POINTS IN TOMATO CULTURE.

Treatment of the Seedlings When an Early Crop Is Desired.

Late tomatoes may be a fairly paying crop for the farmer who grows them for canning factories by acre, but they are not profitable any more for the market gardener. The money for the latter is the ripe fruit he can secure before

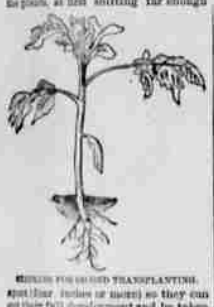
SEEDLING FOR FIRST TRANSPLANTING.

the rush. The growing ones therefore have no time to starting plants and take such early varieties as the Ruby, Fordhook, New Imperial or the older King of the Earlies, Earliest Advance and others of that class to give ripe specimens in 110 or 125 days from sowing the seed.

The seed is sown early in a good seed bed in sunny window, greenhouse or hotbed.

For the first transplanting of these seedlings the soil need not be of more than bedfoot richness. As T. Greiner says in American Gardening: We don't want forced, sappy growth. Seedlings that are short and stocky and still can go through the transplanting process without receiving much of a check, are without wilting. The tomato plants, about three or four weeks after sowing seed, are pulled up from the seed bed, having then the general appearance represented in the first illustration. This shows a plant of the power and type in natural size. The soil is well subdued, and the plants are then carefully lifted out by prying under them with a small trowel or other tool. Then, with all the fine roots intact and perhaps a little soil still adhering to them, they are set firmly in other flats, or directly on the benches or in hotbeds, about three inches apart each way. Root will should always be firmly pressed against the roots of the little plant, and if this is done the latter will hardly feel the transfer.

Concerning the second transplanting Mr. Greiner says: In some cases we set the plants, at first shifting far enough



SEEDLING FOR SECOND TRANSPLANTING.

apart (four inches or more) so they can get their full development and be taken directly to open ground without another transplanting. For earliest crop, however, we want very large, very stocky and well advanced plants, and we prefer to set them first three inches apart, and then, when they have reached the size as shown in accompanying illustration, to a larger distance, say, not less than five inches, if we can possibly spare the room. Thus they are left to grow, and by the time that they can go into the open ground, some time to May, earlier or later according to season and locality, they will be in bloom, and perhaps with fruit already set.

In the final transfer to open ground large chunks of soil are removed with the plant and great care is taken to disturb the roots as little as possible.

SALIENT POINTS IN IRRIGATION.

Presented in an Address Made Before a Convention of Nebraska Farmers.

At an irrigation convention at North Platte President Fort made an address, in which occurred the following salient points: Stoppage of prairie fires and protection of timber are intimately connected with irrigation. By comparison with Colorado fully 60 per cent of Nebraska's lands may be irrigated. A large proportion of Nebraska irrigation will be by pumping. The cheapest form is the Chinese system of lifting water up hill in a trough with paddles on an endless chain or rope. Horse, wind, steam or any other power may be used for this homemade contrivance. Probably the cheapest power that can be obtained will be the water itself, and hydraulic ram where a light fall can be given so as to work these machines will deliver water cheaper than any other class of water lifting appliances. The bucket elevators are claimed as cheap and efficient.

The centrifugal and rotary pumps will lift large quantities of water cheaply. They are not liable to get out of repair, provided a strainer prevents chunks of wood or gravel from getting into the machine. Either will lift sand, mud or fine gravel, especially the centrifugal. As they are not liable to get out of order and have but few working parts they are to be recommended as good machines for lifting water. They must, however, be worked at a high speed to secure the best results, and must therefore be attached to gearing. Probably the cheapest and most economical water elevator is the current wheel. This has one set of stationary buckets, or paddles, that are struck by the current of the river, and that turns the wheel, and a set of adjustable buckets fill with water as they revolve, and on reaching the highest point are tipped automatically, and the water is discharged into a trough, which conveys it to the land.

