

# TIME FOR PLOWING IS OF GREAT IMPORTANCE TO CROP YIELDS

The average yields of spring crops, such as wheat, oats and corn in the great plains area, from spring and from fall plowing, show that the blind following of a rule prescribing any particular time of plowing might cause a reduction as often as it does an increase in the yields. However, in this region, where the precipitation is erratic, there are very few farming operations which can be done successfully by rule of thumb, and this is especially true of plowing. The time of plowing is one of the most frequently discussed subjects, and one on which very few authoritative figures can be obtained. Yet the time of plowing is one of the most important of the controllable factors in crop production.

The great variation in the time and amount of precipitation in this region must be constantly kept in mind, when considering the time of plowing. No dependence can be placed on a heavy precipitation in August and September, yet it frequently occurs. As moisture is considered the most important factor in crop production in the great plains area, its conservation is the primary object in cultivation. By many who have had little or no experience in actual farming in the semi-arid regions of the west, annual plowing is considered as the most necessary of the cultural operations, but this is not substantiated either by the experience of many successful farmers, or by the records from experimental work. The smooth, deeply-plowed, well-harrowed surface looks well, and gives the impression of carefully conducted farm operations, but may prove detrimental to crop production. The smooth, finely-pulverized surface is readily subject to blowing, and the loose, unpacked seed bed may be quickly dried by the rather free circulation of air through it. Stubble left on a field may give it an unkempt appearance, but at the same time it may be of value in catching snow or in preventing the soil from blowing.

Stubble, weeds and uneven ground are common means of retaining snow and holding a large part of the winter precipitation in deciding when a field should be plowed, the question of whether a greater amount of moisture will be accumulated by holding the snow that falls than will be dissipated by the growth of weeds is paramount. It must be decided by the man on the ground. In answering this question several factors must be considered, namely the amount of moisture already in the soil that may be lost through weed growth, the probable time before the weeds will be killed by frost, the possibilities of increasing the water in storage in the soil by holding the snow that may come, the danger of soil blowing if the stubble and weeds are removed, and the distribution of farm labor. The importance of these factors is considered in the new United States department of agriculture bulletin No. 253, the effect of different times of plowing small grain stubble in Eastern Colorado. The major portion of the bulletin is given to a

description of the time of plowing for spring wheat, but is as applicable to oats and corn. The experiments were performed at Akron, Colo., field station, but the deductions are general and useful throughout the entire great plains area. The experiments extend over a period of six years, from 1909 to 1914, inclusive, and during those years the fluctuation in rainfall was as great as would be expected through any like period.

It was found that there was a wider variation in the precipitation of the fall and winter, when the moisture should be stored, than during the growing months. Rains in August and early September invariably produce a growth of weeds, which usually exhaust the valuable moisture supply. The loss of moisture which has penetrated to a greater depth than three inches, after the weeds are dead in the fall and before growth starts in the spring, is almost negligible. Either from land fall plowed or from that covered with stubble, light precipitation evaporates unless it falls as snow, which is blown into drifts until a considerable quantity is accumulated. As 10 inches of light snow are equivalent to only one inch of rain, and one inch of rain penetrates the soil to a depth of six inches, it will be readily seen that snows of one to two inches supply a very small amount of moisture, a greater part of which will be lost by evaporation. Every effort should be made, therefore, to conserve the moisture which falls either while the crop is on the land, or while the land is lying idle.

Early fall rains will be used by weeds unless the land is cultivated. Heavy winter snows may occur, but they are likely to blow off the fields, unless there is either stubble or an uneven surface to hold them. The time and method of cultivation, then, should be planned to prevent weed growth, and still leave the soil or stubble in such a condition that it will hold the maximum snow. However, the period when labor is available will also be an important factor in determining the time of plowing. When labor is scarce, cultivation other than plowing which will kill weeds, and can be done rapidly, may be resorted to. If this cultivation leaves the stubble on the surface or leaves the surface rough enough to hold the snow, it may be of even greater value than plowing. Disking or listing in the fall are the methods most commonly used.

**Spring Plowing Eliminates Weeds.** The amount of moisture in the ground in the spring is only one of the factors in producing grain crops. Weeds growing with the crop may use enough water to decrease the grain yield. It is estimated that one ton of Russian thistles uses 65 per cent as much water as it would take to grow a ton of unthreshed wheat. It was found that fall plowing at the Akron station is especially favorable to weeds starting with the grain. Plowing in the spring, however, thoroughly eliminates the weeds, and is done immediately before seeding

given the grain crop a start before the weeds commence to grow. The ideal cultivation would prevent weed growth in the fall, leave the land in such condition that it would retain the maximum snow in the winter, and retard the germination of weed seed until the crop starts in the spring.

