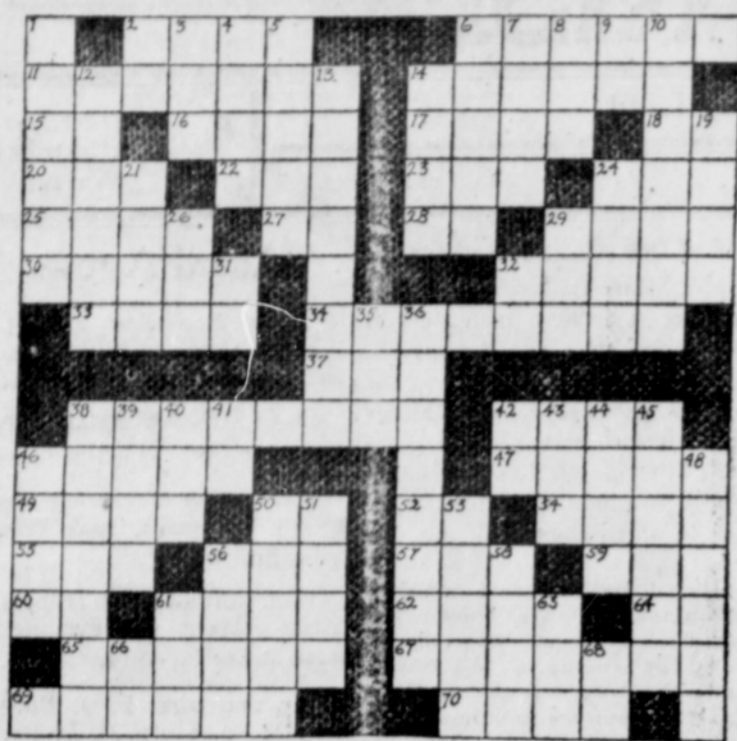


CROSS-WORD PUZZLE No. 18



Horizontal.

- 2—Wind instrument
8—Drinking place
11—Unfamiliar
14—Talks
15—Establishment (abbr.)
16—Change of direction
17—Fat
18—Polite salutation (abbr.)
20—Unit of force
22—Observe
23—Fuss
24—Part of foot
25—Not any
27—Initials of famous President of United States
28—You
29—Foundation
30—Jeweled headress
32—Student
33—Small weight
34—Slants
37—Collection of animals
38—Window sash opening on hinges
42—Abound
43—Construct
47—Bar of metal
48—Crony
50—Note of musical scale
52—Preposition
54—To challenge
55—Possessive pronoun
56—Sack
57—Jewel
59—To obstruct
60—You (French or Latin)
61—Established price
62—Heroic poem
64—Orthography (abbr.)
65—Elevated
67—To fall back into former state
68—Knot
70—Girl's name

Vertical.

- 1—Upward climb
2—Conjunction
3—Strike
4—Burden
5—An cigarette
6—One of the four suits of cards
7—Pertaining to air
8—Boy
9—Approved (abbr.)
10—Division taking place between two liquids separated by thin partition
12—Surface generated by rotation of a plane closed curve about an axis lying in its plane
13—To put forth energy
14—Kill
19—Angling accessory
21—To snarl, growl
22—Narrow woven band
26—Epoch
28—Kind of cake or bread
31—Part of verb "to be"
32—Jumbled type
35—Negative prefix
36—One who lives in a small house
38—Refinement
39—Affects with pain or uneasiness
40—Canning; shrewd
41—Boy's nickname
42—Note of musical scale
43—Finish
44—Mild oath (obs.)
45—A marsh
46—A lure
48—Disposition or frame of mind
50—Afterward
51—Oid
53—Wigwag
56—Same as 28 horizontal
58—Gentle; soft
61—Remove
63—Metal container
65—Indefinite article
68—Father

The solution will appear in next issue.

Solution of Puzzle No. 16.

