | 1,053   | 495             | 783     | --    | 395        | 527    | 2,301       | 956          | 381    | 1,745           | 481       | 1,414    |
| Dickinson         | 9,597         | 54                | 867     | 446             | 945     | --    | 292        | 430    | 2,061       | 864          | 348    | 1,509           | 473       | 1,308    |
| Doniphan          | 14,275        | 148               | 1,477   | 1,209           | 2,205   | --    | 446        | 640    | 1,307       | 1,568        | 533    | 1,740           | 446       | 2,556    |
| Douglas           | 12,880        | 163               | 840     | 1,013           | 2,386   | --    | 310        | 287    | 1,967       | 1,430        | 809    | 1,111           | 444       | 3,073    |
| Franklin          | 11,623        | 121               | 996     | 1,005           | 2,386   | 86    | 391        | 395    | 1,016       | 1,383        | 626    | 1,091           | 319       | 2,480    |
| Geary             | 10,510        | 52                | 1,074   | 779             | 1,070   | --    | 352        | 438    | 1,790       | 1,164        | 447    | 1,333           | 363       | 1,648    |
| Jackson           | 12,804        | 76                | 1,314   | 753             | 1,077   | --    | 791        | 839    | 2,022       | 1,298        | 637    | 1,447           | 133       | 2,417    |
| Jefferson         | 21,868        | 170               | 1,607   | 1,652           | 3,676   | --    | 552        | 637    | 2,910       | 2,453        | 1,238  | 1,788           | 900       | 4,285    |
| Johnson           | 14,091        | 135               | 1,458   | 1,360           | 1,948   | --    | 453        | 665    | 1,326       | 1,418        | 545    | 1,924           | 584       | 2,275    |
| Leavenworth       | 28,182        | 92                | 2,572   | 1,834           | 3,976   | 75    | 872        | 1,076  | 6,126       | 2,924        | 1,468  | 1,994           | 1,232     | 3,956    |
| Marshall          | 13,713        | 108               | 1,391   | 881             | 1,362   | --    | 553        | 619    | 2,060       | 1,335        | 1,812  | 1,862           | 485       | 2,457    |
| Miami             | 25,522        | 242               | 2,645   | 2,461           | 3,527   | 64    | 844        | 1,324  | 2,347       | 2,517        | 963    | 3,476           | 972       | 4,157    |
| Nemaha            | 6,733         | 35                | 643     | 401             | 555     | --    | 362        | 451    | 1,123       | 708          | 310    | 774             | 60        | 1,311    |
| Osage             | 17,114        | 125               | 1,615   | 1,338           | 2,084   | --    | 483        | 677    | 2,446       | 1,780        | 737    | 2,158           | 712       | 2,959    |
| Pottawatomie      | 22,350        | 190               | 2,040   | 1,645           | 2,771   | --    | 640        | 859    | 2,993       | 2,167        | 941    | 3,085           | 881       | 4,138    |
| Riley             | 16,697        | 161               | 1,648   | 1,230           | 2,099   | --    | 483        | 666    | 2,292       | 1,693        | 699    | 2,149           | 615       | 2,962    |
| Shawnee           | 13,618        | 98                | 1,346   | 1,027           | 1,504   | --    | 481        | 712    | 1,896       | 1,357        | 517    | 1,862           | 458       | 2,360    |
| Wabaunsee         | 17,097        | 78                | 1,734   | 1,100           | 1,536   | --    | 642        | 811    | 3,296       | 1,725        | 751    | 2,274           | 621       | 2,529    |
| Washington        | 5,949         | 29                | 715     | 393             | 536     | --    | 453        | 370    | 871         | 629          | 318    | 619             | 95        | 921      |
| Wyandotte         | 4,176         | 34                | 371     | 479             | 912     | 40    | 125        | 165    | 102         | 492          | 140    | 460             | 139       | 694      |
| All counties      | 315,093       | 2,446             | 29,902  | 24,157          | 40,962  | 265   | 10,459     | 13,845 | 43,561      | 32,366       | 13,932 | 37,640          | 11,447    | 54,111   |
| SOUTHEASTERN UNIT |               |                   |         |                 |         |       |            |        |             |              |        |                 |           |          |