Possibly this may be accomplished by disking in the fall and plowing in the spring, or listing in the fall and bursting the ridges in the spring may be more practicable. Early fall plowing is effective in that it destroys weeds which use the early fall precipitation, but it does not leave the land in a condition to retain the snow in the winter, and it gives the weeds an opportunity to start before the crop.

In deciding the time to plow, the advantage and disadvantages of both spring plowing and fall plowing must be taken into consideration. Heavy rains in August indicate that fall plowing should be done, as the gain of moisture during the winter by the stubble land probably would not equal the loss of moisture taken by the rains in the fall. If only light rains occur, however, the moisture in the soil produced by these rains probably would be more than offset by the greater quantity of snow held by the stubble during the winter, and the reduction of the weeds in the crop. Spring plowing would then be better. The availability of labor in the fall will influence the amount of plowing done, but a greater effort should be made to do the plowing if there is heavy precipitation that if the rainfall fall is light. The only advantage in late fall plowing is that the amount of spring labor in preparing the seed bed is reduced. The advantage, however, may be offset by reduction in the yield.

In deciding when a field should be plowed, the question of whether a greater amount of water will be accumulated from snow than will be taken up by weeds is the greatest question to be decided, and this must be done by the man on the ground. The bulletin named above gives the results of fall and spring plowing on oats and on wheat stubble through a series of years, and the amount of water available in the soil at different dates during a series of years. This bulletin may be had upon application to the editor and chief of the division of publications, United States department of agriculture, Washington, D. C., as long as the supply lasts.

**\$100 Reward, \$100**

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. It is a powerful, yet so much faith in its curative powers that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials. Address P. J. CHENEY & CO., Toledo, O. Sold by all Druggists. The Hall's Family Pills for constipation.

**HOBSON TEAM DEFEATS ROY**

**BIG CROWD WITNESSES AN EXCITING GAME PLAYED ON ROY DIAMOND.**

**FINAL SCORE IS FIVE TO FOUR.**

Before one of the largest crowds that has assembled in Fergus county this year to witness a baseball game, Hobson Sunday afternoon took Roy into camp by the score of 5 to 4. A batting rally in the seventh inning turned the trick for Hobson, as it that round the river lads made four scores.

**Williams Weakens.**

Up to that time the score was 3 to 1 in favor of Roy. However, Williams seemed to blow up. In fact he pulled a Beachey stunt or two and after four hits were made, and two men hit by pitched ball, the smoke cleared away and Hobson had what proved to be a safe and sufficient lead.

**Phelps Is Firm.**

Cox caught a good game for Roy. Phelps and Phelps formed a steady battery for the visitors and at no time did the Hobson pitcher waver, but he maintained his clever pace all the way, mixing 'em up well and doing some excellent work on the firing line.

The game was slower than some played by these teams of late, and a few errors were made. However, the large crowd enjoyed the contest, which was exciting and afforded all a touch of real baseball.

**A Third Game.**

Next Sunday Hobson will play Denton, while Roy will not play. However, arrangements are under way to have the third and deciding game played in Lewistown on a week from Sunday. It is now one each between these two teams.

**POPULAR ROY PEOPLE ARE MARRIED**

Walter W. Haney and Miss Hazel Anderson, very popular young people of Roy, were married here Thursday afternoon, the ceremony being performed by Judge B. H. Foley. Following it a wedding dinner was served at the Fergus to a party of 12. Mr. and Mrs. Haney left later for a tour through the Yellowstone park and will take a trip through Canada before returning home. Mr. Haney is a well known rancher, while the bride is the daughter of Mr. and Mrs. C. F. Anderson of Roy. Miss Kathryn Rolland was the bridesmaid, while Theodore Anderson acted as best man.

**MARRIAGE OF R. W. REYNOLDS AND MRS. HELEN WILLIAMS**

Mr. Ralph W. Reynolds and Mrs. Helen Williams were married at 6:30 o'clock Tuesday morning by the Rev. C. M. Donaldson at his home on Boulevard. Immediately following the ceremony, Mr. and Mrs. Reynolds departed for Butte, Salt Lake and other points, expecting to be gone ten days or two weeks. They will reside in Lewistown. Mr. Reynolds is a member of the firm of Cook-Reynolds company here.

