THE DAY WE EAT

And the day we celebrate is a good time to consider the various merits of the St. Paul Daily and Sunday GLOBE. As an advertising medium it has no superior.

ST. PAUL Daily Globe.

THE FEAST IS READY.

The turkey is plump and the cranberry sauce of its usual sanguinary hue. But don't forget that the St. Paul Daily and Sunday GLOBE leads the procession.

VOL. XIII. SAINT PAUL, MINN., THURSDAY MORNING, NOVEMBER 26, 1891.—TWENTY-FOUR PAGES AND COVER. NO. 330.

FARMING IN THE MINNESOTA BELT

Some of the Wonderful Results Achieved in Diversified Farming the Past Year in Minnesota.

Wheat Is Not Alone King of the Products of the Fertile Soil So Cheap and Plenteous in This State.

Other Crops Show the Same Remarkable Results and No Reasonable Product Is Omitted in the Round-Up.

Accurate Statistics Which Prove Minnesota's Right to Be Ranked as the Center of Agriculture.

Facts to Be Read With Interest by the Eastern Farmer Ready to Test the Golden Northwest.

There are no mountains in Minnesota, and the height of its loftiest hills do not exceed 300 feet. It has none of the disadvantages of a mountainous region, though possessing most of the peculiarities of such localities that are beneficial to mankind. For instance, its elevations above the sea gives it that purity of atmosphere for which mountainous countries are esteemed, and the rapid descent of its numerous streams from the high plateaus to the beds of its great rivers afford an incalculable amount of hydraulic force, which is diffused throughout its entire extent. The surface of the state is a high plain, sloping to the northwest. The atmosphere is dry, clear and pure, and it is seldom that a refreshing breeze is not felt, even on the stillest summer day. The heat in summer is rarely oppressive, as is the case where humid atmospheres prevail. The winters are cold, sometimes severely so; but it is seldom, and only for short intervals, that the term "inclement" can properly be applied to Minnesota weather. The dryness of the air diminishes its capability of conducting heat from the body, and men and animals, therefore, suffer much less here from cold than where there is even a slightly greater proportion of dampness. People work at outdoor employments without discomfort when the thermometer ranges from zero to ten or twelve degrees below. The greatest length of Minnesota from north to south is 380 miles, and its greatest extension from east to west, 350 miles. The area of the state is 84,287 square miles, and its acreage 54,760,000. Minnesota is larger than the six New England states, and almost equal to Indiana and Illinois combined. Though far removed from the sea, it is the best watered state in the Union, having, in addition to numerous rivers, nearly 1,000 lakes, varying from fifty yards to thirty miles in diameter.

This by way of introduction to the subject of this article—diversified farming in Minnesota. There is a grossly erroneous opinion abroad that the lands of Minnesota are only capable of raising; that the only thing the Minnesota farmer can depend upon for a living is wheat raising, and, if the wheat crop be blighted or destroyed by storms, nothing remained upon which he could recoup himself for his year's work. There may have been excuse for such an opinion thirty years ago, but today to make the statement that Minnesota is purely a wheat raising country is a gross libel on the state. True, Minnesota is a great wheat country. It was so thirty years ago; it is so today; it will be so thirty years hence. But Minnesota is something more. Minnesota possesses one of the richest soils of any state in the Union—a soil described by the most prominent agriculturists of this and other countries as being "wonderfully rich," and the farmer—the practical agriculturist—would be a fool, a ninny and wanting to his own interests if he, year after year, contented himself in raising wheat. A visit to all the old countries discloses the fact that farmers are yearly recognizing this fact, and many of them do not raise a single acre of wheat. Not that wheat raising does not pay. Far from it. In a good year, and you save your crop, the return is a very good one for the farmer, but experience is a hard teacher, and experience has taught the Minnesotan not to plant all his hopes in cereal. Thus year by year diversified farming is becoming more general; the farmers are becoming more prosperous, and the farming lands of the state are rising in value. Southern Minnesota has already been transformed into a garden of husbandry: it is only a question of time when Northern Minnesota will show a like condition.

A few more words on Minnesota soils. Some very valuable experiments have been made by the professors of the state experimental farm, and the results are most gratifying. Their reports set forth that experiments were made in 1888 and 1890 in four widely separated sections, and proceed: "The fact that most of those soils which have grown wheat for ten to twenty years without rest are still rich enough to produce good crops of corn, potatoes, etc., without the application of manure shows the great fertility of all our best lands. True, we have many sandy lands and some clay soils which are not so rich but that several crops will make them poor in available plant food, but these lands cover but a small part of the state. The lands now cultivated are mainly the rich, naturally drained soils that were easiest subdued. The sandy and clay soils are not yet so much in use. We have no small amount of wet lands also, which, when artificially thoroughly drained, will be our richest lands; and as the arable lands become older and worn these will be brought into use." The report of the professors proceeds to show that the richest lands, "too rich for oats," can stand a wonderful amount of abuse, and if weeds, rust, etc., do not interfere, will support great crops for a year.