| Allen             | 5,884         | 36                | 528     | 230             | 426     | 180   | 351        | 709    | 347         | 530          | 263    | 1,334           | 259       | 691      |
| Anderson          | 7,855         | 76                | 597     | 654             | 793     | 283   | 376        | 829    | 392         | 731          | 394    | 1,491           | 302       | 937      |
| Bourbon           | 22,505        | 165               | 1,078   | 4,352           | 4,300   | 386   | 572        | 1,776  | 440         | 2,022        | 1,089  | 2,682           | 794       | 2,849    |
| Butler            | 13,210        | 56                | 777     | 410             | 1,034   | 676   | 863        | 2,132  | 701         | 1,197        | 775    | 2,297           | 709       | 1,583    |
| Chase             | 6,451         | 33                | 667     | 163             | 393     | 151   | 425        | 765    | 377         | 527          | 233    | 1,659           | 296       | 762      |
| Chautauqua        | 23,805        | 248               | 1,088   | 4,623           | 3,612   | 1,140 | 805        | 2,432  | 563         | 2,240        | 1,358  | 2,221           | 774       | 2,701    |
| Cherokee          | 10,615        | 113               | 511     | 1,470           | 1,338   | 662   | 399        | 1,289  | 540         | 1,115        | 648    | 1,033           | 348       | 1,149    |
| Coffey            | 4,132         | 66                | 218     | 588             | 525     | 241   | 112        | 369    | 264         | 492          | 252    | 445             | 103       | 457      |
| Cowley            | 17,562        | 67                | 1,148   | 757             | 1,360   | 502   | 1,150      | 2,392  | 617         | 1,517        | 973    | 3,797           | 992       | 2,290    |
| Crawford          | 13,088        | 110               | 1,047   | 1,055           | 2,009   | 398   | 630        | 1,490  | 689         | 1,178        | 606    | 2,490           | 541       | 1,448    |
| Elk               | 14,054        | 131               | 1,645   | 1,966           | 2,009   | 651   | 561        | 1,622  | 490         | 1,308        | 817    | 1,611           | 529       | 1,714    |
| Greenwood         | 13,017        | 102               | 1,240   | 606             | 1,003   | 412   | 651        | 1,382  | 1,005       | 1,231        | 605    | 2,847           | 469       | 1,464    |
| Labette           | 7,380         | 98                | 364     | 1,166           | 985     | 448   | 245        | 804    | 315         | 801          | 435    | 696             | 223       | 800      |
| Linn              | 30,993        | 308               | 2,022   | 4,251           | 5,331   | 645   | 1,027      | 2,713  | 1,109       | 2,723        | 1,221  | 4,720           | 1,101     | 3,822    |
| Lyon              | 8,015         | 24                | 699     | 313             | 588     | 109   | 507        | 964    | 289         | 658          | 370    | 1,998           | 441       | 1,055    |
| Marion            | 4,533         | 23                | 238     | 284             | 416     | 213   | 269        | 660    | 177         | 758          | 278    | 758             | 236       | 584      |
| Montgomery        | 13,509        | 176               | 959     | 1,795           | 1,999   | 319   | 487        | 1,196  | 349         | 1,244        | 571    | 2,250           | 532       | 1,632    |
| Morris            | 4,669         | 29                | 405     | 265             | 376     | 81    | 276        | 531    | 183         | 396          | 208    | 1,107           | 238       | 574      |
| Neosho            | 6,724         | 70                | 327     | 1,057           | 884     | 387   | 233        | 750    | 313         | 710          | 404    | 652             | 209       | 728      |
| Wilson            | 15,578        | 103               | 801     | 2,960           | 2,804   | 374   | 449        | 1,394  | 322         | 1,368        | 753    | 1,784           | 541       | 1,925    |
| Woodson           | 5,549         | 78                | 285     | 853             | 729     | 320   | 164        | 535    | 304         | 619          | 336    | 569             | 150       | 607      |
| All counties      | 249,128       | 2,112             | 15,644  | 29,818          | 32,311  | 8,578 | 10,552     | 26,734 | 9,786       | 23,004       | 12,589 | 38,441          | 9,787     | 29,772   |