DREAMER STALKS
RACED TENANT
AD OLIO NEATIOR
MIS OCTOBER ACE
ASPS THE RUMBLE
SHAPE HERE FIRST
NO AR DROSS S
NET APT
CAGREE AN ON
OTHER MOP CREEP
REAM FERTILE DOE
US EAVE LARD PA
PEBBLE TRIBES
TREBLE DESPISE

THE MARKETS

Portland
Wheat—Hard white, \$1.53; hard winter, \$1.49; soft white, \$1.51; north-orn spring and western white, \$1.50; western red, \$1.45.
Hay—Alfalfa, \$19@19.50 ton; valley timothy, \$20@21; eastern Oregon timothy, \$22@22.50.
Butterfat—4c delivered Portland.
Eggs—Ranch, 27@26c.
Cheese—Prices f. o. b. Tillamook: Triplets, 27c; loaf, 28c per lb.
Cattle—Steers, good, \$9.25@9.65.
Hogs—Medium to choice, \$12.50@13.50.
Sheep—Lambs, medium to choice, \$11.50@12.
Seattle
Wheat—Soft white, \$1.62; western white, \$1.60; hard winter, \$1.60; western red, \$1.58; northern spring, \$1.60; Big Bend bluestem, \$1.90.
Hay—Alfalfa, \$24; D. C., \$28; timothy, \$26; D. C., \$28; mixed hay, \$24.
Butterfat—45c.
Eggs—Ranch, 27@26c.
Hogs—Primes, \$13.75@13.90.
Cattle—Choice steers, \$8.75@9.50.
Cheese—Oregon fancy to retailers, 27c per lb.; do-standards, 25c; Washington fancy triplets, 24c.
Spokane
Hogs—Good to choice, \$13.25@13.50.
Cattle—Prime steers, \$8@8.50.
Oregon Herds in Good Shape.
Salem, Or.—A survey by the United States department of agriculture showed that in all excepting six counties in Oregon there is less than 1 per cent of tuberculosis affecting live stock, according to a statement issued here by Dr. W. H. Lytle, state veterinarian.
Don't change an animal's ration abruptly.
Guesswork never will tell whether or not seed corn will grow.
One-half the value of manure may be lost in four months if it is left exposed.
Kohl rabi is an early-season vegetable when at its best, or a late fall one. Put in some seed early.
Oak trees are more subject to lightning than any other kind, according to observations by the federal Department of Agriculture.
The best annual to hide an unsightly object quickly is the castor bean, the most majestic annual in the flower beds. The Zanibar types are particularly fine.

Fruit of Concord Grape Is Produced From Buds

The fruit of the Concord grape is produced, almost entirely, from buds on canes of the preceding season's growth. Nearly all the buds on growth of that type will produce fruit-bearing shoots, if the conditions for growth are favorable the following spring. As a matter of fact, a varying proportion of the buds will lie dormant, owing to the natural tendency of growth to start from the tip of last year's growth rather than from the base. A small portion of the shoots on the vine may prove to be barren at harvest time. Sometimes this condition is due to a failure of the shoot to produce a blossom cluster, but more often it seems to be due to some accident or condition that caused the loss of the cluster after blooming time.

Midsummer Vegetables

For midsummer vegetables the shady garden is limited to varieties. String beans will give good enough crops to make them worth planting, although not as good as in the open sun. Parsnips and carrots often do fairly well. Leaf crops, in general, are more successful than root or fruit crops, and one that is sure fire is the Swiss chard for greens. It will give a good crop in a shady garden, although it will not luxuriate in the manner it does in the sun.

Care for early hatched baby chicks well.

Repair pasture fences before busy season.

A grease coating on plowshares and mold board comes off a great deal easier than a rust coating.

Winter Wheat Crop is Short.

Washington, D. C.—A winter wheat crop about 116,000,000 bushels smaller than that produced last year is indicated for this year by the condition of the crop on April 1. The department of agriculture forecast the crop at 476,265,000 bushels in its April report.

