A Page for the Farmer and His Family

FARM LIVE STOCK

FEED FOR WINTERING STEERS

Methods Used and Results Obtained by Department of Agriculture at Lewisburg, W. Va.

(Prepared by the United States Department of Agriculture.)

Experiments to determine the most desirable rations and methods for wintering steers were continued last year at Lewisburg, W. Va., by the United States Department of Agriculture, cooperating with the state agricultural experiment station. Sixty two-year-old steers, averaging 927 pounds in weight, were divided into six lots of ten each and wintered for a period of 128 days, beginning December 23, 1919. The greatest gain—93 pounds—was made by the lot fed on a daily ration of 25 pounds of silage, 5.4 pounds of straw, and one pound of cottonseed meal. Other rations and gains were: Silage (40 pounds), gain, 79 pounds;



A Good Bunch of Steers.

silage (30 pounds) and cottonseed meal (one and a half pounds), gain, 67 pounds; silage (25 pounds) and mixed hay (eight pounds), gain, 63 pounds; mixed hay (20 pounds) and ear corn (two pounds), gain, 25 pounds; silage (30 pounds), gain 22 pounds.

The steers used in the wintering experiments at Lewisburg were grazed on pasture to determine the effect which the different rations fed and methods of wintering had on subsequent pasture gains.

PUREBRED FEMALES FAVORED

In Opinion of Specialists Number of Purebreds of Both Sexes Is Rapidly Increasing.

According to figures announced by the United States Department of Agriculture, live stock owners in the United States show a tendency toward purebred female animals as well as toward purebred sires. In fact, the use of well-bred sires appears to increase the use of good females. During the period October 1, 1919, to March 31, 1920, the quality of female stock kept in herds and flocks headed by purebred sires, was 48.3 per cent purebred, and 2.5 per cent scrub. The remaining number were grades of crossbreds. Later figures covering the period October 1, 1919, to December 31, 1920, show that the number of purebred females kept under corresponding conditions had increased to 55.9 per cent and scrubs had fallen to 2.1.

These figures are based on a knowledge of the breeding of nearly 400,000 head of animals and poultry. In the opinion of department live stock specialists, the more general use of purebreds of both sexes on farms in the United States is increasing. In about a year, it appears, the increase in the use of purebred females by purebred-sire users has been at least 7 per cent.

DEVELOP HORSES AND COLTS

Protein Feeds Tend to Produce Muscle —Concentrates Are Necessary for Work Animals.

For young horses and colts muscle development is very important. Protein feeds tend to produce this. So do leguminous hays, such as alfalfa, clover, cowpeas, soy beans and peanuts. The following concentrates are valuable: Wheat bran, cottonseed meal, rice, bran and shorts. From one to two pounds of cottonseed meal a day with the grain have been found to be very economical and highly desirable for horses doing heavy work.

SELLS HIS POOR PUREBREDS

Undersized and Poorly Conformed Animals Sold for Beef by Nebraska Live Stock Man.

"I sold as beef two purebred Shorthorn bulls, one undersized, the other of poor conformation." This statement to the United States Department of Agriculture from a Nebraska stockman aiding in the Better Sires—Better Stock campaign, indicates a growing understanding that desirable sires must be of good quality in addition to being purebred.

DEVELOP AND FATTEN SWINE

Terms Are Often Misused in Speaking of Hogs—Some Essentials for Development.

The word develop is often misused for the word fatten. This is a mistake. In order to develop a pig he must have suitable food to keep up a good growth of bone and muscle and regular exercise to give him strength and vigor.

COST OF USING TRACTORS AND HORSES SHOWN IN YEAR'S WORK



Preparing Seed Bed With Tractor Power.

(Prepared by the United States Department of Agriculture.)

During October and November, 1920, representatives of the United States Department of Agriculture visited 286 tractor-owners in Ohio, Indiana, and Illinois. A complete record of all the work done during the year both with tractors and horses was obtained from each farmer. Information from which the cost of using the tractor and the cost of maintaining the workstock could be determined was also obtained.

The investigation was made through the co-operative efforts of the bureau of animal industry, office of farm management and farm economics and the bureau of public roads, in accordance with plans outlined at the farm power conference at Chicago, Ill., in October, 1919. The object was to obtain information, in addition to that already available in the Department of Agriculture, which would aid in determining advantageous forms of power for different farms and different conditions.

Farms Above Average in Size.

The average size of the farms visited was 258 acres. This is considerably above the average size of all farms in these states.