(Table 1 continued on next page)

(Table 1 continued)

## WESTERN UNIT

| County    | Species group |                  |         |                 |         |       |            |       |             |              |     |           |          |                 |
|-----------|---------------|------------------|---------|-----------------|---------|-------|------------|-------|-------------|--------------|-----|-----------|----------|-----------------|
|           | All species   | Eastern redcedar | Bur oak | Other white oak | Red oak | Pecan | Soft maple | Ash   | Cotton-wood | Black walnut | Elm | Hackberry | Sycamore | Other hardwoods |
| Barber    | 5,793         | --               | 558     | --              | --      | --    | --         | 627   | 3,560       | 73           | 134 | 400       | 5        | 436             |
| Barton    | 853           | --               | 114     | --              | --      | --    | --         | 150   | 360         | 18           | 25  | 92        | --       | 94              |
| Cheyenne  | 2,109         | --               | 262     | --              | --      | --    | --         | 263   | 1,072       | 37           | 66  | 206       | 3        | 200             |
| Clark     | 4,226         | --               | 149     | --              | --      | --    | --         | 800   | 2,782       | 35           | 49  | 223       | --       | 188             |
| Cloud     | 7,886         | --               | 1,037   | --              | --      | --    | --         | 676   | 4,360       | 180          | 273 | 676       | 20       | 664             |
| Comanche  | 668           | --               | 51      | --              | --      | --    | --         | 220   | 259         | 10           | 15  | 49        | --       | 64              |
| Decatur   | 1,527         | --               | 223     | --              | --      | --    | --         | 208   | 684         | 30           | 51  | 164       | 1        | 166             |
| Edwards   | 1,616         | --               | 81      | --              | --      | --    | --         | 103   | 1,228       | 11           | 63  | 61        | --       | 69              |
| Ellis     | 1,924         | --               | 261     | --              | --      | --    | --         | 268   | 878         | 43           | 60  | 196       | 1        | 217             |
| Ellsworth | 2,438         | --               | 374     | --              | --      | --    | --         | 284   | 1,157       | 52           | 77  | 252       | 8        | 234             |
| Finney    | 208           | --               | 14      | --              | --      | --    | --         | 74    | 84          | --           | 5   | 18        | --       | 13              |
| Ford      | 381           | --               | 34      | --              | --      | --    | --         | 111   | 146         | 7            | 12  | 24        | --       | 47              |
| Gove      | 120           | --               | 17      | --              | --      | --    | --         | 11    | 58          | 4            | 3   | 14        | --       | 13              |
| Graham    | 3,520         | --               | 459     | --              | --      | --    | --         | 495   | 1,723       | 63           | 111 | 318       | 7        | 344             |
| Grant     | 85            | --               | --      | --              | --      | --    | --         | 27    | 46          | 3            | --  | --        | --       | 9               |
| Gray      | 1,218         | --               | 21      | --              | --      | --    | --         | 135   | 1,008       | --           | 8   | 26        | --       | 20              |
| Greeley   | 20            | --               | --      | --              | --      | --    | --         | --    | 20          | --           | --  | --        | --       | --              |
| Hamilton  | 1,940         | 6                | 135     | --              | --      | --    | --         | 747   | 700         | 10           | 43  | 161       | --       | 138             |
| Harper    | 3,857         | --               | 352     | --              | --      | --    | --         | 676   | 2,040       | 80           | 96  | 248       | 8        | 357             |
| Harvey    | 1,095         | --               | 108     | --              | --      | --    | --         | 241   | 516         | 7            | 40  | 76        | --       | 107             |
| Haskell   | --            | --               | --      | --              | --      | --    | --         | --    | --          | --           | --  | --        | --       | --              |
| Hodgeman  | --            | --               | --      | --              | --      | --    | --         | --    | --          | --           | --  | --        | --       | --              |
| Jewell    | 6,175         | --               | 545     | --              | --      | --    | --         | 990   | 3,377       | 70           | 156 | 536       | 1        | 500             |
| Kearny    | 253           | --               | --      | --              | --      | --    | --         | 7     | 226         | --           | --  | 20        | --       | --              |
| Kingman   | 6,624         | --               | 557     | --              | --      | --    | --         | 1,099 | 3,691       | 158          | 168 | 329       | 20       | 602             |
| Kiowa     | 216           | 6                | 13      | --              | --      | --    | --         | 27    | 135         | --           | 5   | 19        | --       | 11              |
| Lane      | 46            | --               | 7       | --              | --      | --    | --         | 12    | 15          | --           | 2   | 5         | --       | 5               |
| Lincoln   | 2,454         | --               | 285     | --              | --      | --    | --         | 305   | 1,273       | 55           | 72  | 218       | 3        | 243             |
| Logan     | 608           | 6                | 85      | --              | --      | --    | --         | 98    | 263         | 12           | 21  | 56        | 1        | 66              |
| McPherson | 3,338         | --               | 327     | --              | --      | --    | --         | 285   | 2,068       | 61           | 94  | 243       | 4        | 256             |
| Meade     | 1,349         | --               | 82      | --              | --      | --    | --         | 283   | 752         | 18           | 27  | 101       | --       | 86              |
| Mitchell  | 5,770         | --               | 718     | --              | --      | --    | --         | 986   | 2,785       | 136          | 157 | 403       | 24       | 561             |
| Morton    | 1,329         | 5                | 124     | --              | --      | --    | --         | 263   | 647         | 14           | 40  | 115       | --       | 121             |
| Ness      | 323           | --               | 68      | --              | --      | --    | --         | 44    | 126         | 7            | 13  | 33        | 3        | 29              |
| Norton    | 1,894         | --               | 266     | --              | --      | --    | --         | 355   | 786         | 27           | 72  | 179       | 3        | 206             |
| Osborne   | 5,334         | --               | 714     | --              | --      | --    | --         | 657   | 2,810       | 87           | 155 | 436       | 16       | 459             |
| Ottawa    | 5,503         | --               | 732     | --              | --      | --    | --         | 929   | 2,565       | 131          | 154 | 427       | 24       | 541             |
| Pawnee    | 1,280         | --               | 93      | --              | --      | --    | --         | 185   | 774         | 13           | 28  | 93        | --       | 94              |
| Phillips  | 4,304         | --               | 399     | --              | --      | --    | --         | 764   | 2,168       | 95           | 111 | 307       | 3        | 457             |
| Pratt     | 1,538         | --               | 103     | --              | --      | --    | --         | 130   | 1,075       | 18           | 39  | 86        | --       | 87              |
| Rawlins   | 1,461         | --               | 228     | --              | --      | --    | --         | 195   | 637         | 31           | 49  | 159       | 3        | 159             |
| Reno      | 5,515         | --               | 512     | --              | --      | --    | --         | 978   | 2,960       | 121          | 137 | 290       | 17       | 500             |
| Republic  | 6,077         | --               | 498     | --              | --      | --    | --         | 751   | 3,743       | 60           | 166 | 440       | 1        | 418             |
| Rice      | 1,748         | --               | 99      | --              | --      | --    | --         | 105   | 1,363       | 14           | 39  | 57        | 3        | 68              |
| Rooks     | 5,649         | --               | 553     | --              | --      | --    | --         | 827   | 3,250       | 78           | 136 | 363       | 12       | 430             |
| Rush      | 91            | --               | 13      | --              | --      | --    | --         | 23    | 30          | --           | 5   | 9         | --       | 11              |
| Russell   | 3,592         | --               | 451     | --              | --      | --    | --         | 340   | 1,990       | 67           | 115 | 319       | 7        | 303             |

