

CHINESE SUGAR CANE.

CULTURE AND HARVESTING.

Abroad, it has been usual to cultivate it in hills containing eight or ten stalks. Gov. Hammond, in detailing his experiment, made last year with it on his farm in South Carolina, dropped the seed in drills three feet apart, sowing six or eight seeds about eighteen inches asunder. Richard Peters, Esq., of Gordon county, Georgia, sowed in drills, separated about the same distance.

Dr. Robert Battey, of Rome, Georgia, who is a practical chemist, and has taken great interest in Mr. Peters' experiments, recommends that, where it is planted for seed, the drills or rows be even four feet apart, and that the seed be dropped, only one or two at a time, 24 inches apart. The cultivation throughout is much the same as corn requires. Upon Dr. Battey's plan of planting, the shoots or suckers from the roots should not be removed, when seed is wanted. But afterwards, when cultivated for its other products, he advises that the space between rows be narrowed down to three feet, and the seed be dropped every three or four inches.

But when well up, the cane should be thinned out, by pulling up the least promising plants, and each that is left should be suckered down to a single cane for each root. Gov. Hammond planted his on the 23d of March, and cut his canes the latter end of July. Mr. Peters planted his on the 15th of April and 18th of May, and found the seed fully ripened on the 13th of September. M. Vilmorin, desirous of ascertaining at what time sugar begins to form, concluded it was at the time the spikes or ears began to appear. The sugar increased as the ears advanced to the milky state.

M. Beauregard in a report he made to the Toulon Agricultural Society, considers that the ripening of the seed does not interfere with the amount of sugar produced. But Gen. Mapes, the distinguished farmer of New Jersey, recommends that, for increasing the quantity of saccharine matter, the heads or ears be pinched off as soon as they present themselves. If the object is to get seeds, fodder and the juice, the cane should be cut just as the seed ripens, the blades being stripped and the heads cut off, while the body of the cane is taken through the syrup mill.

If fodder is the only object, the seed may be broad-cast. Care should be taken not to sow it near where broom-corn, dourah corn, or any kind of millet is cultivated, since the seeds will mix and spoil the product of the Chinese cane.

PRODUCTS OF THE PLANT.

The representations as to the products of the plant, are truly wonderful. It yields in its blades or leaves, and in the stalks after the juice has been expressed from it, a fodder which is highly relished by farm stock. A correspondent of the Wisconsin Farmer, says:

"I have several times fed it out, both in green and dry state, to cattle, horses and hogs. For the sake of testing their instincts and preferences, I mixed it with corn stalks. In every case, the cane was greedily sorted out, and entirely consumed, no portion being left; while, as is well known, there is a large waste in our fodder."

The juice yields a sugar identical with that of the sugar cane, an alcohol which resembles the Noyan cordial in flavor, and a fermented drink analogous to cider. The meals or flour from its seed may be made into a sweet and palatable bread. The husks which envelope this seed afford a splendid dye. This dye is so abundant as to impart a violet-blue color to the mouths of the animals feeding on them. The sap, if set with the oxide of tin, dyes silk a beautiful pink.

Of course its most valuable and important product is its juice. This juice is, by Beauregard, set down at from 50 to 69 per cent. of the weight of the cane. Dr. Battey is satisfied that with proper treatment the cane will yield an average of 70 per cent. The syrup from the juice is very palatable, and quite equal to what goes under the name of "golden syrup."

PRODUCE OF THE ACRE.

Mr. Peters calculated the yield of fodder per acre at 1200 pounds, of seed 25 bushels, weighing each 36 pounds, and of syrup at 407 gallons. Beauregard states the yield of grain at 50 bushels, and of juice 2600 gallons. This fodder is what is gathered aside from the juice and seed. Where an acre is sown for fodder alone, the supposed yield is "twenty five tons." When it is recollected that a large yield of hay per acre is "two tons," and that, ton for ton, the sugar cane fodder is far more nutritive than hay, the immense value of this crop for feeding stock is apparent at a glance. Nothing else like it is now grown on American soil.

Drilled with a view to the syrup crop, the weight of the canes per acre is reckoned at 30,000 pounds. Taking 70 per cent. of this weight as juice, we have 21,000 pounds of juice, which Dr. Battey says will produce 570 gallons of syrup, and ought, as Beauregard calculates, to yield 10 per cent. of its weight in sugar, or 2100 pounds.

VALUE OF THE CROP.