The mere statement that diversified farming can be undertaken in Minnesota as successfully as any Easterner goes for naught if not backed up by evidence to prove it. Such evidence is ready at hand. We have it from the reports of the state commissioner of statistics; the evidence of farmers who have been for years engaged in diversified farming. Such evidence cannot be disputed; it carries conviction to the greatest doubter. The geographical points of Minnesota have been depicted; its climatic advantages passed upon and the marvelous fertility of its soils demonstrated; now let us see what has been accomplished in the way of diversified farming from the year 1880 to the present time. We will commence with oats, as they figure the highest to the wheat. In fact, in 1889, the oat crop that year exceeded that of wheat, the respective figures being—for oats, 48,253,799 bushels; for wheat, 46,669,583. The last few years wheat has overtopped oats by about 2,000,000 bushels. Another very interesting fact, taking the year 1890, we find that the total wheat acreage was 3,082,293, and the total acreage for all other kinds of crops was 3,392,366. Here we have in a nutshell evidence in support of the statement that Minnesota, while a wheat-growing country, is also capable of raising all kinds of grain. If this were not so, why should the farmers place under cultivation 310,073 acres of land for diversived crops more than is placed under cultivation for the raising of wheat? But to return to the oat crop. Here we have statistics from the present year away back to 1868:

Years.	Acres.	Bushels.	Average
1869	260,015	9,785,959	37.53
1870	317,211	9,895,164	31.19
1871	334,798	10,680,484	31.92
1872	372,478	12,559,733	33.69
1873	368,493	12,544,536	34.04
1874	383,233	10,967,072	28.61
1875	401,381	13,801,761	34.38
1876	458,590	10,566,178	23.04
1877	419,903	18,819,630	32.19
1878	474,557	18,338,356	38.65
1879	567,371	20,667,922	36.42
1880	682,529	22,867,932	32.49
1881	728,367	21,954,126	30.14
1882	769,133	26,480,842	34.44
1883	892,649	30,934,333	34.65
1884	1,080,638	36,978,079	33.93
1885	1,095,805	34,388,213	31.38
1886	1,242,808	39,963,607	32.10
1887	1,325,910	37,661,424	28.40
1889	1,394,555	48,253,799	34.60
1889	1,339,773	40,678,486	30.40
1890	1,339,987	38,989,943	29.00
1891, estimated	1,457,166	59,743,806	41.00

The agriculturists of the state have been singularly successful in their oat crops, while the wheat crops have been repeatedly destroyed by storms and insects. There seems to be a terrible fatality hovering round the wheat crop of Minnesota, which makes it an exceedingly risky thing for farmers to place their all in it. If the crop escapes destruction by storm it has a more serious gauntlet to run from insects. A farmer in Washington county was recently heard to remark: "I have tried wheat raising and diversified farming, and while, of course, it is nice to raise wheat, the risk you run is far too serious for the working farmer. You never know how you will come out. I know what it is. There have been years when my entire wheat crop has been destroyed by insects. When I turned to diversified farming, very singular to say, the land has never been troubled with these pestiferous pests. Since then I have never missed making a living out of my farm, but in those days of the '60's when I relied solely on wheat and the crop failed, I can tell you it was pretty hard existence through the ensuing winter. The farmer who relies solely on wheat will, in the end, find his farm covered under a blanket mortgage, and in the end forcibly compelled to leave his homestead. But by diversified farming it is different. Every year since I diversified my crops my financial condition has improved. I have improved my land, improved my buildings, and my banking account has always had a snug balance on the right side."

THE THIRD CEREAL.

Corn Looms Up as a Great Favorite of the Farmers.

The third cereal of importance grown in Minnesota is corn—wheat, oats, corn. There has been a steady growth in the yearly acreage of land put into cultivation for corn. For instance, in 1868 there were 129,999 acres under cultivation. This year there were 726,493 acres under cultivation. This gradual growth is shown by the following tabulation:

Years.	Acres.	Bushels.	Average.
1868	129,909	4,849,936	37.33
1869	136,482	4,194,965	30.73
1870	178,129	5,650,370	31.66
1871	200,124	7,076,268	35.35
1872	216,455	7,142,245	32.99
1873	209,459	6,457,368	30.87
1874	256,493	7,340,342	28.64
1875	297,316	7,195,581	24.81
1876	295,089	7,623,043	25.84
1877	388,758	9,151,281	23.49
1878	324,174	11,286,545	34.90
1879	379,766	12,939,901	33.95
1880	422,461	12,125,255	31.07
1881	474,030	14,654,645	30.91
1882	628,512	16,606,379	26.42
1883	530,220	5,885,427	11.10
1884	535,133	16,761,495	31.32
1885	580,223	16,290,035	28.07
1886	596,877	18,940,026	31.70
1887	642,477	17,234,422	26.80
1888	688,622	22,115,769	32.10
1889	704,369	19,079,262	27.10
1890	726,493	18,848,198	25.09
1891, estimated	782,416	25,384,560	35.00

DONE IN BARLEY.

This Year Shows the Greatest Showing of Any.

There has also been a steady growth in the barley product. The figures show:

Years.	Acres.	Bushels.	Average
1867	11,862	316,715	26.70
1868	18,150	518,500	28.50
1869	31,695	851,113	26.85
1870	64,766	1,518,686	23.42
1871	64,558	1,627,007	25.20
1872	56,785	1,495,491	26.33
1873	35,501	669,415	18.85
1874	29,028	614,545	21.17
1875	40,803	1,230,420	30.15
1876	70,838	1,608,463	22.70
1877	79,334	2,239,650	26.37
1878	55,423	1,493,658	26.95
1879	96,951	2,423,932	24.87
1880	118,480	2,751,638	23.21
1881	196,917	4,215,715	21.40
1882	257,385	6,109,140	23.73
1883	265,207	5,770,946	21.76
1884	285,252	7,001,526	24.54
1885	285,919	6,653,851	23.27
1886	338,400	7,533,488	22.20
1887	322,612	5,216,897	16.10
1888	332,017	9,105,209	27.49
1889	290,668	6,803,039	23.41
1890	323,281	7,932,889	24.50
1891, estimated	390,665	11,719,959	30.00

Stupendous as these figures respecting oats, corn and barley may seem, they do not at all cover the various channels which diversifying farming in Minnesota has run into. The rye crop cuts no inconsiderable figure. In 1867 there were 1,988 acres of rye under cultivation, which yielded 32,763 bushels, or an average of 16.43. For 1880 the figures are given: Acres, 12,312; bushels, 170,817; average, 13.89. For 1890 we have: Acreage, 50,202; bushels, 845,207; average, 16.89. The estimate for this year: Acreage, 56,402; bushels, 1,128,020; average, 20.