Two-plow tractors were owned on 174 of the 286 farms, three-plow tractors on 104, and four-plow tractors on six farms. One farmer owned a one-plow machine, and one farmer owned a five-plow machine. Two-plow machines were found on 75 per cent of the farms with less than 160 crop acres, and on 53 per cent of those with 160 or more crop acres.

One hundred and six of the tractors had been in use one year, 100 had been in use one and one-half or two years, 49 had been in use two and one-half or three years, and 31 had been in use more than three years.

On the average the tractors were used for 30.8 full days during the year covered by the investigation. Twenty-three and five-tenths days of this was drawbar work on the home farm, 2.7 days was belt work, and 4.6 days was custom work. Seventy-three of the 286 tractors did less than 20 days' work during the year and 26 did 50 or more days' work.

The number of workstock still owned varied from two head on 11 of the farms to more than 15 on five of the large farms. On the average there were 6.8 head per farm at the time of the survey, and their value was $145 per head. In all there were 1,878 head of workstock on the 286 farms and 111 colts less than one year of age.

The average number of full days work per year per horse, for all farms was 68.6. On 20 of the farms the workstock did less than 40 full days work and on 27 they did 100 or more days work per year.

The tractors did 85 per cent of the plowing on these farms, 73 per cent of the disking, 43 per cent of the harrowing, planting, rolling, and packing, 41 per cent of the grain cutting, and about 15 per cent of the loading and hauling of hay.

Of 267 men who did spring plowing, 142 did it all with tractors, 121 used both tractors and horses, and four used horses only.

Of 225 who did fall plowing, 190 did it all with tractors, 27 used both tractors and horses, and eight used horses only.

In all, the power for 30 per cent of the drawbar work on these farms, as measured by days of horse labor required for it, was furnished by tractors and the remainder by horses.

The average cost per head of keeping workstock on these farms for the year ending November 1, 1920, was $159, and the average cost per farm was $1.76.

Costs 45 Cents Daily to Feed Horse.

Exclusive of grass and stalk pasture, the average ration per horse consisted of 1.3 tons of hay, 1.2 tons of straw, 0.2 acre of stover, 37.8 bushels of corn, and 22.3 bushels of oats. The total cost of feed per head was $134. Based on present prices (March, 1921), the cost of feed per head would be about $80.

The average cost per day of horse labor for the year of the survey was $2.43. Based on present prices the cost on these farms would be not far from $1.50 per day.

The average first cost of the two-plow tractors was $972, of the three-plow tractors $1,354, and of all tractors $1,140. The average amount spent for equipment, mostly plows and disks, for use with tractors was about $340. The average value of the horse-drawn implements disposed of after the purchase of the tractors was $12.

The average life of these tractors as estimated by their owners is 8.7 years. The annual depreciation of the two-plow tractors amounted to $164, and of the three-plow $217. The annual cost of repairs, including the value of the owner's time spent in repairing the tractors, was $39 for both the two-plow and three-plow sizes.

The fuel consumption per day for the two-plow tractors varied from about 18 gallons for fall plowing to about 11 gallons for drawing the hay loader. For the three-plow tractors it varied from 23 gallons for plowing to 15 gallons for drawing the hay loader. The two-plow tractors covered 6.6 acres per day in plowing and three-plow machines 8.6 acres. The amount of fuel required per acre by the two sizes was practically the same, 2.8 gallons for the two-plow and 2.7 gallons for the three-plow tractors.

Difference in Plowing Costs.

The average cost per acre of power for the plowing done with two-plow tractors was about $2 and with the three-plow about $2.20. The cost of power for the plowing done with horses on these farms was about $2.90 per acre. Based on the present costs of keeping workstock, the cost of power for plowing with horses would be about $1.90 per acre. For most of the other operations the cost of power when furnished by horses was slightly less than when furnished by tractors. The cost per acre of power for disking with tractors was $0.67, with horses, $0.64; for cutting grain with tractors, $0.67; with horses, $0.59. These figures represent the cost of power only, and do not include either the cost of man labor, or that of the implements used.

The average cost per day of two-plow tractors for drawbar work on the home farm was about $12.65, and of three-plow tractors about $17.75.

The total cost of power furnished by the tractors for drawbar work at home during the year averaged $341. This drawbar work on the home farm constituted 76 per cent of the total work done by the tractors, and only 76 per cent of the total annual charge for depreciation, repairs, and interest on investment, is included in it.

Tractor Reduces Number of Workstock Needed.