If we reckon the money value of the crop, from such data, we are astonished. Let us see what it amounts to:

1200 pounds of fodder, worth one ton of hay,	\$10 00
25 bushels seed worth (say 50 cents)	12 00
500 gallons syrup, (at 50 cents)	250 00

Total, \$272 00

MANUFACTURE OF SYRUP.

Mr. Peters, in order for crushing the cane he raised, got a press consisting of two vertical rollers, which he worked with two mules and one hand to feed the machine and a boy to drive the mules. General Mapes recommends the use of a press having three rollers placed horizontally, one of them just above the other two. The boiling-kettles should be placed over furnaces, which admit of easy regulation of the fires.

When the juice is poured into the boiler, it should be gradually raised to a simmer and there

maintained, until a thick scum, which rises to the surface, is ready to crack. This scum should then be skimmed off. The juice is then to be boiled actively until it gets to be reduced to one-half its original bulk. It is then to be removed to another kettle, and there boiled with a heat gradually moderating, as the syrup concentrates, so as to avoid burning. A sign that the syrup is made, is its hanging in flakes from the rim of the ladle. But Dr. Battey has constructed a little instrument which determines the precise moment when the syrup should be removed. Mr. Peters says he has obtained the clearest syrup, without the use of lime or other clarifiers.

But as lime is useful in neutralizing the acid of the juice, it is advised that, when that is used, a teaspoonful of cream of lime to about ten gallons of juice be added just after the scum has been removed. The above is Dr. Battey's method of manufacturing syrup.

MANUFACTURE OF SUGAR.

In the manufacture of sugar, Gen. Mapes directs the operator as follows: Get three kettles, one of which need not be so large as the other two. The moment the juice is expressed, it should be conveyed to one of the larger kettles, and to it should be added, for every ten gallons, a teaspoonful of cream of lime, one pound of finely powdered bone black, and the whites of two eggs beat up or half a pint of skimmed milk. The juice in this kettle should be heated slowly, and not allowed even to simmer. The scum, when it cracks open, should be skimmed off.

The juice should then be placed in kettle No. 2, and boiled as rapidly as possible, until a thermometer placed in it will indicate 220 deg. Fahrenheit when it should be again filtered; the first portion passing the filter should be returned, as it will not be quite clear. The whole will then be bright, and may be put into kettle No. 3, which need be but half the size of the others, and so arranged that it can be readily taken from the fire at short notice.

Place in this a thermometer—it will commence boiling at 220 deg., and gradually increase to 240 deg; the instant it reaches that point it should be taken from the fire suddenly, for if permitted to rise to 251 deg. or more, it can never be purified.

Let it stand in this kettle until a slight crust commences to form on the sides and top, then scrape this down with a wooden spatula, thin at the end and edges, and stir all until evenly mixed with the more fluid portions—then pour into a conical sugar mould, stopped at its lower end, and place the nose of this mould on a drip pot—this sugar mould should be of the kind known at the Bastur mould, and it and the drip should stand in a warm place. The next day, the sugar in the mould will be solid, and the plug in the bottom of the mould may be withdrawn and an incision made with a pegging awl, replacing the mould on the drip pot.

The sugar or molasses will gradually drip from the nose of the mould into the pot, and the time necessary for this purging will depend upon the heat of the apartment where it is placed. Usually the syrup will run off in the natural way in a week or ten days, leaving the sugar in the mould of a light straw color.

[From Life Illustrated.]

What I have seen of New Agricultural Tools.

Reader: What have you seen, heard, or learned, in all your life's experience, that would be of service to mankind? Have you invented or discovered any thing new?—[Life Illustrated.]

Yes, I have seen some things during some of my late experience of life that, if known to my fellow men, would be of vast service to mankind, for they reach back to first principles, and touch the arts of life to make life easier; that is, make the productions of earth that enables civilized man to sustain life in a state of civilization, easier to obtain. Without these arts—without the aid of machinery to enable man to increase the productions of earth, earth's inhabitants could not live; for there are but two modes by which men are fed—one comes from the art of the hunter, and the other from the art of the husbandman.

NATURAL MODES OF LIVING.

In all primitive countries there are what may be termed natural modes of living; such as the rude means that savages employ to insure wild animals, and obtain fish, or, by the use of wild roots, seeds, nuts, buds, barks, herbs, sugar of trees, or the disgusting diet of worms, frogs, snakes, and "unclean things," such as are eaten by the Californian Digger Indians—not the diggers of gold, but the diggers of roots and snails.