BUCKWHEAT AND POTATOES.

Both Show Up Great and Paying Crops.

Buckwheat has sprung into prominence since 1889 as a product of Minnesota. In 1867 there were but 1,000 acres of buckwheat under cultivation throughout the length and breadth of the state. In 1880 this had increased to an acreage of 3,955, the yield for that year being 29,735, the average per acre being 10.06. In 1889 this jumped to 17,224 acres, the average yield being 12.70. A drop, however, was experienced in 1890. The acreage then was reported as 10,235, the yield 132,702 bushels, an average of 12.90 per acre.

Minnesota is yearly gaining prestige for its potato products. Each year witnesses a most gratifying increase in the crop. The northern half of Minnesota is producing an immense crop of potatoes each year. The establishment of starch factories all over the state is making the potato product a very valuable one to farmers, and, to some extent, accounts to the marked increase of the potatoes grown. This increase is exhibited most forcibly by the following tabulation:

Years.	Acres.	Bushels Potatoes.	Average per Acre
1867	17,747	1,788,053	101.32
1868	24,475	2,592,686	105.90
1869	20,832	1,488,428	71.44
1870	19,085	1,372,975	71.94
1871	21,429	2,153,536	100.49
1872	26,061	3,072,349	117.89
1873	26,369	2,195,138	83.31
1874	28,219	2,283,107	80.90
1875	31,487	3,783,637	120.26
1876	32,703	2,477,384	75.75
1877	40,770	2,426,002	62.00
1878	33,559	3,259,181	97.12
1879	37,925	3,915,890	103.25
1880	38,254	3,782,243	98.87
1881	41,797	3,907,187	95.84
1882	47,994	5,074,735	105.90
1883	58,930	7,113,813	120.71
1884	58,848	6,583,844	111.87
1885	54,503	5,339,720	97.75
1886	65,540	5,783,335	88.29
1887	64,658	4,920,735	76.10
1888	80,320	6,444,137	80.20
1889	76,895	7,609,097	97.60
1890	76,817	644,231	....
1891	83,554	8,709,062	....

The potatoes are purchased readily by the starch factories, but in addition a ready and excellent market is found for them in the large cities. The export of potatoes to other states is also a large one and increases with the recurrence of each season. Last year, when the potato crop all over the country was almost a failure, in Minnesota the blight was not so severely felt, and those farmers who had saved potatoes secured an excellent return. The demand was so great that the price quoted was too much for the starch factories, and they temporarily suspended operations. Minnesota is gradually forging to the front for this product. The size of the potatoes grown are remarkably large—so much that samples taken East are looked upon as more of a curiosity than an article of diet. But not only as a curiosity, but as a delectable food the Minnesota potato will stand its own with that grown in any other country in the world.

The bean crop tipped 8,020 bushels in 1867. There were 527 acres sown. In 1880 there were 1,538 acres under cultivation, with a yield of 20,904 bushels, an average of 13.63. The acreage for 1890 was 27.89, with a yield of 34,206 bushels. This year an estimate gives: Acreage, 3,232; bushels, 47,621.

BOUND TO GROW.

Minnesota a Veritable Paradise for the Agriculturist.

Everything the Minnesota farmer undertakes to grow is bound, in course of years, to increase. We have already noted the magnitude of the growth in the following products: Oats, corn, barley, rye, potatoes and beans. These have increased more than four fold in the past decade, and, it must be enforced, are in addition to the wheat that has been raised. The reader mustn't run away with the idea that this article is written to detract from Minnesota as a wheat-growing country. Not at all. No one can deny the excellent bread produced from Minnesota No. 1 hard wheat. Minnesota wheat is unequaled in the world. The object of this article is not to detract from its glory. The desire, however, is, in the first place, to demonstrate the fertility of Minnesota soils; in the second place, to show that other cereals beside wheat can be cultivated here; in the third place, to enforce upon farmers and intending settlers the absolute fact that it pays to diversify his crops—is better for his land, creates more demand for labor, enriches himself and reduces his risk to a minimum. A farmer, say, cultivates his land with wheat, oats, corn, rye and potatoes. He also has some cattle and pigs. It is pretty certain under these circumstances he must make something on his year's work. Everything cannot fail him, even if all his products failed. If the wheat, oats, corn and rye were totally destroyed by storm or eaten up by insects, and his potatoes blighted, he has his stock to fall back upon to help him out over winter. For years and years have the agricultural teachers attempted to instil into the general mass of farmers these self-evident truths. But no; wheat raising was all the rage. The consequence was that hundreds of men have been brought to penury by their foolhardiness. They put the whole of their capital into a piece of land and started out to raise wheat. They were unfortunate in having it eaten up by grasshoppers. As a consequence the farm becomes blanketed with mortgages. Another year the foolish farmer places his all in wheat, and again he is doomed to disappointment, and, in desperation, he quits the country. All this loss and unnecessary hard times might have been averted by the farmer placing three or more strings to his bow instead of one. It has been found that the farmers of Minnesota who have engaged in diversified farming are and always have been in a comfortable position, many of them, indeed, occupying positions of affluence. Diversified farming is a reality in Minnesota. The statistics already given, and yet to be given in this article, fully sustain this statement. These statistics demonstrated that the future of Minnesota is beyond the wildest expectations of its most enthusiastic citizens. And why? For the mere reason that fully one-half, if not more than one-half, of the land of the state remains to be developed by the hand of the sturdy yeoman. The land is ready, waiting for the people, and, with the experience gained by upwards of fifty years of toil and hard experience, the future is full of hope and brimming over with promise.