**MONTANA WINS MORE HONORS**

**CAPTURES MORE THAN TWICE AS MANY MEDALS AT SAN DIEGO AS ANY OTHER STATE.**

**ONE GRAND MEDAL IN THE LOT**

More honors have been heaped upon Montana. The awards at the San Diego world's fair have been made, and in the distribution of the marks of merit, Montana takes front rank as an agricultural empire. This state captured more than twice as many medals as any other state in the union. This is the information contained in a telegram received Tuesday by David Hilger from J. A. Pyle, who is in charge of the Montana building.

Montana won the grand prize for the best agricultural display and 15 gold medals.

Together with the high honors won at the San Francisco fair, Montana can well be said to have been the surprise of both fairs and the biggest prize winner of any state.

The result cannot but result in great good for the state and many eyes will now be turned Montanaward.

**A SMALL BLAZE.**

Saturday afternoon at 5:30 o'clock the fire department responded to a call from Park addition. A small shed belonging to Mr. Hall had caught on fire, corner Sixth and Brassey. Little damage was done before the fire was extinguished. Some rubbish was being burned when the flames reached the shed and set it on fire.

**COMING CONVENTION OF THE SOCIETY OF MONTANA PIONEERS**

**SESSIONS WILL BE HELD AT GREAT FALLS BEGINNING ON SEPTEMBER NINTH.**

Members of the Society of Montana Pioneers are receiving advance notice of their annual reunion at Great Falls, Sept. 9 and 10. At the same time and place the yearly convention of the Sons and Daughters of Pioneers will be conducted. Each year finds a few of the old Montana pioneers fading away, while at the same time new members are being added to the Sons and Daughters association.

These conventions are among the most important in the state and from 400 to 500 members are expected to attend. The meetings are expected to be of interest to all, and a good time take precedence over their business sessions. The Great Falls Commercial club is co-operating in promoting everybody an excellent vacation, and is assuring all delegates that the power city will live up to its reputation as a convention city of note and a splendid place to entertain.

**Headquarters at "The Rainbow."**

Headquarters have been established at the Rainbow hotel, and the opening meeting will be held in the magnificent new Palace theater. Each evening there will be music in the palm room of the Rainbow with receptions and a real old-timers' dance.

A movie matinee will be given one afternoon, including film pictures of Alder gulch from Summit to Pete Daly's ranch, and in addition vaudeville acts and other interesting films.

Auto parties will be conducted, and as Great Falls boasts of more places of interest than most communities, those visiting that city on September 9 and 10 are assured a pleasant and very profitable time, and in addition the business meetings will contain the names of prominent men who will give entertaining and interesting talks. The smelters, the various big dams and power sites, the packing plant, the numerous parks, boulevards and driveways, the only city market of the state, and other points of interest to visit will be on the program.

**M'CARTHY MAY BOX FRANK MORAN SOON IN NEW YORK**

**EBBETS FIELD MANAGEMENT IS TRYING TO ARRANGE THIS IMPORTANT CLASH OF HEAVY WEIGHTS.**

Frank Moran of Pittsburg, who has just returned from Paris and London, where he made a good showing in the squared ring, may be next opponent of Tommy McCarthy, the Lewistown entrant for heavyweight honors. The management of the Ebbets field and Broadway Sporting club of Brooklyn has made McCarthy a flattering offer, through his manager, Henry Iringer, and states that an effort is being made to get Moran as McCarthy's opponent. Such a match would draw a big house in the east, as it would be Moran's first appearance in America since his return from abroad, while it would also be McCarthy's first showing in the east this season. Moran recently boxed Jack Johnson in Paris, the bout going 20 rounds, Moran losing the decision. But Frank gave Jack a good argument all the way, and Johnson picks Moran as a likely fellow to beat Willard. However, after the McCarthy bout, if finally arranged, there may be a different opinion in the sport world.

**REDUCED RATES.**

All railroads in Montana have made a special rate of a fare and third on the certificate plan, with selling dates on Sept. 7 and 8, and good returning Sept. 10 and 11. The original dates of these two conventions were set for Sept. 17 and 18, but this being the week of the annual convocation of Masons, the meeting were set ahead to the ninth and tenth.



**NATURAL neighborly friendship and good will lead many tobacco chewers to tell their friends about the Real Tobacco Chew.**

And it's welcome news to the men who hear it, because it is the chew that gives the satisfying taste of rich, sappy tobacco.

A little chew of pure, rich, mellow tobacco—seasoned and sweetened just enough—cuts out so much of the grinding and spitting.