On the 172 farms where there had been no change in acreage the number of workstock had been reduced by 2.2 head, an average reduction of 26 per cent. Forty-four of these 172 men had not reduced the number of workstock, 62 had disposed of one or two head, 43 had disposed of three or four head, and 23 of more than four head. On these 172 farms one horse had been kept for each 28 acres (total acres, not crop acres) before purchase of tractors, and at the time of the survey there was one horse for each 37.7 acres. For all the farms there had been an average of one horse for each 27.6 acres before purchase of tractors, and there was one for each 37.9 acres at the time of the investigation. On the farms where there had been no change in acreage there had been one horse for each 21.5 crop acres before the purchase of tractors, and there was one for each 29 crop acres at the time of the investigation.

Operating Costs May Be Reduced.

There were great variations on individual farms in the cost of power furnished by both horses and tractors; and by more careful management many farmers could doubtless reduce this cost. Repair costs and fuel consumption of the tractors could in many cases have been reduced by more careful operation. The cost of keeping workstock could have been reduced on many farms by more careful feeding practices.

The average annual cost of power for the drawbar work on the home farm which was done with tractors was equal to the cost of keeping 2.1 head of workstock and this is practically the average number displaced per farm. On the basis of present prices, however, the cost of keeping workstock has declined considerably more than the cost of operating tractors.

Since, during the year covered by the investigation, the cost of power on the average farm was no greater than if it had all been furnished by horses, any saving in man labor costs, any gain due to getting a larger amount of work done in a given time, and any other advantages connected with the use of tractors which cannot be measured directly in dollars and cents, might be considered clear profit. It is doubtful, however, if such gains were great enough to balance the cost of operating the tractors on many of the farms where there was no change in acreage and where no workstock was displaced.

DAIRY FACTS

BREEDER HELPS ASSOCIATION

Nebraska Dairyman Offers to Sell Purebred Sires at Half Price to Promote Quality.

(Prepared by the United States Department of Agriculture.)

Following the meeting of the Nebraska State Dairymen's association at Lincoln, Neb., recently, a prominent breeder from that state offered to provide bulls for a bull association at half their value, according to a representative of the dairy division, United States Department of Agriculture. Appreciating the value of the bull association in establishing a certain line



Unusually High-Producing Herd of Purebred Cows.

of breeding, this dairyman told a dairy extension specialist that when he formed a bull association he could choose the bulls from his herd, set a fair price on them, and he (the breeder) would cut that price in two.

This breeder has a large and unusually high-producing herd of purebred cows, the herd average being more than 18,000 pounds of milk a year. Offers of a similar character have been made by several other breeders in different sections of the United States, says the department specialist, all of which indicates that the value of the association plan as a means of improving the quality of dairy cattle is becoming more generally recognized.

When a bull association is formed one dairy breed, usually the one predominating in the locality, is selected for that association, and purebred bulls of that breed are used to improve the herds. As time goes on a number of good purebred and grade herds of the same breed are developed. When one breeder supplies a number of bulls to one association these bulls, generally of similar breeding, make it possible to concentrate the blood of certain families among 250 to 300 cows. Each bull is used in each block for two years. Thus the four or five bulls are used consecutively for eight or ten years, developing in one community a large number of dairy cattle of uniform type and breeding.

STUDY OF INDIVIDUAL COWS

Scale and Milk Record Sheet Give Feed Requirements and Other Characteristics.

The first great step with any dairyman in determining the true measure of his individual cows is taken when he begins to test or deal with his herd as individuals, and not just as a whole. Then he soon learns that he must own a scale and milk record sheet, and use his mind and his pencil to study the individual cow, her feed requirements and her other characteristics.

FOR BEST WORK WITH CHURN

Important Not to Have Too Much Cream in at a Time—Handle All Butter With Ladle.

To do the best work with the churn, do not have too much cream in at a time. A churn that is too full does not get all the butter out of the cream. So you lose, and lose heavily. No churn ought to be more than half full—less would be better. And then keep your hands off the butter. Handle it with the ladle.

KEEP MILK IN HOT WEATHER

Qualities Improved by Cleanliness of Cow, Milker and Especially of Pans and Pails.

Milk will keep fairly well in the hottest weather, provided the bacteria are excluded. This can be done by cleanliness of cow, bag, milker and especially of milk pails and milk cans. Pasteurization is still used to improve the keeping qualities of milk.

CLEANLINESS IS GREAT HELP

One Man Can Groom Two Cows Sufficiently in Minute to Remove Particles of Dirt.

Clean cows contribute to cleanliness of milk. With a stiff brush one man can sufficiently groom two cows a minute. If a currycomb is used, take one on which the points have been worn down, so they will not be too severe on the cows.