But to return to our statistics. The acreage and yield of oats, corn, barley, rye, buckwheat, potatoes and beans have been clearly put before the reader. Much, however, remains to be said. Let us take up sugar cane. They have, as it were, blown hot and cold in regard to it. For instance, in 1869, there were 629 acres of sugar cane under cultivation. This had mounted to 7,396 acres in 1871, when the yield was 684,066 gallons. In 1889 the acreage had dropped to 2,999, with a yield of 220,251, and in 1890 the acreage is given as 3,490. No satisfactory reason can be given for the way in which the cultivation of sugar cane has varied in the state; its sudden rise and then partial falling off. The only reason ventured is that farmers, having found out more profitable branches, have neglected this one.

THE HAY CUT.

Flax and Hemp Open a Boundless Field to Settlers.

Cultivated and wild hay figure no inconsiderable part in the returns of the Minnesota farmer. To show this the following tabulation is only necessary:

Years.	Wild Hay. Tons.	Cultivated Hay. Acres.	Tons.
1872	743,414	88,990	108,[illegible]
1873	782,618	104,525	144,712
1874	1,006,212	104,107	138,868
1875	878,782	47,592	122,813
1876	935,961	174,888	135,860
1877	974,224	112,056	131,647
1878	1,110,241	121,228	155,295
1879	1,200,506	145,150	194,964
1880	1,263,472	135,722	175,595
1881	1,231,089	171,512	227,432
1882	1,564,597	198,183	269,925
1883	1,617,307	786,951	417,099
1884	1,856,921	338,930	439,481
1885	1,939,939	365,523	517,098
1886	2,060,527	424,878	586,698
1887	2,120,526	885,259	390,100
1889	1,623,749	410,474	541,528
1889	1,797,663	417,608	454,999
1890	2,740,262	441,937	564,703
1891, estimated	2,999,762	492,873	672,432

Flax and hemp will cut no small part with the farmers of the North Star state in the future. The last legislature considered the growing of flax so important that a special committee was appointed "to investigate and report whether or not it is practicable to produce to advantage flax or hemp fiber grown in this state suitable for making binding twine." The committee made a very exhaustive report on its investigations. It was proved that we had an admirable climate, fertile soil; that no state in the union offers so many advantages to this branch of agriculture, for, in addition to those named, we have abundant water power, such as no other country possesses; the most perfect machinery for harvesting, preparing the fiber and for any other purpose; ingenuity and spirit of enterprice, in short, every condition is present to ensure success. This legislative committee reported: "That flax and hemp can be grown in this state at a profit cannot longer be a matter of successful dispute. The fact that over 150,000 acres of flax have been grown in this state each year for some years past makes this statement no longer a matter of experiment or doubt. We do not hesitate to say to each farmer in this state, grow flax. A poor farmer will not succeed; the slovenly cultivator will get the minimum, the painstaking cultivator the maximum, results and prices. To the young man who intends to make farming his life's work, we say, the growing and working in Minnesota of flax and hemp for fiber, when followed with care and intelligence, is a line of industry well worthy of his studious attention. Skill and experience in this line of work will bring rich rewards."

WHAT HAS BEEN DONE.

Linen Goods Made From Minnesota Flax Fiber.