The Great Outdoors

Where Bread, Meat, Clothing, Health and Vigorous Humanity are Produced

Tile Drains Make White Land Good

Increased Crops Pay the Cost and a Good Profit

Two weeks ago we told of the success C. H. Falk sr. has had in tile-draining the anathematized white land and other soil in this valley. Mr. Falk is a man who observes and remembers facts and who through a long life has also perused much agricultural literature and apparently has had good success in separating the grain from the chaff in the latter. Moreover, there appears a considerable space between him and the poor-house, towards which his neighbors thought he was heading when he began to bury tile in his fields.

Among others who have laid tile in fields in this county are R. P. Dougherty of Brownsville, J. L. Workinger of Shedd, J. L. Guthrie of Harrisburg, David Aegeter of Scio, J. F. Porter of Halsey and a number more.

Like nearly everything else, drain tile costs more than it did a few years ago, but in land free from stones and roots the ditching machine recently mentioned in these columns can be made to offset some of the cost of tile by reducing the amount of labor required.

The extension service of O. A. C. will furnish F. R. Price, drainage engineer, free of charge for working out drainage plans. With this and the use of the ditching machine at cost many farmers can install who could not otherwise.

Here we quote from a bulletin by W. L. Powers, chief in the department of soils, O. A. C.:

"An experimental tile drainage system was installed at the station in 1914 on a white land field west of the stadium. This field is being maintained as a phase of Oregon soil investigations to learn the most effective means of improving white land after tiling.

"The soil contains 21 per cent of clay and over 55 per cent of silt. The sub-surface is blue clay, containing over 33 per cent clay; the subsoil is yellow silt loam, containing only 17 per cent clay. Just below the blue clay, or at a depth of about 8 feet, is a friable streak, more porous than the subsoil at a greater depth. It is in this friable layer just below the blue clay that it is usually best to place laterals or collecting drains. The tiles should go under, over or around thick impervious layers [such as Mr. Dougherty found at Brownsville.—Ed.]

"In typical white land the tiles will need to be about 4 rods apart. In most white land a fall of two-tenths of a foot to the hundred feet can be secured for lateral drains, and one-to-two-tenths of a foot for main drains. This is the minimum grade desirable. The more fall the better, up to several feet per hundred.

"Drainage in experimental fields studied has doubled the yield. Those who have tried it say it pays to tile white land."

In the concluding sentences of last week's installment of "So Big" Selina's victory over unfavorable circumstances is glimpsed. This week she is shown in the fruition of her years of grinding toil. And tile draining, which her husband had sneered at, is the key to her success.

White Land is Fertile

Six years ago W. S. Hense of Tangent plowed a field of white land which came from the plow in slabs that could hardly be broken with the harrow. He practiced a three-year rotation, first corn, well cultivated; then clover, cut for hay; then pasture; then back to corn. The field is now in good tillth, shows a dark color and bids fair to be among the best in the neighborhood.

Vegetable matter left in the soil, through rotating the crops and allowing the roots of the replaced ones to decay in the ground, together with cultivation, did the trick.

But it takes perseverance. You can't change Willamette valley white land into a fertile field in a year. On some of it water stands too long for clover. There tile drainage will pay.

Highest market price paid for your Wool

See me before you sell W. F. Carter

Farm Products Grown at Loss

Too Many People on Farms Causes Excess and Lowers Living Standard.

(Prepared by the United States Department of Agriculture.)

Too many people on farms results in an excess of farm products sold at unremunerative prices, which in turn has a tendency to hold down the standard of living in the country and blight the lives of the growing boys and girls on the farms, declares Dr. H. C. Taylor, chief of the bureau of agricultural economics, United States Department of Agriculture.

"When the movement from country to city goes on at a sufficiently rapid rate there will not be a surplus of farmers and, one year with another, farm prices will be adequate to maintain the desired standard of living on farms in rural communities.