(Table 1 continued on next page)

(Table 1 continued)

| County       | All species | Species group    |         |                 |         |       |            |         |             |              |        |           |          |           |
|--------------|-------------|------------------|---------|-----------------|---------|-------|------------|---------|-------------|--------------|--------|-----------|----------|-----------|
|              |             | Eastern redcedar | Bur oak | Other white oak | Red oak | Pecan | Soft maple | Ash     | Cotton-wood | Black walnut | Elm    | Hackberry | Sycamore | hardwoods |
| Saline       | 2,507       | --               | 379     | --              | --      | --    | --         | 334     | 1,152       | 60           | 87     | 237       | 8        | 250       |
| Scott        | 102         | --               | 26      | --              | --      | --    | 17         | 33      | 2           | 5            | 10     | 1         | 8        |           |
| Sedgwick     | 5,643       | --               | 785     | --              | --      | 44    | 947        | 2,615   | 140         | 166          | 396    | 31        | 563      |           |
| Seward       | 1,565       | --               | 138     | --              | --      | --    | 224        | 850     | 34          | 36           | 131    | --        | 152      |           |
| Sheridan     | 997         | --               | 113     | --              | --      | --    | 107        | 564     | 19          | 25           | 79     | 1         | 89       |           |
| Sherman      | --          | --               | --      | --              | --      | --    | --         | --      | --          | --           | --     | --        | --       | --        |
| Smith        | 2,513       | --               | 315     | --              | --      | --    | 388        | 1,187   | 39          | 79           | 250    | --        | 255      |           |
| Stafford     | 3,904       | 10               | 101     | --              | --      | --    | 153        | 3,371   | 21          | 59           | 78     | --        | 111      |           |
| Stanton      | 10          | --               | --      | --              | --      | --    | --         | 10      | --          | --           | --     | --        | --       | --        |
| Stevens      | 425         | --               | 61      | --              | --      | --    | 68         | 177     | 7           | 16           | 47     | --        | 49       |           |
| Summer       | 13,831      | --               | 1,596   | --              | --      | 99    | 1,850      | 7,845   | 212         | 481          | 833    | 61        | 810      |           |
| Thomas       | 522         | --               | 17      | --              | --      | --    | 11         | 458     | 4           | 3            | 14     | --        | 15       |           |
| Trego        | 1,044       | --               | 121     | --              | --      | --    | 241        | 456     | 21          | 29           | 71     | 4         | 101      |           |
| Wallace      | 76          | --               | --      | --              | --      | --    | 27         | 37      | 3           | --           | --     | --        | 9        |           |
| Wichita      | --          | --               | --      | --              | --      | --    | --         | --      | --          | --           | --     | --        | --       | --        |
| All counties | 147,094     | 33               | 15,374  | --              | --      | 143   | 21,121     | 80,945  | 2,498       | 4,078        | 10,593 | 304       | 12,005   |           |
| All units    | 711,315     | 4,591            | 60,920  | 53,975          | 73,273  | 8,986 | 61,700     | 134,292 | 57,868      | 30,599       | 86,674 | 21,538    | 95,888   |           |

1/The volume of sound wood in the bole of growing-stock trees 5.0 inches d.b.h. and larger, from a 1-foot stump to a minimum of 4.0 inch top diameter outside bark, or to the point where the central stem breaks into limbs.

Table 2.--Net volume of sawtimber<sup>1/</sup> on commercial forest land by county and species group, Kansas, 1981  
(In thousand board feet)<sup>2/</sup>

