

## FARM GARDEN

### THE FARM WATER SYSTEM.

#### Hydraulic Rams—Device For Using One With Insufficient Fall.

A permanent farm water supply for household, stable and irrigation purposes is becoming more and more recognized as desirable and necessary. The schemes for carrying water are various. A corresponding who has found satisfaction in a hydraulic ram, having used it five years, sends a sketch of his arrangement to the Ohio Farmer, with the following comment:

"It pumps water for my garden, greenhouses and plant beds and will fill a 100 barrel tank at a height of 30 feet, 300 feet from the ram, every 24

WATER RAM SYSTEM.

hours easily. The size I use takes 2 inch feed pipe with 1 inch discharge. One can get any size wanted from three-quarter inch to 4 inches feed and three-eighths inch to 2½ inches discharge, and to use from two gallons to 150 gallons per minute and cost from \$5 up to \$65. The size I use, No. 5, will cost from \$11 to \$13. The small sizes use shorter feed pipes than the large ones, the smallest about 40, the largest 85 feet. There are 10 or 12 sizes. I use 60 feet on No. 5. The ram house and feed box can be built of wood, brick or stone. I used brick for feed box, cemented like a cistern, and the ram house is built of stone 6 by 6 by 4 deep. Feed box 3 by 3 by 3 deep. Put them down nearly level with ground, so you can protect them from freezing in winter. Be sure to lay all pipes below freezing and make all joints tight.

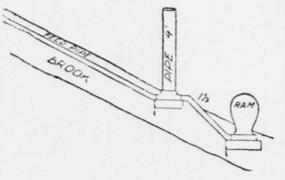
"I would use galvanized pipe, but the common black pipe will do quite a while just as well. I would use a larger size than you think you will need if you have enough water to run it, because the smaller the pipes and ram the more danger of getting out of order. Put a screen on feed box so that nothing can get in feed pipe or it will get in the ram and stop it. Take all the ram you can up to 10 feet, although a fall will work on 3 feet fall, but not quite so well.

"If the spring will not furnish water enough in a dry time to run the ram, build a tank or cistern on a hillside if you have one, and fill it when there is plenty of water, and pipe it from there to where wanted. I have nearly 1,000 feet of pipe connected to the ram I use, and I did all the work myself, and it worked all right from the start.

"I think I can truthfully say that hydraulic rams are cheaper and more reliable than windmills or gasoline engines, etc. They are handy to get at when they need repairing (which is very seldom) and will run without any attention and whether the wind blows or not."

But trouble sometimes attends the use of the hydraulic ram. One gardener of note tells that his brook is so level he could not get the desired fall without using a very long feed pipe, and a long feed pipe is fatal to the good working of a ram. To him and others in the same box a collaborator gives advice as follows through American Gardening:

Locate your rams in a desirable place and decide how much fall you must have. Get a piece of three inch (if a large ram use four inch) steam pipe as



HOW TO GET ENOUGH FALL FOR A RAM. long as the fall must be in feet. Put a T on one end with a 1½ inch opening one way and the other opening the right size to connect with the ram. Securely fasten this steam pipe in the bed of the brook or in an excavation at one side of the brook, with the 1½ inch opening up stream and the T at the bottom of the pipe.

Run from this 1½ inch pipe as far up stream as is necessary in order to get the desired fall of water. Connect the other opening of the T with the ram, using as large (in diameter) a pipe as can be used with the ram you have. The shorter this pipe is the better the ram will work, 6 to 10 feet being better than 20. This will be found to be cheap, enduring and more satisfactory by far than a dam, and the ram will not refuse to do its duty.

Keeping a Few Squashes. My method of keeping a few winter squashes is somewhat different from that generally recommended and succeeds so well that I will give it for the benefit of any who wish to follow it, remarks an American Cultivator correspondent. On the approach of winter, before there is danger of freezing, the squashes are placed in a cupboard in the sitting room, the door being left ajar through the day and closed at night in very cold weather. It will be seen that the temperature of the room is considerably higher than is generally recommended, often reaching 70 degrees. The Hubbard squash has been kept in this way till May.