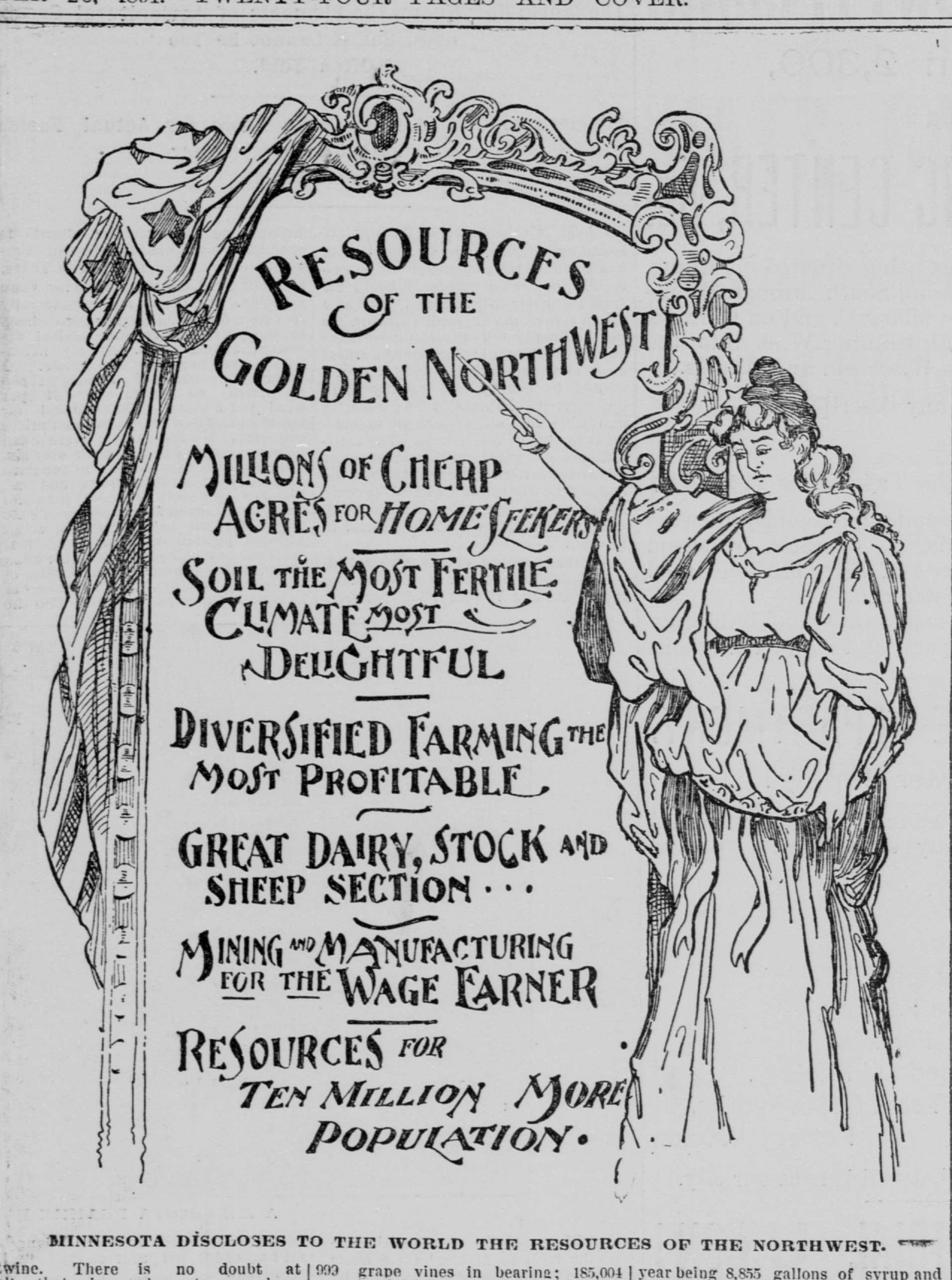
The growing of flax and hemp is bound to be largely taken up by the farmers of this state. The manufacture of the fiber has been undertaken by the state prison management on a large scale, and dotted all over the country small manufacturers are starting the same industry. A very interesting fact related in the report of the committee already referred to is this:

"On the 19th of December, 1890, John Kerwin and Charles N. Bell, of St. Paul, obtained of Mr. Basse, of St. Paul Park, one bale of his flax fiber grown and made by him at St. Paul Park in 1890. They shipped it to one of the largest linen mills in Belfast, Ireland, to be made into linen goods and returned to St. Paul. The manager of the mill, in a letter received by Mr. Kerwin on March 14, 1891, declares his astonishment over the good quality of the fiber, and says he has dressed down 112 pounds of the fiber to 85 pounds, and that when so dressed it has a value of £65 per ton; also that he will soon return to St. Paul linen products of the fiber, and he also urges the production of the fiber in large quantities for shipment to Ireland. These gentlemen claim this to be the first shipment of Minnesota fiber to Europe, and that it also shows another outlet for the product of this new industry."

It will thus be seen that to the Minnesota farm, in flax and hemp, an almost boundless field is afforded. J. Carmichael Allan, general superintendent of the Minneapolis Linen company, says: "It was a matter of vital importance to me, before becoming identified with the manufacture of linen in Minnesota, to satisfy myself that there were undoubted advantages to be gained by coming to this state, and principal among these I reckon the nature of the soil, which I consider is the best I ever saw for producing fibrous plants. The highest authorities claim that a black, sandy loam is the best of all soils for flax and hemp and that such soil will, if combined with a level district, almost invariably give good crops of both seed and fiber; provided, of course, that the farmer puts in decent seed and gives his crop fair attention. Our company has been organized to start a complete system for flax spinning, weaving and finishing linen cloth, and if success attends the venture, arrangements have been made whereby the mill will be extended to a considerably larger size. Our intention is to use, as far as we possibly can, fiber flax grown in this state. I am perfectly satisfied from samples that I have seen, that the very finest fiber suitable for the best goods can be grown, and on a small scale has been grown, in Minnesota."

