

THE TIME TO CUT WHEAT.

Concerning the quality of wheat cut at different stages of ripeness, the experiments of Prof. Lacy, of the Minnesota Agricultural College, are quite pertinent. Six plots of ground 429 feet long by 13 feet wide, with a vacant space between them of about 18 inches wide, all the same quality of soil, were selected. These plots were all sown on the 15th day of April with Scotch rife wheat, and the grain grew uniformly and presented an even appearance. We give the result of cutting at different times and stages of ripeness in the following table:

Date and Condition of Cutting	Rate per Acre in Bushels of 60 Pounds.
1—July 16, early milk	4.50
2—July 19, advanced milk	7.00
3—July 23, early dough	8.50
4—July 26, advanced dough	11.00
5—July 29, ripe	14.00
6—August 6, dead ripe	12.00

Mr. Lacy, in commenting upon the appearance of the grain in the *Minneapolis Tribune*, says: The appearance of the grain advances and decreases in precisely the same way. As the quality, the grain of the first cutting was miserably shrunken, resembling, it was frequently remarked at the fairs, that of the crop of 1878, in the southwestern portion of the State. That of the second cutting showed a vast improvement; that of the third, some improvement over the second, but not so much as the preceding case. The grain of the fourth cutting was by a few pronounced the best; but the majority readily agreed upon the fifth. The grain of the sixth cutting had lost its bright color, and was bleached. The condition termed ripe was this: Most of the stems or straw had turned, not dead white, but a rich lively yellow, some were still somewhat green. The berry when pressed between the thumb and finger would yield, but nothing liquid or doughy could be pressed out, and this was the cutting that gave the greatest quantity and the best quality of wheat.

CATAMARAN FOR FAST PASSENGER TRAVEL ON THE HUDSON.—A late number of the *New York Graphic* gives an illustration of a novel steamboat now building at Nyaek, under the superintendence of Mr. Wm. Voorhis, of that place, formerly Commodore of the New York Yacht Club. The new boat is to be in the form of a catamaran, and it is expected that she will exceed in speed any ever constructed. She will have a double hull, 200 feet in length, while, as a whole, she will have 25 feet beam. Her engines will be of a pattern suited to the character of the craft, and turn a single wheel—to be placed between the parts of the double hull—of 8 feet in diameter, at the rate of 325 revolutions per minute. It should be mentioned that her hull, or, rather, hulls, are to be of iron, each 5 feet six inches in diameter and cigar shape. Of course it will be understood that she will have no cabins below the water as in the ordinary steamboat. On account of the peculiar boiler, Mr. Voorhis expects to be able, with perfect safety, to carry 125 pounds of steam to the square inch, whereas the common boats rarely exceed from 30 to 35 pounds. Great speed is expected to result from the following considerations: From the length and narrowness of the engine cylinders, giving great speed to the machinery, and from the shallow draft of water, the draft amidships being less than 3 feet and gradually diminishing to nothing fore and aft. In proportion to her displacement no other boat has one-third the power this novel steamer will possess. It is intended to use her as a passenger boat, and her carrying capacity will be 73 tons or about 500 passengers. She will have four bulkheads, comprising five air-tight compartments, which will be placed 9 feet apart, and the deck over her center will be 125 feet long, including a saloon of the same length and as wide as the vessel itself. In case Mr. Voorhis' new nautical venture turns out to be the great success which he anticipates, the so-called fast boats of the day will have to retire on their records and make way for the new era in steamboating on the historic Hudson.

HEART DISEASE.

When an individual is reported to have died of a "disease of the heart," we are in the habit of regarding it as an inevitable event, as something which could not have been foreseen or prevented, and it is too much the habit, when persons suddenly fall down dead, to report the "heart" as the cause; this silences all inquiry and investigation, and saves the trouble and inconvenience of a repulsive *post mortem*. A truer report would have a tendency to save many lives. It is through a report of "disease of the heart" that many an opium eater is let off into the grave, which covers at once his folly and his crime; the brandy drinker, too, quietly slides round the corner thus, and is heard of no more; in short, this "report" of "disease of the heart" is the mantle of charity which the politic coroner and the sympathetic physician throw around the grave of "genteel people."

At a late scientific congress, at Strasburg, it was reported that of 66 persons who had suddenly died, an immediate and faithful *post mortem* showed that only two persons had any heart affection whatever; one sudden death only, in 33, from disease of the heart. Nine out of the 66 died of apoplexy, one out of every seven; while 46, more than two out of three, died of lung affections; half of them of "congestion of the lungs"—that is, the lungs were so full of blood they could not work, there was not room for air enough to get in to support life.—*Hall's Journal of Health.*

BLACK DYE.—This is for either wool, hair, fur, or silk. Boil the articles for two hours in a decoction of nutgall, and afterwards keep them for two hours more in a bath composed of logwood and sulphate of iron; keep during the whole time at a scalding heat, but not boiling. During the operation they must frequently be exposed to the air. The common proportions are five parts of galls, five of sulphate of iron, and thirty of logwood for every hundred of cloth. Sometimes a little acetate of copper (verdigris) is added to improve the color. Woolen cloth, before it receives a black color, is usually dyed blue; this renders the color much fuller and finer than it otherwise would be. If the cloth is coarse, the blue dye may be too expensive; in that case, a brown color is given by means of walnut shells. Silk is dyed in the same manner as wool, except that as it imbibes a large quantity of tannin, the quantity of galls must be increased to twice as much, and the silk must remain longer in the solution.