In all countries where the more noble animals of the chase, such as buffalo, deer, antelope, elk, bears, et omnes genus, have been hunted to the death, man would be reduced to the miserable subsistence of the Digger Indians, were they not enabled to increase the artificial productions of earth by the aid of those little machines and tools that somebody has invented, that are all classed and huddled together under the general term,

AGRICULTURAL IMPLEMENTS.

This, then, is one of the things that I have learned—that Broadway and Fifth Avenue could not be built without the aid of the plow—that this city could not be fed at this day if there had been no inventors of each-workers. Since the day that Abraham plowed with a crooked stick that merely scratched the earth, in a soil that undoubtedly resembled that of California at the present day in productiveness, where three crops of barley grow from one poor plowing and sowing. Such is not the productiveness of New England soil, but it has produced that which has overcome its sterile nature—it produced inventive men—men who have invented

PLOWS,

as the first of all important earth-working tools—men who have devoted lives of toil and study to this work. What a monument JOEL NOURSE has built to himself—more noble and more enduring

than that of Franklin upon Boston Common.—His name is printed upon ten thousand plows every State of the Union. He is an original inventor, improver, and patron of inventors of all sort of tools that increase earth's productions.

I am asked if I have ever heard of any thing that would be of service to mankind? Yes, I answer, I have heard of KNOX, of Massachusetts.

Not Knox the General, of honored fame, but Knox of a fame more honorable—the fame of an inventor and improver of plows—the man to whom letters patent have just been granted for the discovery and application of a principle based upon accurate calculations in mathematical

SCIENCE IN THE CONSTRUCTION OF A MOLD-BOARD.

Where others have left off, Knox has begun, and now shows that a mold-board—a crooked, curving, twisting section of a screw, in, when scientifically constructed, a series of planes; and no matter how long or wide it is, if it is rightly constructed, a perfectly straight rule will touch and make a close fitting joint when laid down in the direction of the furrow slice.

This, then, is a discovery that will benefit mankind, if mankind will think; that a mold-board of a plow is simply a section of a screw; that the operation of turning the earth is just that of the screw; and the screw, as all know who think, is nothing but a combination, or, rather, succession of inclined planes, of easy ascent, and every one of which in its section is as straight and true as the inclined planes up the mountain side, by which the ponderous engine ascends to the summit. So ascends the earth from the sharp wedge point of the plow, turning its regular screw twist half way, or entirely over, by which every particle of earth is disintegrated from its fellow.

THE VIRGINIA VOLCANO.—It is said that the statement in reference to a volcano having recently made its appearance in Pendleton county, Va., on the great Backbone mountain, is true.—The Cumberland Telegraph says.

It is at a point on the mountain directly between the heads of the dry fork of Cheat and the South branch of the Potomac rivers, at a place known by the name of "Sinks," so called from the depressed condition of the mountain at that point. The "Sinks" are funnel shaped, and each one embraces as much as an acre of ground. On the first day of January the report caused by the bursting forth of the subterranean fire was heard for a distance of twenty or thirty miles. Vast columns of flame and smoke issued from the orifices, and red hot stones were thrown up in the air several hundred feet above the mouth of the crater. Our informant adds that the people in the vicinity are becoming alarmed at the pertinacity with which the flames are kept up and the red hot masses of rocks thrown out. A heavy rumbling noise, like distant thunder, is continually reverberating through the deep caverns of the mountains, which at times seem to tremble from summit to base.

The prison is shut night and day, yet it is always full; the temples are always open, and yet you find no one in them.—[Chinese Proverb.]

RIDDLE.

I'm found with the Saint, I dwell with the sinner,
I stay with the priest and am part of his dinner;
I'm found in religion, yet cleave to the devil;
I'm never with the just, but ever with the evil;
I'm never in heaven, yet never in hell,
My home's in paradise, in happiness I dwell;
I'm a partner in crime and frequent in jail,
I'm seen in the lightning, I come with the hail;
I'm never in water, but always in rain,
I'm never in health but always in pain;
I'm never in war, but always in strife,
I cleave to a friend and stick to his wife;
I'm found in every riddle, but never in rhyme,
I exist in eternity and live in all time. CHARLIE.

DESERET AGRICULTURAL AND MANUFACTURING SOCIETY.