Having thus said so much of the great opening that awaits the farmers of Minnesota and the cultivation of flax and hemp, it will not be out of place to notice, without any inducements, what has been done the past eighteen years. In 1872 there was an acreage of 12,129 for flax, and a yield of 71,752 bushels of seed. This, in 1889, had become 255,602 acres with 2,293,217 bushels of seed. The flax fiber has, up to within a few years, been thrown away as practically worthless. To use the remark of a Scotchman, brought up in the linen business, who visited our Western country not long ago, when he saw the flax fiber and its lack of use, he said: "What a waste of God's mercies." If the farmers follow the advice of the late legislative committee there need be no necessity for such waste, their advice being:

In regard to the cultivation of flax: Select clean land, work it deep and fine, make it level by rolling, sow before the 10th of May one and one-half (1½) bushels of seed per acre. In order to produce a fine fiber we must have imported seed. With our ordinary seed we cannot expect to raise anything better than second or third class fiber, but even this grade of fiber will be amply good enough to make the best quality of binding twine. There is no doubt at all that in order to produce the finest grades of fiber the flax must be pulled, but for secondary qualities it may as well be cut. The flax should be pulled or cut as soon as the lower half of the leaves have fallen off and the balls are yellow. Use self-binder if it cuts three inches from the ground or lower; if not, use reaper and bind at once if you intend to keep the straw straight. Stand up in rows of no more than three bundles thick. After eight days it will be dry enough and must be stacked. Never mind the flax when the straw is not perfectly dry. If for tangled straw, follow your own way of cutting and curing, but cut as low as practicable, and proper machines will be on hand to thrash the new crop, both tangled and straight straw, without any injury to the fiber."



MINNESOTA DISCLOSES TO THE WORLD THE RESOURCES OF THE NORTHWEST.

But enough of flax and hemp. The subject has been touched upon at more than ordinary length, because of its vast importance. Here is a branch of agriculture, in its mere infancy, so far as the flax fiber is concerned. It is, therefore, of as much importance to the citizen farmer as it is to the prospective farmer.

GRASS SEEDS.

A Falling Off Observed in Apple Tree Culture.

Grass seeds may next be mentioned. In 1871 the product of the crop was 15,823 timothy bushels and 2,588 clover bushels. The showing for 1889 was 430,304 timothy bushels and 66,413 clover bushels.

The apple tree industry is depreciating. There were in 1874, 3,742,479 apple trees growing in the state. The trees bearing were placed at 114,474. These are the figures given in the report of the commissioner of statistics, and presumably are correct. The year following the report from the same source shows that the apple trees growing in Minnesota had decreased from 3,742,479 to 889,874. There must be some mistake about this. However, while there may be an error here, there is no gainsaying the fact that the number of apple trees are yearly growing less. The largest number of apple trees bearing was 301,455 in 1885. There were 301,538 trees growing in 1889, with but 117,390 bearing. The figures for this year are: Trees growing, 357,308; bearing, 112,970.

This gradual falling off in apple-growing is inconceivable. In the years from 1877 to '89 it appears to have paid, for the farmers report each year an increased number of trees. But then the decline came, and the fall has been very marked. As in sugar, this decrease can only be accounted for by the explanation that the farming community are directing their energies to other and more profitable branches. It is natural that with the development of the state—and this development may be said to have only just begun—that some of the less unremunerative branches will be neglected. Take the growing of flax as an instance. It is natural to assume that when the farmers are made to understand the remuneration for them by undertaking its cultivation, not only for seed but for fiber, that some less remunerative branch will go to the wall. It is the same old story; the survival of the fittest, or, in this particular case, the survival of the best payer.

So rich is the soil of Minnesota and so suited its climate that there would seem to be no end to the products which can be raised. Few people would imagine that grape growing was to any great extent indulged in. The popular outside opinion—particularly Eastern opinion—is that in Minnesota is nothing but cold waves, snowstorms and cyclones and such like death-dealing visitors are entertained. The popular mind has not grasped the lovely spring weather, the cool breezes of summer or the invigorating fall months which are enjoyed by the Minnesotans. If they did, there would not be so much land still undeveloped. Later we will enlarge more full on this undeveloped land; but to return to grapes. Grape cultivation is a most profitable one to the farmer. He recognized this fact early, for in 1874—as far back as the official reports go—there were 36,145 grape vines reported bearing, yielding 114,922 pounds of grapes. The greatest year for grapes in Minnesota was in 1885, when there were 173,357 grape vines in bearing, yielding 198,309 pounds. The reports for 1890 read: 66,999 grape vines in bearing; 185,004 pounds yielded, and the estimate for this year is 60,952 grape vines bearing with a yield of 172,742 pounds.

TAKES IN TOBACCO.

Tons of the Soothing Weed Annually Raised in the State.

Tobacco raising is a no small industry. This will be news to the outside, as, to a certain extent, it is news to many residents of cities in Minnesota. The ignorance which exists outside the state respecting Minnesota—its great agricultural capabilities; its boundless mineral resources; its vast forests and lumber interests—is nothing surprising. It is only what is to be expected when so many people within its borders are unaware of it. Tobacco raising is a case in point. You meet a citizen—an average intelligent man—and you say: "In 1890 there were 60,952 pounds of tobacco grown in Minnesota." "Is that so?" he replies. "I did not know that tobacco was ever grown here." And you will find this to be the case with ninety-nine out of every hundred individuals you care to address. Tobacco raising is no new thing in this state. The reports go back to 1868, when 5,998 pounds of the delicious weed were raised. This was more than doubled the following year, and the yield has gone on increasing ever since. The reports for the past ten years show:

Years.	Pounds	Years.	Pounds
1882	62,850	1887	28,931
1883	14,744	1889	13,959
1884	47,472	1889	27,689
1885	64,085	1890	33,621
1886	65,920	1891 (estimated)	47,500

An article on diversified farming would naturally be incomplete without something about dairy products. That Minnesota is eminently a dairy state is clearly indicated in another article in this issue. But to impress upon farmers already on the land and intending settlers it will not be out of place to bring in the subject here. The grain farmer is interested in maintaining a universally intelligent and successful American dairy, for that means less competition for him and a larger consumption of grain. His market is a freer one for every cow that lives. It is in a diversity of our industries that our prosperity is to be found. The dairy is an important branch of our farm industries, and to illustrate that the majority of Minnesota farmers have learned this to be the case the following figures conclusively show:

Years.	No. of Cows.	Pounds of Butter.	Pounds of Cheese.
1871	106,016	7,356,768	469,147
1880	228,955	15,695,283	417,904
1889	412,036	29,165,137	1,274,076
1890	473,304	32,218,030	1,385,241
1891, estimated	454,176	39,762,000	1,762,424

These figures apply strictly to farmers, and are an indication of the general prosperity of the state. It will thus be seen, all along the line, evidence is being accumulated showing the enormous advantages—advantages which no other country in the world can show—under which the agriculturist operates in Minnesota. But, great as the showing is that has already been made, it may truthfully be said, in the words of Queen Sheba, half of the glories of the state have not yet been told.

BEES AND HONEY

Help to Swell the Honest Granger's Banking Account.

Bees, honey and maple syrup make up a nice sum in the yearly earnings of the Minnesota farmer. This industry has been carefully ventured for a quarter of a century, and each year exhibits a healthy increase in the number of hives owned, the pounds of honey obtained, the gallons of syrup and the pounds of sugar secured. To once more get down to statistics. Statistics tell the story much more concisely and much more forcibly than columns of padded matter. There were 13,704 hives reported in 1872, and 132,948 pounds of honey produced. As stated, each following year marks an increase. This increase is most gratifying, as shown by the totals reached in 1890-91. In 1890 the figures are: Hives, 20,058; pounds of honey, 221,333. In 1891: Hives, 23,462; pounds of honey, 243,742. The returns from maple sugar and maple syrup are also reassuring. There were in 1874 17,256 gallons of syrup, and 145,285 pounds of sugar reported. Those dwindled somewhat—the figures for this year being 8,855 gallons of syrup and 16,289 pounds of sugar. A much better showing is anticipated from this year on. The largest amount of sugar obtained in this state was in the years 1874-75, which respectively furnished 145,285 pounds and 151,215 pounds.

Beet sugar received quite a boom from the legislature last winter. Minnesota is declared to be peculiarly adapted to produce these beets. In 1888 and 1889 sugar beets were raised in various places in Nebraska, the results at Grand Island being particularly good. It is, therefore, claimed that in this state the success of beet growing is more than assured—certainly preliminary experiments this year bear this out. Of course it is not to be expected that the land in every part of the state will meet the requirements of successful beet growing. The character of the soil has an influence upon the shape, size, quality and yield of the beet. Very light, sandy soils produce beets containing a fair amount of sugar, with juice of high purity, but deficient in yield per acre. A clay soil produces a heavy, large beet containing a considerable quantity of sugar, but with low purity of the juice. Loamy lime soils produce beets having the most sugar, with high purity of the juice and the yield per acre is good. The beet takes most of its food from a depth of about twelve inches, so that a porous, easily cultivated and well-drained soil is essential. The soil in Minnesota naturally adapted to the cultivation of sugar beets must have been for a sufficiently long time under cultivation. With our conditions, where the ground freezes to so great a depth during winter, and the spring comes suddenly with long sunshiny days, the requirements for moisture, light and heat are usually well filled. The raising of sugar beets has been encouraged by congress, who have provided a bounty therefore, and its importance may be understood from the fact that the United States consumes more sugar than any other country, and with the exception of England the per capita consumption is greater.

Having enumerated in this article the number of cows and their produce, it is within bounds to state that in 1880 there were 259,813 sheep and 216,913 hogs on the assessor's lists, and last year the number was 297,117 sheep and 364,379 hogs. From the same source we find for 1890 the following: 50,389 one-year-old horses, 79,451 two-year-olds, 231,335 three-year-old horses and over. There were also: Cattle under three years, 440,525; cows, all ages, 554,269; cattle over three years, 56,362; total cattle of all ages, 1,051,156. A fine showing, truly!

Need any more be said to further prove Minnesota's claim as an agricultural state?

The most skeptical person must be convinced that here we have the ideal place for the intending settler. That there is plenty of room is easily proven. The population of the state is reported by Supt. Porter as 1,301,826. The state is capable of maintaining many more millions. The total number of farms in the state in 1880 was 74,888; this year the number reached 100,622, of which 1,207 were new farms. The cultivated acreage of the state is 6,743,421 acres. The total acreage is 54,760,000. It will thus be seen that there is room for everybody, as it has already been demonstrated that there is opportunity for all who come to make a living.

IT CAN BE DONE.

Minnesota Made a Leading State for Breeding Thoroughbreds.

The advance made by no business or amusement can compare with the strides achieved by the thoroughbred interest in our land during the last decade. Whereas $180,000 represented the amount of money given for running races in America during the year 1880, almost $5,000,000 was expended for the same purpose last year, and we see to-day single stables in one year winning an equal amount to the entire sum devoted to the thoroughbred throughout the length and breadth of our land a decade ago. This has naturally raised the price of the thoroughbred, which has of late years rapidly and steadily increased in value.