REMEDY FOR THE RATTLING OF A HOT WATER BOILER.—When a coil is used in a stove instead of a waterback the diameter of the pipe should not exceed a certain proportion to its length, with the fewest possible turns, that the water as it warms can pass rapidly to the tank or boiler, and not be retained long enough in the coil to form steam or to get nearly as hot as it is possible, consequent with the pressure. Thus, short pipe, large diameter, with one bend, or water back with one septum, or if a chamber only, the water will take care of itself, according to gravity. Babbling will be sometimes caused in a very hot tank when the pressure is relieved by drawing, on the same principle as water below 212° boils in a partial vacuum.

FOR BRONZING cherry wood, Brazil wood, powdered nutgall and alum are boiled in the water until a blackish color is obtained; the liquid is filtered and applied to the wood, which is then next washed in a liquor made by digesting strong vinegar and a little oil of vitriol for some time with excess of iron turnings; thoroughly wash the wood, dry and oil. For staining fine woods the following is applicable: 4 ounces of gall nuts, 1 ounce powdered logwood, 1 ounce green vitriol, and 1 ounce verdigris are boiled with water, and the solution, filtered hot, is applied to the wood, which is then coated with a solution of 1 ounce fine iron filings dissolved by a digestion in a small quantity of hot wine vinegar.

HOME-MADE SODA WATER.

The artificial seltzer water, made with a carbonic-acid generator, is already an imitation, far from perfect, of the natural water. A recipe to make it on the small scale for family use, as it were, can only give a product differing still more from that of the spring. Yet the following would fairly imitate the taste and properties of the natural water:

Fused chloride of calcium	4 grains
Chloride of magnesium	12 "
Chloride of sodium	15 "
Citrate of iron	1 "
Tartaric acid	1/2 dram
Bicarbonate of soda	2 1/2 "
Water sufficient.	

Dissolve all the salts, excepting the tartaric acid and bicarbonate, in about one pint of water, and introduce the solution into a champagne bottle. Then, having completed the requisite quantity of liquid so as to leave an empty space of about two fluid ounces, add the tartaric acid, and, immediately after, the bicarbonate of soda. Cork the bottle tightly, secure the cork with stout cord, and set the bottle aside for about six hours before it is opened. It is then ready or use.

MANUFACTURE OF LAGER BEER IN SMALL QUANTITIES.—The following recipe is said to make an excellent beer for home use: To make 5 gallons of beer, take somewhat more than that quantity of soft water, suspend in the vessel containing it a bag with about two ounces of hops, and boil for about half an hour; then add about 3 pounds of ground malt, or, if preferred, a quart of thick sugar syrup (or of molasses); allow the whole to boil up several times, then pour the decoction in a tub or vat. As soon as it has become say luke-warm, add to it about a half pint of good brewer's yeast, and allow the whole to remain in a cool place to ferment. At the expiration of six to eight days, it will have become quite clear, and may then be bottled. This beverage may be made stronger or weaker, or more or less bitter, by varying the above proportions; and, when prepared according to this recipe, is said to make a refreshing and pleasant drink, which will keep very well in a good cellar.

LIGHT AND HEAVY BLOWS.—The difference in effect between a blow delivered by a light hammer traveling fast, and one delivered by a heavier hammer traveling more slowly, is that the effects of the blow are more confined in the first case, and more spread in the second. The blow from a light hammer penetrates but slightly below the surface; while a blow from a heavy hammer penetrates deeply into the metal which is being forged. In practice it will be observed that light quick blows, have a tendency to drive out of shape, split and break the iron; while the force of heavy blows, with a heavy hammer, going slow, penetrates deeply into the iron and forces the mass of the metal out into the desired shape. Every wood chopper knows the difference in effect between the effort to drive a wedge into a tight place by light blows or by heavy ones.

"Sir," roared a man out in Nebraska, striding up to a neighbor, "Sir, you are a liar." "I am!" exclaimed the astonished neighbor. "How do you know I am?" "Because I know it; because I have found it out." "How long have you been living here?" "Six weeks." Neighbor, tranquilly nodding his head: "Oh, well probably you do know then. I didn't think you had been in town so long." There was no fight.

PARENTS should teach their children that God is goodness and love; that the rules which He has laid down for the government of the world are His will and wish for us; that even frost and cold, even sickness and pain, are for our good, and we must trust that He has some good reason when He makes us strong and brave and healthy.