Adequate Prices. "Unless farmers insist upon a satisfactory standard of living and withdraw from agriculture when they are not able to maintain this living standard, prices for farm products adequate to provide such a standard of living cannot be hoped for.

"In 1920 approximately 87 per cent of those engaged in gainful occupations in the United States were in agriculture. The percentage engaged in agriculture in 1920 was 26. This movement of country to city went on gradually throughout 1900 years, but between 1910 and 1920 the movement was more rapid than in any period since 1870.

"The proportion of those gainfully occupied who are engaged in agriculture will doubtless be further reduced in the United States, but even when final perfection has been reached in the form of labor-saving machinery there will continue to be a movement of population from country to city as long as the birth rate in the country is higher than in the cities.

Desirable Movement. "This movement, within proper limits, should be looked upon as desirable. Without the movement from country to city we would have entirely too many people engaged in agriculture and farm prices would be even lower than they are. Cities would be lacking labor and the disparity between the purchasing power of farm products would be even worse than it has been in recent years.

"The danger in the movement is that the process will be selective, taking the best stock from the rural community and leaving the weaker elements of the population on the farms to the detriment not only of agriculture, but of the nation as a whole. The movement should operate in such a way as to leave in the country those elements of our rural population best suited to an efficient type of farming, a higher standard of living on the farm and in the rural community, and a standard of rural citizenship commensurate with the needs of our democracy."

Properly Pruned Fruit Trees Most Economical

Fruit trees properly pruned from the year they are set in the orchard until they have passed their age of usefulness will produce more and better fruit than the unpruned or improperly pruned ones. They will produce fruit more economically because pruning facilitates the culture, spraying, thinning of the fruit, and even the future pruning.

Pruning consists in the removal of superfluous parts of trees in order to assist in the control and direction of remaining parts and to facilitate other orchard practices. Trees to produce good crops economically must be vigorous, large, strong and spreading. It is the vigorous trees that produce large annual crops with the least breakage and the least need of propping. It is the large, vigorous, strong, spreading trees that produce large annual crops of fruit carrying the best combination of size and color.

The state board of control has authorized the purchase of 47 acres of land adjoining the state prison property at a cost of \$28,800. The land will be used for farming purposes.

Sense of Duty

A sense of duty may not be the highest motive, but the best men are moved by it.—Presbyterian Record.

Giving to the Poor

Give work rather than alms to the poor. The former drives out idleness, the latter industry.

WANTED Sheep to Shear with a Power Shearing Machine

Phone 12F12 Harrisburg or write Jim Greene, Harrisburg, route 2.

Prune Grape Vines for Best Results

Work Usually Done While Plants Are Dormant.

Bearing grape vines must be pruned every year if a profitable yield is to be secured.

This work is usually done while the vines are still dormant, advises J. H. Clark, instructor in fruit growing at the New Jersey State College of Agriculture. "A heavy pruning is necessary to stimulate vigorous wood growth, to keep the plant within bounds, and to leave only as many buds as can produce good-sized clusters.

"The amount of old wood left at pruning time should be no more than is necessary to act as a support to the producing canes. In the Kniffen system of training, which is recommended for New Jersey, a single trunk extends to the top wire of the two-wire trellis. Four vigorous, one-year-old canes, a little above the average in length and starting as near the trunk as possible, are selected to produce the crop. These should be so located that one cane can be tied in each direction along each wire. Each of these canes is cut back to eight or ten buds, depending on the vigor of the vine, making a total of 82 to 40 buds on the entire plant.

"This number of buds distributed over four canes will produce more fruit than the same number of buds on spurs, each bearing only two to four buds. Since the canes which bear fruit one year are removed the next, some provision must be made for renewal. This is provided for by selecting four other canes as close as possible to where renewal canes will be wanted a year later, and cutting them back to spurs of two buds each. All remaining canes are then removed entirely.