### THE BEGINNER.

#### Some of the Troubles He Has and Mistakes He Makes.

The question of how to begin in the poultry business is one of importance. There must be beginners or there can be no true fanciers, but a very serious fault exists in many young minds—they expect to become fanciers at the very start. They imagine that the poultry business consists in merely buying a few good fowls and letting the stock produce some more of the same kind. They hold the belief that "like produces like," and therefore if they place a pen of prize winners at work the next season will see them surrounded with a host of equally valuable specimens.

The fact is, the breeding of prize winners is an art. This is owing to several causes: First, the tendency of fowls to revert to type—that is, the strongest element in the blood is the disposition to get back to the original parentage in style, whatever that may have been. This creates a large percentage of inferior birds in every flock.

In the second place, prize winners are in one sense artificial specimens, which have no fixed standard. We say this in face of the fact that a standard of perfection is published by the recognized authority—the American Poultry association. But no two judges of fowls agree in their detailed interpretation of that work, and no exact reading can be given it. Take the Plymouth Rock, for example. This breed comes nearest to being a satisfactory popular one, but there are few breeders who coincide on the first point—namely, shape. It therefore follows that wide diversity of opinion obtains as to what shall be called worthy of a prize. Even with the established breeds color and shape are hard to maintain.

These are the principal reasons why novices fail the second year and become discouraged. Experience in the work and familiarity with the fanciers' trade are essential to success. No man can spring into high place in any business or profession and hold his rank without having a foundation in knowledge.

The way to begin is to take a single breed and study it in the light of public shows, in the yards of admitted fanciers and in one own yards. Comparison will do wonders as an educative means, but no beginner should attempt to sell birds as superior stock until he actually knows what other men call good fanciers' stock.

The selling of birds at low price is a mistake. A fancier's fowl is never sold for \$1 or \$1.50. Good birds for egg and meat purposes can be had at that rate, but not the kind that gets the winners at shows. A single specimen may now and then be picked up from a cheap flock that shows phenomenal color, shape and other points and may be just the bird needed to mate with an established family, but the chances are that it will in the hands of a novice cast back to a ruinous weakness. Only confirmed line bred birds maintain stamina.

If a beginner is contented to start as a beginner, he can pretty surely count on developing into a fancier, but if he jumps to the front without experience he is likely to jump back again out of sight.

This rule holds good with those who aspire to become "large raisers" in one year. It is safer to spread that ambition over several years. In time the breeder of fowls for market may reasonably calculate on becoming a fancier, but there are lessons to learn all along the way, and the necessary qualities to insure success in any business are perseverance, pluck and industry.—American Poultry Journal.

#### Brooders Beat Hens.

Can the brooder compete with the hen in raising chicks successfully? I think it can. I presume it is necessary to go further into the matter than to simply make the assertion.

One reason why I am so positive in this statement is because with a brooder it is possible to raise the chick both in season and out of season. It does not matter whether a brooder is taking care of its flock in the cold winter months, the moderately warm spring or hot summer months, because a good brooder will do it every time, and do it well, if given half a chance. All it needs is the proper ventilation, proper heat, cleanliness and proper feeding of the chicks. A brooder will raise more chicks than a hen, twice over. Why? For several reasons. When the hen is dragging the little fellows about in the wet grass, the brooder is keeping them close and warm. It never forsakes the chicks to go to laying before they are able to take care of themselves. Above all, it never takes them so far from home that half of them are lost. It is also a sure protection against vermin of all kinds, while the hen is not. Last, but not least, it is as easy to take care of 100 chicks in brooders as 20 chicks with two hens.—G. C. Flegel in American Poultry Journal.

To Secure a Constant Egg Yield. The hardest task in maintaining a constant and continuous egg yield is to keep the laying stock in prime condition, says Colonel E. O. Reesle. "This means such a condition of perfect health that the eggs will not only be laid regularly, but that they will be of uniform size, according to the breed laying them. Under such conditions we should have large eggs from Minorcas, Leghorns, Plymouth Rocks and Brahmas. When such breeds lay small eggs, abnormally large eggs with perhaps double yolks or soft shelled eggs, the stock is out of condition and usually irregular. The eggs will thus be laid frequently, and many times laying will stop entirely. Layers should be kept active, and activity is induced by short feeding. A hungry hen is usually a good layer.