G. S. L. CITY, June 12, 1857.

Meeting of the Board: present—Edward Hunter, President; Wilford Woodruff, Seth M. Blair, Charles H. Oliphant, William C. Staines, John R. Winder, Directors; Robert L. Campbell, Secretary.

Prest. Hunter introduced the business of the evening. Voted unanimously that the following list of premiums be awarded in the various counties throughout the Territory:—

Best 5 acres of Wheat	5 00
2nd do.	dip.
Best 5 acres of Corn	5 00
2nd do.	dip.
Best Acre of Barley	5 00
2nd do.	dip.
Best Acre of Oats	3 00
2nd do.	dip.
Best specimen of Chinese Sugar Corn	5 00
2nd do.	3 00
3rd do.	2 00
4th do.	dip.

The following Committees were appointed in the counties named below.

CEDAR.

Preston Thomas, Claiborne Thomas, and Allen Weeks.

IRON AND WASHINGTON.

C. C. Pendleton, I. C. Haight, and J. D. Lee.

MILLARD.

Lewis Brunson, J. H. Dame, Hiram B. Bennet.

SAN PETE.

Warren Snow, Geo. Peacock, Welcome Chapman, and Jezreel Shoemaker.

JUAB.

Albert Fellows, Jacob G. Bigler, Timothy B. Foote.

UTAH.

Kimball Bullock, Aaron Johnson, Stephen M. Farnsworth, Abel Evans, and Benj. F. Johnson.

TOOELE.

John Rowberry, J. W. Cooley, Thomas Atkinson.

DAVIS.

Thomas Grover, Allen Taylor, John Stoker, Philip Gbern.

WEBER.

Thomas Dunn, Lorin Farr, James Brown.

BOX ELDER AND MALAD.

John C. Wright, John Bankhead, Robert Pierce, Anson Call, and John P. Barnard.

SHAMBIG.

Luke Johnson, William G. Russell and Francis St. Jear.

GREEN RIVER.

Isaac Bullock, Arza Adams, and Wm. M. Thompson.

On motion, William G. Mills was unanimously elected Corresponding Secretary to this Society.

NOTICE.

The members of the Priests' Quorum in G. S. L. City will meet in the 14th Ward School house the 1st Sunday in every month at 4 o'clock, by order of the President of said Quorum. LEWIS WIGHT, President.

NEW ADVERTISEMENTS.

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A. O. Smoot	Kanyon Creek Ward.
Reuben Miller	Mill Creek do
Archibald Gardner	do
Milo Andrus	Big Cottonwood Ward.
Andrew Cahoon	South Cottonwood "
Joseph Hammond	do
Isaac Ferguson	do
Silas Richards	Union.
J. Guernsey Brown	Draper.
Samuel Bennion	West Jordan.
Daniel R. Allen	Jordanville.
McGee Harris	Fort Herriman.

CEDAR COUNTY.

Allen Weeks	Cedar Valley.
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UTAH COUNTY.

D. Evans	Lehi City.
Leonard E. Harrington	Lake City.
T. J. McCullough	Lone City.
W. G. Sterrett	Pleasant Grove.
D. Carter	Provo.
A. Johnson	Springville.
J. L. Butler	Spanish Fork.
C. B. Hancock	Payson.
James Holman	Santaquin.

JUAB COUNTY.

T. B. Foote	Salt Creek.
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SAN PETE COUNTY.

Geo. Peacock	Manti.
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MILLARD COUNTY.

S. P. Hoyt	Fillmore.
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BEAVER COUNTY.

P. T. Farnsworth	Beaver Creek.
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IRON COUNTY.

T. Lewis	Parowan.
I. C. Haight	Cedar City.

WASHINGTON COUNTY.

J. D. Lee	Fort Harmony.
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GREEN RIVER COUNTY.

I. Bullock	Fort Supply.
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TOOELE COUNTY.

J. W. Cooley	Grantsville.
Hezekiah Mitchell	E. T. City.
Lysander Gee	Tooele City.

DAVIS COUNTY.

John Stoker	Stoker.
Wm. H. Smith	Centerville.
James Lethead	Farmington.
Samuel Henderson	Keyville.

WEBER COUNTY.

C. W. West	Ogden.
Thomas Dunn	North Ogden.

BOX ELDER COUNTY.

Salmon Warner	Nor. Willow Creek.
Samuel Smith	Brigham's City.

CACHE COUNTY.

Peter Maughn	Cache Valley.
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MALAD COUNTY.

James Frodsham	Fort Malad.
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