It is doubtful if any cheaper power will be discovered for lifting water than the water itself, unless it be the wind. Now that inventors have secured by proper construction of the frame fully 60 per cent of the pressure applied to the wind to the mill's surface the prospect of a cheap power for lifting water is favorable, and we can hope that within a few years every farmer will own and have at work one or more of these machines that will be lifting water into reservoirs from whence it can be carried out over his garden, orchards and fields, and in this way safely solve the food question for all parts where the canal can not go.

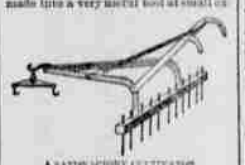
Wherever practicable the canals should be constructed, owned and managed by the farmers themselves. In Utah fully 90 per cent of the canals have been constructed by the Utah farmer, who owns, manages and controls them. This places land and water under direct control of the farmers themselves, making land and water inseparable. In Colorado 95 per cent of the canals have been constructed by the farmers, and from 50 to 60 per cent of all the canals of the west, with the exception of some of the very largest, have been built by the farmer and this without bonds or foreign capital.

A Word About Ducks.

In mating see drake to six ducks will be sufficient, says one authority. They should be in good condition, but not too fat. Duck eggs hatch remarkably well. They require four weeks to incubate before hatching. Give the setter a warm, clean nest, free from lice, and give her good corn, and you will have a good hatch. The day you expect the ducklings to come out do not disturb the mother, she will prefer to remain on the nest, and if she has plenty of food and water the day before she will not suffer by it. When you think part of the ducklings are out, gently remove the mother, take out shells and replace the mother. Let the ducklings remain with the mother, as they will send her vitalizing heat.

A Cheap Cultivator.

As level and shallow cultivation is being practiced more and more each year by progressive farmers, and as nearly every farmer has one or more three plows, the sketch originally drawn for Ohio Farmer shows how they may be made into a very useful tool at small expense. The crosshead is made of 3 by 3 hard wood, the length to suit width of rows, and filled with two rows of teeth made of old steel harrake teeth, 10 inches long, each row of teeth being 3 inches apart and set so that the rear row will come half way between the front ones, making the teeth meant 1½ inches each. The crosshead should be bolted on rear of front beam and in front of rear beam, so that it will be nearer at right angle with the row.



A HAND SCHOOL CULTIVATOR.

The teeth should incline slightly forward. It may be necessary to change the crosshead some to suit the condition of the soil. The farmer who describes this tool says: "I hit upon this plan of making a practical tool for working my mangles last season, as the garden rake was too slow and the cultivator threw too much dirt. It gave such good satisfaction that I worked a piece of corn on a steep hillside with it exclusively, it doing good work and leaving the ground as smooth as that on the level."

Soap and Lime Beans.

As to varieties, some do well in one soil, but not in another, and then tastes differ about vegetables just as about flowers or clothes. The progressive gardener always gets a few new varieties for trial, but the average man, if he is

CHALLENGE BLACK WAX BEAN.

wise, will depend upon well tried standards for his main crops. Here is a selection from American Gardening:

Among soap beans Valentine and Refugee are good reliable old green podded sorts. Refugee Wax and Challenge Black Wax are the wax varieties. There is a new Valentine Wax that is worth trying as a novelty.

In selecting Lima beans get Henderson's Dwarf to fill the gap between peas and Limas; then Dreer's and Burpee's Dwarf Limas to sow in rows 2½ feet apart, but if you want to use poles get Dreer's Lima or Challenge.

The Director's Fee.

Nearly all the great financial concerns have pay the directors who attend board meetings $10 for each sitting, not counting lunch and cigars. Some men in this way pick up all the way from $5,000 to $10,000 a year, they being of the directory of several institutions or corporations. A bank president whose services are in demand as a director is authority for the statement that the fee is paid in gold and is given to the director the moment he enters the board room. And directors don't always stand at that.—New York Letter.

The Cattle's Own Fault.

Jackins—Hogsflats are so common nowadays, I suppose, that nobody pays any attention to them.

Rumsup—That's just it. People pay no attention to them, and then they denounce the hogflats for running their down.—Rodbury (Mass.) Gazette.