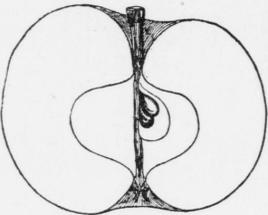
One Thousand Dollar Prize For an Apple. The Minnesota State Horticultural society offers a premium of \$1,000 for a seedling apple which shall be as hardy and as prolific a tree as the Duchess of Oldenburgh, with fruit equal in size, quality and appearance to the Wealthy and keeping as well as Malinda. The awarding committee is Professor S. B. Green, J. M. Underwood, J. S. Harris, Clarence Wedge and A. K. Bush. The secretary, from whom all particulars of the competition can be learned, is A. W. Latham, 207 Kasota Block, Minneapolis, Minn.

## FRUIT FLOWERS

### WESTERN BEAUTY APPLE.

#### Properly the Grosh and Also Known as Big Rambo, Ohio Beauty, Etc.

In regard to an apple which is locally known in Pennsylvania as English Rambo, H. E. Van Deman says in Rural New Yorker: It is properly called Grosh, although it is much more generally known as Western Beauty and in some degree as Big Rambo, Ohio Beauty, Musgrove and a few other synonyms. English Rambo I have never before heard applied to it. That is one of the synonyms of Domine. It is not strange that it is called Big Rambo, for the habit of the tree is much like that of the true Rambo, and the fruit is somewhat similar in shape, color, flavor and season, but is very much larger. It is an apple of most excellent qualities of both tree and fruit and is well worthy of being in



GROSH OR WESTERN BEAUTY APPLE.

every family orchard. It is one of the best flavored apples of its season and, I think, better than Rambo, being rich subacid, very agreeable and the flesh tender and juicy. It is large, flat, smooth and regular in shape, except that one side is usually a little larger than the other. The stem is short and the calyx large and open. The color is greenish yellow, with abundant stripes and splashes of pale red. The tree is a strong grower and the leaves very large.

Dr. John A. Warder, the great pomologist, esteemed it in his day as one of the best fall apples. In my own orchard in Kansas and wherever I have seen it I have found it to be among the most satisfactory apples of its season.

Its history dates back to about 1815, when, according to information obtained by Charles Downing from members of the Grosh family in Pennsylvania, the original tree was raised from seed by Mr. John Grosh and planted at Marietta, in that state, where it was still standing in 1877. By some means unknown to the pomologists west of the Alleghenies, it was found by them in Ohio about 1850, or perhaps earlier. It is quite certain that some one had taken the grafts westward from Pennsylvania without leaving any record of the fact.

Not knowing the original name, Grosh, which the variety had in its native state, and supposing it to be of western origin, the name Beauty of the West was given to it, and this was soon shortened to Western Beauty. All who have this apple, under whatever name, should hereafter call it Grosh and not be afraid to recommend it for general cultivation.

#### A New Cherry Worm.

A new cherry pest, a true maggot, differing from the familiar grub of the curculio, has been reported this season, and growers of the eastern, central and northern states are warned against it by the Cornell station. One can usually readily determine when a cherry is "wormy" from the attacks of the plum curculio, but this new pest gets in its work in such an inconspicuous way that the fruit it infests might easily be classed among the fairest and best on the tree or in the dish on our breakfast table until it has been kept a few days, when the infested portion rots and falls in. From the above statements cherry growers can readily understand how serious a menace to their business this new pest might easily become and how important it will be for them to learn all they can about it, for which purpose bulletin 172 of the Cornell station has been issued.

#### Laying Down Fruit Canes.

"Most varieties of raspberries, blackberries and grapes need winter protection in this region. The cane or vines must be laid down and covered." In calling attention to this point a Colorado exchange says: "The usual way when covering raspberries and blackberries is to remove some of the earth on one side of the plants, then lay them carefully down and fasten them by driving down iron or wooden hooks over the canes and shoveling a few inches of soil over them. Some prefer straw or coarse manure for covering canes and vines, for it is more quickly put on and removed in the spring and makes a mulch and fertilizer for the plants in summer. Probably the simplest plan is to throw up a furrow or two on each side of the row with a breaking plow and complete the covering with shovels."

#### Left Handed Philosophy.

The philosophy of a good many people appears to be similar to that of the French peasant. "As for the roads which are now bad," he said, "it is of no use to repair them, for nobody travels over them, and, as for those which are good, why do anything to them until they get bad?"