| County            | Species group |                  |         |                 |         |        |            |        |             |              |        | Other hardwoods |           |          |
|-------------------|---------------|------------------|---------|-----------------|---------|--------|------------|--------|-------------|--------------|--------|-----------------|-----------|----------|
|                   | All species   | Eastern redcedar | Bur oak | Other white oak | Red oak | Pecan  | Soft maple | Ash    | Cotton-wood | Black walnut | Elm    |                 | Hackberry | Sycamore |
| Atchison          | 54,573        | 366              | 6,083   | 5,180           | 9,197   | --     | 1,463      | 2,252  | 8,305       | 4,589        | 1,073  | 6,462           | 2,993     | 6,610    |
| Brown             | 36,117        | 296              | 3,781   | 4,690           | 8,160   | --     | 759        | 1,636  | 2,220       | 3,191        | 592    | 3,475           | 2,047     | 5,270    |
| Clay              | 39,325        | 118              | 4,730   | 1,870           | 3,014   | --     | 1,472      | 1,610  | 10,634      | 3,097        | 838    | 5,475           | 2,264     | 4,203    |
| Dickinson         | 35,993        | 132              | 3,752   | 1,576           | 3,788   | --     | 1,087      | 1,242  | 9,590       | 2,930        | 755    | 4,716           | 2,183     | 4,242    |
| Doniphan          | 49,986        | 295              | 6,220   | 3,945           | 9,307   | --     | 1,833      | 1,882  | 5,429       | 5,042        | 1,000  | 5,271           | 2,130     | 7,632    |
| Douglas           | 42,738        | 268              | 3,111   | 3,519           | 11,703  | --     | 1,455      | 515    | 4,079       | 3,784        | 1,519  | 3,242           | 2,133     | 7,112    |
| Franklin          | 38,449        | 214              | 3,949   | 3,073           | 8,739   | 184    | 1,817      | 1,076  | 4,187       | 3,725        | 1,125  | 3,174           | 1,674     | 5,592    |
| Geary             | 36,690        | 108              | 4,473   | 2,700           | 4,611   | --     | 1,446      | 1,315  | 7,606       | 3,527        | 905    | 4,036           | 1,780     | 4,183    |
| Jackson           | 43,704        | 185              | 5,918   | 2,157           | 3,615   | --     | 3,744      | 2,978  | 9,697       | 3,475        | 940    | 4,132           | 730       | 6,133    |
| Jefferson         | 74,959        | 276              | 5,903   | 5,823           | 16,847  | --     | 2,506      | 1,541  | 13,421      | 6,745        | 2,174  | 5,049           | 4,673     | 10,001   |
| Johnson           | 49,515        | 290              | 6,286   | 4,634           | 8,157   | --     | 1,715      | 2,033  | 5,521       | 4,368        | 1,185  | 5,960           | 2,643     | 6,723    |
| Leavenworth       | 102,019       | 172              | 9,657   | 6,561           | 16,292  | 161    | 4,046      | 3,276  | 29,964      | 8,475        | 2,003  | 5,490           | 6,509     | 9,442    |
| Marshall          | 48,596        | 205              | 6,316   | 3,097           | 5,832   | --     | 2,337      | 1,939  | 8,787       | 4,078        | 1,135  | 5,486           | 2,309     | 7,175    |
| Miami             | 90,177        | 560              | 11,131  | 8,876           | 14,683  | 138    | 3,393      | 4,267  | 10,034      | 7,787        | 1,742  | 10,601          | 4,735     | 12,265   |
| Nemaha            | 23,062        | 75               | 2,941   | 1,121           | 1,962   | --     | 1,626      | 1,473  | 5,519       | 1,893        | 512    | 2,280           | 326       | 3,334    |
| Osage             | 59,394        | 268              | 6,721   | 4,649           | 8,665   | --     | 2,018      | 2,002  | 10,789      | 5,255        | 1,521  | 6,399           | 3,382     | 7,725    |
| Pottawatomie      | 78,642        | 399              | 8,642   | 5,798           | 12,157  | --     | 2,538      | 2,394  | 13,621      | 6,478        | 1,929  | 9,320           | 4,270     | 11,096   |
| Riley             | 58,691        | 316              | 7,011   | 4,245           | 8,978   | --     | 1,940      | 1,856  | 10,314      | 5,157        | 1,304  | 6,633           | 2,956     | 7,981    |
| Shawnee           | 15,386        | 209              | 5,842   | 3,606           | 6,148   | --     | 1,933      | 2,320  | 8,034       | 4,207        | 969    | 5,732           | 2,197     | 7,460    |
| Mabaunsee         | 60,783        | 181              | 7,414   | 3,923           | 6,232   | --     | 2,649      | 2,565  | 14,466      | 5,214        | 1,537  | 6,916           | 3,039     | 6,647    |
| Washington        | 20,775        | 95               | 3,039   | 1,299           | 2,366   | --     | 2,285      | 1,535  | 3,657       | 1,729        | 374    | 1,614           | 535       | 2,247    |
| Wyandotte         | 14,768        | 78               | 1,370   | 1,279           | 3,964   | 92     | 502        | 447    | 229         | 1,780        | 375    | 1,351           | 560       | 2,695    |