IMPROVED UNIFORM INTERNATIONAL SUNDAY SCHOOL LESSON

(By REV. P. B. FITZWATER, D. D., Teacher of English Bible in the Moody Bible Institute of Chicago.)
(©, 1921, Western Newspaper Union.)

LESSON FOR MAY 8

REST AND WORSHIP (RECREATION).

LESSON TEXT—Lev. 23:39-43; Deut. 5:12-15; Mark 6:31, 32.

GOLDEN TEXT—The streets of the city shall be full of boys and girls, playing in the streets thereof.—Zech. 8:5.

REFERENCE MATERIAL—Ex. 33:14; Lev. 23:3; Neh. 8:9-18; Heb. 4:9.

PRIMARY TOPIC—The Happiest Day of the Week.

JUNIOR TOPIC—Holy and Happy Days.

INTERMEDIATE AND SENIOR TOPIC—Sane Recreation.

YOUNG PEOPLE AND ADULT TOPIC—The Use and Guidance of Recreation.

The title "Rest and Recreation," as chosen by the committee, is hardly true to the content of the Scripture passages. It should be "Rest and Worship."

1.—The Feast of Tabernacles (Lev. 23:39-43).

This was the final feast of the series which in type covered the great facts of redemption.

1. Time of (v. 39). It was on the fifteenth day of the seventh month and lasted seven days. This time would about correspond to the close of our September and the beginning of October. It was after the harvest had been gathered.

2. Method of keeping (vv. 40, 42). They were to take the boughs of goodly trees, branches of palm trees, and the boughs of thick trees, and willows of the brook, and construct booths. These booths were placed on the flat tops of houses, on the streets and open places of the city, and even in the fields. In these the people dwelt for the whole week.

3. The significance of it (v. 43). (1) A memorial of Israel's dwelling in booths in the wilderness (vv. 42, 43). It reminded them of God's care of them during their journey through the wilderness. (2) A "harvest-home thanksgiving" (v. 39). "When ye have gathered the fruits of the land." This was the greatest feast of rejoicing of the whole year, for more numerous sacrifices were offered than at any time of the others (Num. 29:12-36). (3) It foreshadowed the final gathering of God's redeemed ones from all nations (Zech. 14:16, 17).

II.—The Sabbath Day (Deut. 5:12-15).

1. Meaning of (Gen. 2:2, 3; cf. Ex. 20:8-11). According to the etymology of the word, "Sabbath" means to desist from exertion—repose. God rested when the work of creation was done. On the basis of this, God has established the law of labor and rest. It is not only a memorial of creation, but of redemption (Deut. 5:15). The Jews were to keep the Sabbath in memory of the deliverance from Egyptian bondage.

2. Obligation of (vv. 12-15). (1) Kept as a sacred institution (v. 12), God sanctified it (Gen. 2:3). "Sanctify" means to consecrate, dedicate, therefore holy. It means set apart to God's service; therefore keeping the Sabbath meant more than cessation from labor—it meant to cease from labor in order to occupy one's self with God. Its supreme signification and obligation was to remember God. (2) No work to be done on the Sabbath (vv. 13, 14). All work was to be done in six days. In fact, the obligation to work six days is here made just as binding as to keep the Sabbath day. Work was God's primal thought for man. Even before the fall he was to "dress and keep" the garden. Work is the psychological solution of pauperism (II Thess. 3:10). It is a thousand times more gracious to provide employment for the suffering poor than to make gratuitous gifts unto them. (3) By whom should the Sabbath be kept (v. 14)? (a) The head of the family. He should be the example for all. (b) The children. The children should be obliged to follow the example of the parents in keeping the Sabbath. (c) The servants. The maid in the kitchen, the servant on the farm, the chauffeur in the city, should keep the Sabbath as well as the head of the family and the children. (d) The beasts of burden. The dumb animals are likewise entitled to their rest. (e) The stranger. The foreigner who comes to our shores should be obliged to keep the Sabbath. It should be kept in mind that Christians are not under obligation to keep the Sabbath as law (Col. 2:16, 17), and especially as it applies to any particular seventh day. The first day of the week is the proper day for a Christian to observe. This he does not as a law, but as a glorious and exalted privilege. He is on resurrection ground, therefore above the law. While the keeping of the Sabbath is a matter of privilege, woe unto the one who abuses this privilege. The principle of resting one day out of seven is inexorable in its demands. (4) The ground of obligation was redemption from bondage (v. 15).

III. Jesus Invited His Disciples to Rest (Mark 6:31,32).

He took them apart to a desert place. This was not primarily for recreation, but that they might be free from the crowd to have fellowship with Him, that they might be prepared for the strenuous days which were to follow.