Road Briefs. Poor roads make poor horses. Proper highways are good going and likewise coming.

### STEEL ROAD IN SPAIN.

#### Advantages They Possess Over the Ordinary Stone Road.

Horace Lee Washington, United States consul at Valencia, Spain, in a recent report to the state department on a steel roadway in Spain, says:

The road between Valencia and Grao is two miles in length, and an average of 3,200 vehicles pass over it daily. Until 1892 it was constructed of flint stone. The annual cost of keeping it in repair was about \$5,470.

The construction of a steel roadway was determined on, and the annual cost of keeping in repair the central zone of road thus relieved from heavy traffic, which proceeds over the steel rails, is now only about \$380.

The length of road so built was less than two miles, and the cost in detail was: Steel construction, \$6,800; transportation and laying steel construction, \$507; binding stone construction between rails and lateral zones, \$2,100; total, \$9,503.

The rails during the seven years they have been in position exhibit a wear of one decimil of a millimeter yearly and have not required repairing.

Ample room is allowed between the rails for two horses to walk abreast. Horses do not appear to slip on rails of this construction.

At each side of the rail are layers of binding stones, the paved road being higher than the face of the rails.

The municipality of Valencia is of opinion that the saving in cost of repairs through a road of this description pays for its construction in a short time, and other and similar roadways are in contemplation.

From various parts of Spain inquiries have been made concerning this road. I learn that a similar construction was decided on at Alicante in 1898, but was temporarily abandoned when events caused exchange to increase. A toll of about eight-tenths of a cent is charged each vehicle passing over this roadway.

### WISCONSIN ROADS.

#### State Road Convention Declares For State Aid.

At the first state good roads convention ever held in Wisconsin, which convened recently at Milwaukee, nearly 1,000 delegates were present.

Resolutions were formulated and referred to a committee declaring that the good roads movement deserves increased attention and the support of the United States department of agriculture; that the discussion of good roads and road building methods approved at the Wisconsin farmers' institutes should be endorsed; that every town should own and employ road graders, road rollers and a stone crusher for macadamizing purposes, to be purchased by collection of road taxes in cash, and that competent labor should be employed for the improvement of country roads leading to county seats and market towns.

The resolutions declared also that these results can best be obtained by state aid, which system is enjoyed by New Jersey, Massachusetts, New York, Rhode Island and Connecticut. The constitutional amendment now pending for such aid was favored.

#### The Cost of Mud.

More than \$4,000,000 of public funds is spent annually for the 100,000 miles of roads in Illinois. It is estimated that this fund carefully spent would construct 2,000 miles of macadam roads and properly drain and roll 20,000 miles of dirt roads annually. Ninety-nine per cent of every load transported by railroads or steamer lines is carried in a wagon or truck over a highway, it is said. As statistics collected by the office of road inquiry under the secretary of agriculture at Washington prove that it costs the American farmer nearly three times as much as it does the European agriculturist, the good roads movement is awakening great interest.

#### The Good Roads Campaign.

There will not often be a political campaign in this country which will involve more important interests than the campaign for good roads which is now on in many states.

The earnestness and activity with which this campaign is being pushed indicate an advance of popular intelligence and the growth of a true spirit of progress.

#### The Good Roads Movement.

The good roads movement in this country is not of recent origin, as many who are following and agitating it may think. In the earlier part of the century an agitation for good roads was kept up for nearly 50 years and had among its leaders such men as Henry Clay and John Calhoun. This movement resulted in the government taking a sufficient interest in it to provide for a national turnpike through the leading eastern cities to those in the west. About the time the movement was well under way the railroads as a means of transportation became so prominent as to cause the road work to stop.

#### Not Nicotine, but Pyridines.

It is doubtful whether any nicotine ever reaches the mouth of the smoker except that present in the moistened tobacco which is in contact with the lips. The smoke products of tobacco do not contain any important quantity of nicotine, the chief toxic bodies being related to that interesting series of organic bases known to chemists as pyridines.—Lancet.

The peculiar gait to which the South American horses are trained, known as the "paseo de trote," is a mincing step, so light and easy that the hoofs scarcely touch the ground. It is said to have been acquired in the early days of the Spanish invasion.

It's love that makes the world go round, but money makes it go round without squeaking.—Somerville Journal.

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