| All counties      | 1,107,613     | 5,106            | 124,290 | 83,621          | 174,417 | 575    | 44,464     | 42,154 | 196,103     | 96,526       | 25,507 | 112,814         | 56,268    | 145,768  |
| SOUTHEASTERN UNIT |               |                  |         |                 |         |        |            |        |             |              |        |                 |           |          |
| Allen             | 21,738        | 92               | 2,647   | 514             | 1,675   | 573    | 1,596      | 2,344  | 1,341       | 1,702        | 671    | 5,200           | 1,362     | 2,021    |
| Anderson          | 27,000        | 249              | 2,891   | 1,266           | 3,036   | 896    | 1,640      | 2,647  | 1,522       | 2,105        | 934    | 5,656           | 1,556     | 2,602    |
| Bourbon           | 71,539        | 396              | 4,404   | 8,779           | 18,003  | 1,433  | 1,998      | 5,348  | 1,935       | 5,887        | 2,500  | 9,119           | 3,674     | 8,063    |
| Butler            | 46,894        | 105              | 4,001   | 1,052           | 3,958   | 1,648  | 3,518      | 7,694  | 2,854       | 3,558        | 1,822  | 8,109           | 3,475     | 5,100    |
| Chase             | 24,968        | 63               | 3,390   | 467             | 1,622   | 504    | 2,034      | 2,512  | 1,457       | 1,875        | 625    | 6,649           | 1,590     | 2,180    |
| Chautauqua        | 67,063        | 624              | 4,452   | 8,328           | 12,729  | 3,158  | 3,066      | 7,863  | 2,431       | 5,139        | 2,892  | 6,307           | 3,451     | 6,623    |
| Cherokee          | 31,617        | 362              | 2,188   | 2,756           | 4,714   | 2,013  | 1,500      | 4,260  | 2,096       | 2,755        | 1,453  | 3,009           | 1,512     | 2,999    |
| Coffey            | 12,314        | 226              | 901     | 1,183           | 1,882   | 896    | 388        | 1,080  | 954         | 1,213        | 615    | 1,405           | 452       | 1,119    |
| Cowley            | 63,884        | 146              | 5,837   | 1,681           | 5,114   | 1,349  | 4,610      | 8,511  | 2,551       | 4,781        | 2,628  | 13,720          | 5,130     | 7,826    |
| Crawford          | 46,381        | 279              | 5,111   | 2,143           | 5,659   | 1,234  | 2,797      | 4,666  | 2,697       | 3,774        | 1,405  | 9,595           | 2,763     | 4,258    |
| Elk               | 43,253        | 309              | 2,879   | 3,786           | 7,709   | 1,662  | 2,154      | 5,507  | 2,059       | 3,235        | 1,733  | 5,207           | 2,447     | 4,566    |
| Greenwood         | 46,996        | 261              | 6,025   | 1,304           | 4,076   | 1,501  | 2,976      | 4,171  | 3,741       | 3,782        | 1,519  | 11,252          | 2,486     | 3,902    |
| Labette           | 21,649        | 341              | 1,531   | 2,210           | 3,427   | 1,455  | 920        | 2,606  | 1,232       | 1,918        | 987    | 1,975           | 973       | 2,074    |
| Linn              | 108,858       | 872              | 9,424   | 9,522           | 23,463  | 2,443  | 4,601      | 8,340  | 4,558       | 8,671        | 2,667  | 18,265          | 5,260     | 10,772   |
| Lyon              | 30,369        | 64               | 3,492   | 784             | 2,380   | 368    | 2,128      | 3,303  | 1,187       | 2,231        | 1,070  | 7,488           | 2,360     | 3,539    |
| Marion            | 15,386        | 39               | 1,188   | 601             | 1,519   | 497    | 1,048      | 2,352  | 736         | 1,158        | 662    | 2,591           | 1,166     | 1,804    |
| Montgomery        | 46,711        | 572              | 4,488   | 3,891           | 8,117   | 1,311  | 2,197      | 3,686  | 1,484       | 3,793        | 1,411  | 8,224           | 2,683     | 4,984    |
| Morris            | 17,333        | 68               | 2,024   | 598             | 1,448   | 283    | 1,729      | 1,731  | 1,346       | 1,346        | 1,579  | 4,215           | 1,271     | 1,849    |
| Neosho            | 19,672        | 223              | 1,361   | 1,959           | 3,101   | 1,211  | 868        | 2,412  | 1,208       | 1,762        | 915    | 1,900           | 910       | 1,842    |
| Wilson            | 48,604        | 208              | 3,327   | 5,826           | 11,493  | 1,148  | 1,683      | 4,392  | 1,461       | 3,807        | 1,654  | 5,903           | 2,474     | 5,228    |
| Woodson           | 16,317        | 266              | 1,178   | 1,643           | 2,580   | 1,125  | 586        | 1,624  | 1,125       | 1,500        | 1,795  | 1,724           | 658       | 1,513    |
| All counties      | 828,546       | 5,765            | 72,739  | 60,293          | 127,705 | 26,708 | 43,370     | 87,049 | 39,358      | 65,992       | 29,537 | 137,513         | 47,653    | 84,864   |