**THE REAL TOBACCO CHEW IS NOW CUT TWO WAYS!!**  
W-B CUT IS LONG SHRED. RIGHT-CUT IS SHORT SHRED.

Take less than one-quarter the old size chew. It will be more satisfying than a mouthful of ordinary tobacco. Just take a nibble of it until you find the strength chew that suits you, then see how easily and evenly the real tobacco taste comes, how it satisfies, how much less you have to spit, how few chews you take to be tobacco satisfied. That's why it is *The Real Tobacco Chew*. That's why it costs less in the end. An excess of licorice and sweetening makes you spit too much.

One small chew takes the place of two big chews of the old kind.

**Notice how the salt brings out the rich tobacco taste.**

**WEYMAN-BRUTON COMPANY, 50 Union Square, New York City**

**BUY FROM DEALER OR SEND 10¢ STAMPS TO US**

**DANA KING DROWNED.**

The news of the drowning of Dana King a few days ago at Reno, Nev., has just been received here. The young fellow was 21 years of age, and formerly lived in Lewistown with his parents, Mr. and Mrs. E. W. King.

His sudden death comes as a shock to the many friends of the young man and the family.

Mr. and Mrs. Cliff Miller expect to depart this morning for Glacier park, where they will visit for a few days.



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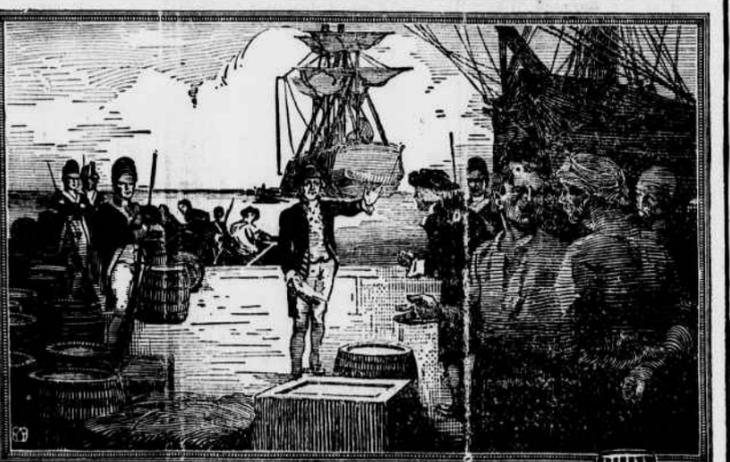
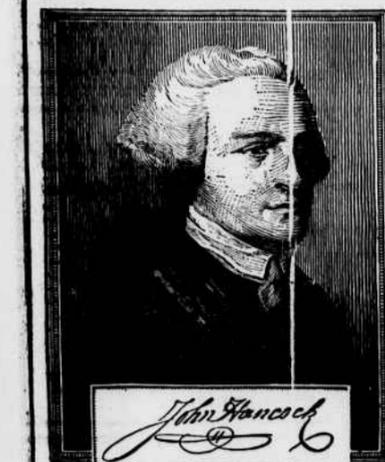
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**John Hancock—"Father of the Revolution"**

UPON the Declaration of Independence his name may be read without spectacles. His signature was the first subscribed to the world's most famous State document. In the most realistic sense John Hancock pledged his life and his fortune to the cause of the Revolution. He was one of the richest men in the colonies, holding investments in banks, breweries, stores, hotels, and also owning a fleet of vessels. The seizure of one of these precipitated the Boston massacre. In Revolutionary days and until his death he was a popular idol. When it was proposed to bombard Boston, though it would have resulted in greater personal loss to him than to any other property owner, he begged that no regard be paid to him because of his financial interests. While Hancock did not sign the Constitution of the United States, he used his great influence in its behalf, which awakened the gratitude of Washington. "He was prepossessing in manner, and passionately fond of the elegant pleasures of life, of dancing, music, concerts, routs, assemblies, card parties, rich wines, social dinners and festivities." Until the end of his life the people of Massachusetts delighted to honor him. In the stirring events preceding the Revolution he was one of the most active and influential members of the Sons of Liberty. To this tireless worker for American Independence Liberty was the very breath of life. He would have frowned upon any legislation which would restrict the natural rights of man, and would have voted NO to prohibition enactments. It was upon the tenets of our National Spoken Word that Anheuser-Busch 58 years ago founded their great institution. To-day throughout the length and breadth of the Free Republic their honest brews are famed for quality, purity, mildness and exquisite flavor. Their brand BUDWEISER has daily grown in popularity until 7500 people are daily required to meet the public demand. Its sales exceed any other beer by millions of bottles.

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