"These recommendations can easily be applied to other systems of training. The removal of as much old wood as possible and keeping 30 to 40 buds on four or five one-year-old canes to produce the crop are the essential points."

Farming Becoming More Difficult, Says Expert

According to Director Sidney B. Haskell of the Massachusetts experiment station, farming is becoming more difficult, due to higher market standards, soil fertility problems, insect pests, plant and animal diseases, and competition with the factory which has brought about a shorter working day. This increasing difficulty works to the advantage of the educated farmer.

The future of farming looks bright because of the increasing population, because there are no longer great areas of untilled soil in the West, and because the Middle West and South are now passing through the same era of industrialization which the East has already had.

Each section of the country must adapt itself more and more to that type of agriculture that best fits its market and transportation facilities, its soil and its climatic conditions, and in order to compete on the market at the price set by the large producing areas, farmers must reach certain standards of efficiency per acre, per dollar and per man.

More and more attention must be given to good seed, productive live stock, economical use of labor and to the application of proper fertilizers in sufficient quantity to give the greatest profit.

Sin in Infancy

Be not familiar with the idea of wrong, for sin in infancy mothers many an ugly act.

FOR SALE Red King Spring Wheat White Oats

Mrs. Nate C. Smith

Moles Eat no Vegetables

A correspondent of the Oregon Farmer, proposing to give "the names and natures of the numerous pests that infest the ground and their respective remedies," starts out with: "Before being planted peas should be soaked in kerosene oil and sprinkled with red pepper to secure protection from moles."

If the writer knows the rest of his subject no better than this, gardeners will do well to look farther for advice or go without. No fact has been better established than that moles eat only animal food. In making their tunnels they encounter vegetables, and in some cases cut through them, but they never eat them. Investigators of the national department of agriculture settled this when they examined the contents of thousands of moles' stomachs and found no vegetable matter except scraps that might have been accidentally swallowed with the worms and grubs that constituted the diet.

You may find vegetables gnawed or eaten or carried away from a mole's runway, but this is the work of mice or squirrels that make use of the roadway which the moles have built.

Moles damage lawns and meadows by throwing up their mounds and by letting in air which draws moisture away from the roots, but they eat no vegetables.

Alfalfa Is Replacing Timothy in Cow Ration

"Alfalfa is finding a permanent place on many Wisconsin farms," declares L. F. Graber, agronomist of the Wisconsin College of Agriculture, "but it is not replacing the large acreage of timothy and other grasses as rapidly as it should."

Farmers have hesitated in growing alfalfa because they have not had sufficient knowledge of the cultural practices of this wonderful legume, is the opinion of Graber. Only within the past year has alfalfa taken a rapid step forward. Dairy farmers are realizing that in order to make dairying a profitable business, they must find a dependable crop, one that can be grown from year to year, and aid in cutting down their feed bills. They want to replace the timothy and wild grasses which now make up over three-fourths of the roughage used in rations on Wisconsin dairy farms.

Because of its resistance to drought, its wide range of soil and climatic conditions, its large yields per acre, alfalfa has advantages over any other crop as a solution to the dairy farmer's problem.

Pasturing Sweet Clover During Second Season

Sweet clover, the second season, should be pastured as soon as an animal is able to get a mouthful and should be grazed heavily, according to specialists of the Kansas State Agricultural college.

If a seed crop is desired, grazing should cease the last of June or the first of July and the crop should be allowed to make seed. Harvesting should be done September 1, or before. Close grazing is not likely to hurt sweet clover. As a matter of fact, it benefits the following seed crop, where seed is desired, by forcing the plant to make a fine, bushy growth, instead of a coarse, upright growth.

Advertisement for FISHER'S CHICK FEED and "Developing Mash" by O. W. FRUM. Text includes: "For thrifty, healthy chicks feed FISHER'S CHICK FEED and 'Developing Mash' O. W. FRUM"