(Table 2 continued on next page)

(Table 2 continued)

## WESTERN UNIT

| County    | All species | Species group    |         |                 |         |       |            |       |             |              |       | Other hardwoods |           |          |
|-----------|-------------|------------------|---------|-----------------|---------|-------|------------|-------|-------------|--------------|-------|-----------------|-----------|----------|
|           |             | Eastern redcedar | Bur oak | Other white oak | Red oak | Pecan | Soft maple | Ash   | Cotton-wood | Black walnut | Elm   |                 | Hackberry | Sycamore |
| Barber    | 24,420      | --               | 3,286   | --              | --      | --    | --         | 2,098 | 15,259      | 192          | 415   | 1,827           | 30        | 1,313    |
| Barton    | 3,602       | --               | 682     | --              | --      | --    | --         | 384   | 1,719       | 40           | 77    | 393             | --        | 307      |
| Cheyenne  | 9,479       | --               | 1,546   | --              | --      | --    | --         | 926   | 5,090       | 86           | 256   | 856             | 14        | 705      |
| Clark     | 16,070      | --               | 894     | --              | --      | --    | --         | 862   | 11,764      | 89           | 182   | 1,744           | --        | 535      |
| Cloud     | 35,800      | --               | 6,038   | --              | --      | --    | --         | 2,585 | 20,618      | 517          | 1,111 | 2,588           | 114       | 2,229    |
| Comanche  | 2,343       | --               | 301     | --              | --      | --    | --         | 432   | 1,105       | 39           | 43    | 300             | --        | 123      |
| Decatur   | 6,682       | --               | 1,325   | --              | --      | --    | --         | 731   | 3,156       | 69           | 158   | 684             | 8         | 551      |
| Edwards   | 7,701       | --               | 485     | --              | --      | --    | --         | 344   | 6,147       | 37           | 215   | 271             | --        | 202      |
| Ellis     | 8,415       | --               | 1,554   | --              | --      | --    | --         | 870   | 4,165       | 106          | 192   | 811             | 8         | 709      |
| Ellsworth | 11,295      | --               | 2,171   | --              | --      | --    | --         | 1,050 | 5,746       | 129          | 284   | 1,055           | 45        | 815      |
| Finney    | 644         | --               | 81      | --              | --      | --    | --         | 101   | 258         | --           | 13    | 161             | --        | 30       |
| Ford      | 1,432       | --               | 199     | --              | --      | --    | --         | 342   | 638         | 31           | 33    | 114             | --        | 75       |
| Gove      | 564         | --               | 102     | --              | --      | --    | --         | 40    | 300         | 8            | 10    | 56              | --        | 48       |
| Graham    | 15,315      | --               | 2,689   | --              | --      | --    | --         | 1,652 | 7,992       | 168          | 377   | 1,300           | 37        | 1,100    |
| Grant     | 331         | --               | --      | --              | --      | --    | --         | 77    | 239         | 15           | --    | --              | --        | 0        |
| Gray      | 4,729       | --               | 121     | --              | --      | --    | --         | 165   | 4,176       | --           | 20    | 202             | --        | 45       |
| Greeley   | 64          | --               | --      | --              | --      | --    | --         | --    | 64          | --           | --    | --              | --        | 0        |
| Hamilton  | 5,824       | --               | 799     | --              | --      | --    | --         | 928   | 2,482       | 27           | 122   | 1,119           | --        | 347      |
| Harper    | 15,991      | --               | 2,025   | --              | --      | --    | --         | 1,459 | 9,683       | 253          | 385   | 1,043           | 46        | 1,097    |
| Harvey    | 4,100       | --               | 642     | --              | --      | --    | --         | 758   | 1,958       | 31           | 105   | 365             | --        | 241      |
| Haskell   | --          | --               | --      | --              | --      | --    | --         | --    | --          | --           | --    | --              | --        | 0        |
| Hodgeman  | --          | --               | --      | --              | --      | --    | --         | --    | --          | --           | --    | --              | --        | 0        |
| Jewell    | 25,053      | --               | 3,234   | --              | --      | --    | --         | 2,550 | 12,891      | 194          | 462   | 4,259           | 8         | 1,455    |
| Kearny    | 1,100       | --               | --      | --              | --      | --    | --         | --    | 703         | --           | --    | 397             | --        | 0        |
| Kingman   | 27,313      | --               | 3,139   | --              | --      | --    | --         | 2,410 | 17,522      | 561          | 732   | 1,162           | 114       | 1,673    |
| Kiowa     | 850         | --               | 79      | --              | --      | --    | --         | 74    | 415         | --           | 13    | 239             | --        | 30       |
| Lane      | 165         | --               | 39      | --              | --      | --    | --         | 37    | 45          | --           | 6     | 23              | --        | 15       |
| Lincoln   | 11,408      | --               | 1,691   | --              | --      | --    | --         | 1,031 | 6,612       | 147          | 258   | 884             | 15        | 770      |
| Logan     | 2,564       | --               | 497     | --              | --      | --    | --         | 306   | 1,218       | 32           | 68    | 229             | 7         | 207      |
| McPherson | 16,099      | --               | 1,932   | --              | --      | --    | --         | 998   | 10,841      | 153          | 331   | 966             | 23        | 855      |
| Meade     | 5,462       | --               | 496     | --              | --      | --    | --         | 356   | 3,490       | 43           | 86    | 736             | --        | 255      |
| Mitchell  | 25,013      | --               | 4,064   | --              | --      | --    | --         | 2,837 | 13,858      | 459          | 587   | 1,548           | 135       | 1,525    |
| Morton    | 5,120       | --               | 736     | --              | --      | --    | --         | 633   | 2,415       | 38           | 117   | 829             | --        | 352      |
| Ness      | 1,520       | --               | 381     | --              | --      | --    | --         | 171   | 674         | 20           | 45    | 115             | 15        | 99       |
| Norton    | 7,736       | --               | 1,556   | --              | --      | --    | --         | 1,149 | 3,343       | 76           | 215   | 776             | 15        | 606      |
| Osborne   | 23,232      | --               | 4,119   | --              | --      | --    | --         | 2,272 | 12,841      | 238          | 510   | 1,718           | 88        | 1,446    |
| Ottawa    | 23,652      | --               | 4,153   | --              | --      | --    | --         | 2,324 | 12,643      | 407          | 569   | 1,778           | 134       | 1,644    |
| Pawnee    | 5,247       | --               | 552     | --              | --      | --    | --         | 561   | 2,997       | 46           | 77    | 788             | --        | 226      |
| Phillips  | 17,710      | --               | 2,360   | --              | --      | --    | --         | 2,036 | 10,058      | 301          | 384   | 1,279           | 15        | 1,277    |
| Pratt     | 7,272       | --               | 618     | --              | --      | --    | --         | 317   | 5,532       | 41           | 121   | 357             | --        | 286      |
| Rawlins   | 6,524       | --               | 1,343   | --              | --      | --    | --         | 699   | 3,059       | 73           | 157   | 648             | 15        | 530      |
| Reno      | 22,406      | --               | 2,891   | --              | --      | --    | --         | 2,254 | 13,769      | 431          | 525   | 1,132           | 97        | 1,307    |
| Republic  | 26,475      | --               | 2,962   | --              | --      | --    | --         | 1,995 | 16,771      | 144          | 495   | 2,812           | 8         | 1,288    |
| Rice      | 8,136       | --               | 568     | --              | --      | --    | --         | 366   | 6,625       | 44           | 122   | 218             | 15        | 178      |
| Rooks     | 23,373      | --               | 3,188   | --              | --      | --    | --         | 2,240 | 14,395      | 239          | 465   | 1,538           | 67        | 1,241    |
| Rush      | 329         | --               | 79      | --              | --      | --    | --         | 74    | 88          | --           | 13    | 45              | --        | 30       |
| Russell   | 17,278      | --               | 2,649   | --              | --      | --    | --         | 1,245 | 10,372      | 159          | 374   | 1,414           | 37        | 1,028    |