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City.	Springs.	Springs.	City.
*7 50 a. m.	*7 55 a. m.	10 00 a. m.	*11 05 a. m.
8 40 a. m.	8 45 a. m.	11 30 a. m.	12 35 p. m.
10 40 a. m.	10 45 a. m.	12 00 m.	1 05 p. m.
11 00 a. m.	11 05 a. m.	12 30 p. m.	1 35 p. m.
2 00 p. m.	2 05 p. m.	3 40 p. m.	4 45 p. m.
4 00 p. m.	4 05 p. m.	5 40 p. m.	6 45 p. m.
5 00 p. m.	5 05 p. m.	6 40 p. m.	7 45 p. m.
8 00 p. m.	8 05 p. m.	9 40 p. m.	10 45 p. m.

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Sundays only.

Sundays—For Deer's Hot Springs, 8:00, 9:00, 10:00, 11:00, 12:00 a. m., 12:30 m., 1:00, 1:30, 2:00, 3:00, 4:00, 5:00, 6:00, 7:00, 8:00, 9:00, 10:00, 11:00 p. m.

S. HARRINGER, General Manager.

UNION PACIFIC SYSTEM. THE THROUGH CAR LINE. Effective Aug. 18th, 1895. Trains arrive and depart at Salt Lake City Depot, as follows:

ARRIVE

From all points east ..... 4 15 a m
From Ogden, Portland, Sun Francisco and Ogden ..... 9 30 a m
From all points west, Park City ..... 4 15 p m
From Ogden, Portland, San Francisco and Ogden ..... 7 40 p m
From Park City, Ogden Valley, Ogden and intermediate points ..... 7 40 p m
*From Ogden Valley, Park City and Ogden ..... 4 15 p m
(Free Reclining Chair Car and Sleeper through.)

DEPART

For Ogden, Logan, Park City and all points north ..... 7 00 a m
For Ogden and intermediate points ..... 10 45 a m
For Ogden, intermediate points, Butte, Helena, Portland and San Francisco ..... 4 45 p m
For all points north Ogden, and San Francisco ..... 7 00 p m
*For Ogden, Park City, Ogden Valley and Milford ..... 7 15 a m
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*Trains south of Ogden run daily except Sunday.
† Runs daily except Sunday.

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H. ELLERY ANDERSON, Asst. Gen. Ticket Agent.
JOHN W. DOUGALL, Cashier.
FERDINAND S. CHURCHILL, Asst. Cashier.
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CURRENT TIME TABLE. In Effect March 31, 1895.

Leave Salt Lake City.

No. 1—For Kingman, Provo, Grand Junction and all Colorado points ..... 8:00 a. m.
No. 4—For Provo, short junction and all points East ..... 7 40 p. m.
No. 6—For Ogden and all points North ..... 5:30 p. m.
No. 8—For Ogden and intermediate points ..... 1:00 p. m.
No. 10—For Provo, Provo Junction and all intermediate points ..... 5:00 p. m.
No. 2—For Ogden and the West ..... 11:45 a. m.
No. 3—For Ogden and the West ..... 6:00 p. m.
No. 5—For Ogden and the West ..... 4:00 p. m.

Arrive Salt Lake City.

No. 1—From Provo, short junction and the East ..... 1:00 p. m.
No. 3—From Provo, Provo Junction and the East ..... 11:00 a. m.
No. 5—From Provo, Ogden, Moab points, across the all intermediate points ..... 1:00 p. m.
No. 9—From Ogden and intermediate points ..... 9:00 a. m.
No. 7—From Ogden and the West ..... 1:00 a. m.
No. 4—From Ogden and the West ..... 1:00 p. m.

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DIPLOMA ALABAMA STATE AGRICULTURAL SOCIETY, At Montgomery, 1886.

AWARD Chattahoochee Valley Exposition, Columbus, Ga., 1885.

HIGHEST AWARDS TWO SILVER PIECES ST. LOUIS AGRICULTURAL & MECHANICAL ASSOCIATION, 1878.

SIX FIRSTS AWARDS WORLD'S COLUMBIAN EXPOSITION CHICAGO, 1893.

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