In God's Keeping.

This world is in God's keeping; despite the travail of soul in many parts of it, the clash of races and the struggle of class with class, despite the machinations of selfish men, a new earth is slowly being fashioned, wherein every child shall have its rightful measure of laughter, every man and woman a chance to do, and the proper reward for doing, a faithful day's work, every race and nation due consideration from its sister nations, rendering in return its full contribution to the happiness and welfare of all.—Congregationalist and Advance.

WRIGLEY'S



"AFTER EVERY MEAL"

Mint leaf, peppermint or luscious juicy fruit, either flavor is a treat for your sweet tooth.

And all are equally good for you. Teeth, appetite and digestion all benefit.

Your nerves will say "thank you," your vim will respond.

WRIGLEY'S is liked for what it does as well as for its BIG value at the small cost of 5c.

The Flavor Lasts

SEALED TIGHT — KEPT RIGHT

WRIGLEY'S SPEARMINT THE PERFECT GUM — MINT LEAF FLAVOR

WRIGLEY'S DOUBLEMINT CHEWING GUM — PEPPERMINT

UNITED COUPONS

WRIGLEY'S JUICY FRUIT CHEWING GUM — THE FLAVOR LASTS

B12

DIFFERENT IN THEIR MAKEUP

Boys Together, John Burroughs and Jay Gould Were as Wide Apart as the Poles.

One poignant recollection John Burroughs had of Jay Gould as boy and man, he spoke of in this way: "I was large and strong, while Jay was small and slippery. A boy taught us to wrestle, but Jay would break his hold and land on top. I would say: 'Jay, that isn't fair,' but he would only laugh. Not wanting to be thrown, he resorted to tricks, and because I was indulgent, would wrestle with no one else. He went away to an academy, and, when he returned, his father had sold his land and bought a village tinshop. Jay got in with a man and made maps. By and by he left that part of the country, and our lives being no longer parallel, I never spoke to him after that, although I saw him twice.

"One day while I was custodian of a vault at the national treasury in Washington I heard a familiar voice. Looking up from my desk, I saw Jay Gould, dark and thin and wiry as ever, and even then one of the richest men in the United States. He hadn't observed me, and I said nothing."

His Interpretation.

"The presiding elder says something has got to be done about the acoustics in the church," remarked an acquaintance.

"Aw, I d'know!" returned Gap Johnson of Rumpus Ridge, Ark. "If folks are just nacher'ly bound and determined not to believe what's preached to 'em I'm willing to let 'em go to—yaw-w-wn! —hell in peace,"—Kansas City Star.

Endurance is nobler than strength, and patience than beauty.—Ruskin.

Gloomy penitence is only madness turned upside down.—Dr. Johnson.

WERE OTHERS IN THE FIELD

School Superintendent Learned That He Was Not Alone in His Devotion to Fair One.

The superintendent of schools in a small Indiana town recently persuaded the school board to revoke its ruling to employ only single women as teachers in the school. At the first school at which he called he tried to joke the young teachers. "Now you'll all be getting married," he laughed. "Have any of you been getting any proposals since the ruling was passed?"

Accidentally his eyes happened to meet those of the young teacher in whom every one knew he was interested. She thought the question was addressed to her and blushingly answered, "Just three others besides yours."

Amid the roars of the other teachers the young superintendent made his exit from that building. But never since that day has he mentioned the new ruling.—Indianapolis News.

What Alcobronze Is.

Possessing the luster and color of gold, stronger, tougher, and harder than ordinary bronze, a new alloy of copper and aluminum bids fair to have a wide use. The new metal has been named alcobronze.

It is stated by its sponsors that the new alloy can be wrought, forged, or rolled without deterioration. It also resists the action of the air, acids, and salt water. This makes it particularly suitable for forgings, propellers, and other ships' parts.—Popular Science Monthly.

Safer to Elope.

He—Will you marry me if I ask your father's consent?

She—I'm afraid not.

After a woman says "There's no use talking" she keeps right on.

It's So Easy to Make the Change

There's no bother and no sacrifice in turning away from the ills which sometimes come from tea and coffee, when you decide on

POSTUM CEREAL

Then you have a rich, full-bodied table beverage which fully satisfies the taste—and there's no ingredient to harm nerves or digestion.

Thousands have changed to Postum as the better meal-time drink and they don't turn back.

Suppose you try the change for ten days and note the result.

"There's a Reason" for Postum

Made by Postum Cereal Co., Inc., Battle Creek, Mich.

©Maryland State Archives, msa_sc2929_scm3544-0146.jpg