(Table 2 continued on next page)



Table 3.—*Net volume of growing stock and sawtimber on commercial forest land by species group for 1965 and 1981*

| Species            | Growing stock              |                | Sawtimber                              |                  |
|--------------------|----------------------------|----------------|--|------------------|
|                    | 1965 <sup>1</sup>          | 1981           | 1965 <sup>1</sup>                      | 1981             |
|                    | <i>Thousand cubic feet</i> |                | <i>Thousand board feet<sup>2</sup></i> |                  |
| <b>Softwoods</b>   |                            |                |  |                  |
| Eastern redcedar   | 216                        | 4,591          | 511                                    | 10,871           |
| <b>Total</b>       | <b>216</b>                 | <b>4,591</b>   | <b>511</b>                             | <b>10,871</b>    |
| <b>Hardwoods</b>   |                            |                |  |                  |
| Bur oak            | 36,925                     | 60,920         | 173,124                                | 286,120          |
| Select white oak   | 11,501                     | 34,121         | 36,194                                 | 107,383          |
| Other white oak    | 10,484                     | 19,854         | 19,229                                 | 36,531           |
| Select red oak     | 26,020                     | 45,828         | 103,966                                | 183,457          |
| Other red oak      | 19,438                     | 27,445         | 84,208                                 | 118,665          |
| Hickory            | 13,103                     | 29,081         | 30,502                                 | 67,696           |
| Pecan              | 8,040                      | 8,986          | 36,974                                 | 28,043           |
| Hard maple         | 2,259                      | 3,120          | 5,563                                  | 6,280            |
| Soft maple         | 9,005                      | 21,011         | 37,644                                 | 87,834           |
| Ash                | 35,714                     | 61,700         | 107,524                                | 185,760          |
| Cottonwood         | 101,052                    | 134,292        | 459,058                                | 610,060          |
| Basswood           | 3,614                      | 6,031          | 15,438                                 | 25,763           |
| Elm                | 89,243                     | 30,599         | 358,279                                | 69,531           |
| Black walnut       | 36,751                     | 57,868         | 107,950                                | 169,979          |
| Willow             | 10,772                     | 11,629         | 44,370                                 | 47,901           |
| Hackberry          | 48,909                     | 86,674         | 169,049                                | 299,581          |
| Sycamore           | 24,613                     | 21,538         | 125,288                                | 105,631          |
| Other hardwoods    | 14,941                     | 46,027         | 38,675                                 | 119,143          |
| <b>Total</b>       | <b>502,384</b>             | <b>706,724</b> | <b>1,953,035</b>                       | <b>2,555,358</b> |
| <b>All species</b> | <b>502,600</b>             | <b>711,315</b> | <b>1,953,546</b>                       | <b>2,566,229</b> |

<sup>1</sup>Figures have been adjusted from those published for the 1965 survey to conform to 1981 areas because of changes in survey definitions and procedures.

<sup>2</sup>International 1/4-inch rule.

The sampling error of volume for the survey was 3.52 percent for the 711.3 million cubic feet of growing stock in the State.

The third forest inventory of Kansas was conducted in 1979 and 1980 by the North Central Forest Experiment Station with cooperation from State and Extension Forestry, Kansas State University. Special funding requested by the 1980 Kansas Governor and appropriated by the 1980 Kansas Legislature allowed State and Extension Forestry to provide additional personnel to intensify the field sample. Aerial photography was provided by the Kansas Office of the USDA Agricultural Stabilization and Conservation Service.