The recent sale of the Belmont stud, which aggregated over half a million of dollars, sounds more like some story from the Arabian Nights than a simple fact, and shows the prize offered that person who can successfully breed the thoroughbred. A detractor may say this was simply the dispersal of a fashionable stud, from which it was considered the correct thing for those in the swim to secure representatives. Not at all. Less than a year ago Mr. Belmont's racing stable, comprising twenty-eight head, were sold at auction. These horses since then having won $300,000, the high prices obtained for his brood mares and colts seem a most natural consequence. Charles Reed did not buy St. Blaise as some millionaire would a famous painting. I understand that gentleman had to make no little sacrifice to enable him to secure

This Great Horse,

which he accomplished in a spirit of enterprise, entirely as a business venture. The apparently high price, $100,000, brought by St. Blaise, was not exceptional; forty-eight brood mares brought $203,525, an average per head of $4,240. Twenty-seven head of suckling colts and fillies, sold separate from their dams, brought $72,325, an average of $2,678 for each one. Twenty-four yearlings sold for $124,550, an average of $5,189 apiece. In what way could the farmer obtain larger returns for his labor than here? How could he secure a better recompense for his timothy and oats? What domestic animal would it pay him better to keep in his shaded pastures than the thoroughbred brood mare and her gazelle-like foal? Only partially blessed can that land be which, for any reason, is unsuitable to the rearing of the highest types of the noblest species of animal over which man has domination.

The claim, advanced by many, that owing to her latitude, Minnesota is not adapted for growing the thoroughbred, I will never admit. My own want of success in this direction, far from indicating any local or climatic deficiency, only convinces me of my own stupidity and lack of the knack of good management. It is unbroken faith in our matchless Minnesota air and water and hard-bought experience that urge me onward, and promise in the near future the reward due perseverance. The idea that only a warm climate can produce superior horses is contradicted by the performances of the trotters Allerton, Nelson and Axtel. That the moose, the largest of our fauna, should be a denizen of a latitude still further north than Minnesota, shows the error of thinking that a warm

Climate Is Essential

to the attainment of physical perfection in animals. That this is not the case with man is shown by the Swedes, who, the longest-lived members of the human family, have possessed a military supremacy in Europe oftener than any other nation, and that in the face of the fact that there are more people in the city of London than in the whole of Sweden.

The Clydes, raised by Mr. Clarke in St. Cloud, compare favorably with those bred anywhere else in the world. I think the day near at hand when some trotters reared in our midst will receive the very highest laurels. "But granted," some one may contend, "this is not the case with the thoroughbred. He takes his origin directly from a family of horses that for ages have lived in an extremely dry, hot climate. One cannot successfully reproduce him in a region where the erection of ice palaces is the winter amusement." Indeed, let us see, that high-class race mare, Fleur de Lis, was never in a barn, or under a roof, until she was six. In 1884 this mare won every race she started in, seven in number. Being put in training the spring of 1885, she won twenty-one races before she was run into and cut down by Kiohba, the following winter at New Orleans, her other legs at this time being as sound and

Free From Blemish

as in colthood. At no time since has there been nearly so high a class of race-horses at New Orleans as were present there that winter. Centennial Maid, Fleur de Lis' full sister, was raised in the ordinary manner, and while a good, useful mare "in the brush," as the saying is, in no way compares with her sister, who was never in a stable or barn, but passed each Minnesota winter out doors until she was six. Could there be a higher indorsement of any climate than this? To my own deficiency alone must I attribute my failure in not having long ago demonstrated beyond question the desirability of Minnesota as a home for the thoroughbred.

What success can a person expect, so incautious as to receive into his stable a boy about whom he knew nothing farther than that, while he was living on him, he was daily exercising the horses of rivals, whom he knew to be unprincipled, unscrupulous men? It has long been a matter of wonder to me that racing studs have not been formed more extensively in the North. I expect to see the day when they will; and, if in the North, what state is better than our own for such enterprises? Col. King, than whom there is no more intelligent breeder, always claimed that thoroughbreds could be successfully bred and

Raised in Minnesota.

The conditions surrounding the thoroughbred in the dry, pure atmosphere of Minnesota most nearly approach those of his progenitors in Arabia than they possibly could in England, or our Atlantic states, which are damp, wet and afflicted with numerous diseases affecting the wind, from which we are happily exempt.

Beyond the reach of the baleful efforts of the protectionist, once established, the breeding of the thoroughbred in Minnesota could not fail to be a great industry in our midst. The yearly meetings given at Hamline by the Twin City Jockey club are a long stride in this direction and must contribute immensely to the improvement of our horses. All honor to Frank Shaw, to whom we owe their introduction. To few individuals is the state more indebted than to that gentleman, whose labors, both directly and indirectly, will for years to come be the cause of bringing millions of dollars into our commonwealth. But one thing, the race for Minnesota bred horses run at our summer meetings is, in effects, the most important of all. This should not be a purse race. It should be a fixed event, a stake race. In what way could some of our wealthy citizens, advocating true sport, bring more deserved gratitude on their heads, and accomplish more good for the state, than inaugurating the "Minnesota Breeders' Stake," and making it a fixed event, to subscribe enough to it to make it an object for any one to breed thoroughbreds here, thus showing the world that whereas the industry may, as yet, be only small, such is not the case with our leading men, who demonstrate that it is not their fault if Minnesota, as a home of the thoroughbred, is behind Kentucky or California?

I hope this suggestion will be acted upon. Its expediency must be apparent. I call upon all to aid in bringing about its fulfillment.

JOHN BRADFORD.

Journalistic Cycles.

Good News.

Mrs. Reider—I see the man who has been exchange editor of the Daily Night for twenty years is dead.

Mr. Reider—My! my! I'm sorry to hear that. Now they'll put some young fellows in his place, and they'll be printing all the old jokes over again.