

**RATHER DIFFICULT POSITION TO MAINTAIN**



When it comes to maintaining difficult positions, the armies at the front must take off their hats to this British munition worker. He is the well-known juggler, 40-H.P. Zarna, who at present is continuing his efforts principally to making munitions for the Germans, though to the great regret of the Boches they won't receive the munitions except through the muzzles of British guns. However, between times Zarna finds opportunity to exhibit his skill for the amusement of his fellow workers. The photograph shows him at one of his clever tricks, standing on his head on a bottle and juggling several balls at the same time.

**BULLSNAKE IS MASCOT OF PORTLAND TROOPS**

Portland, Ore.—Company G, Second Washington state infantry, of Aberdeen, if allowed to do so will take a mascot to France that will raise the hair on the heads of the allied troops as well as those of the Teutons. The mascot is a bullsnake. The snake has been a pet with the company outposts in the Cascade mountains. One soldier discovered the snake in deadly battle with a rattler. It killed the rattler and a few minutes later when attacked killed a second rattler. The soldiers thought its fighting ability should be recognized and captured it.

and by grafters collecting money. No such abuse of the American Red Cross nurses' uniform is possible. The woman who has organized this great service and trained it to a morale every bit as perfect as that of the army or navy is Jane A. Delano, herself a trained nurse. Miss Delano was formerly a superintendent of the nurses training schools at Bellevue hospital, New York, and the hospital of the University of Pennsylvania, Philadelphia, and is now chairman of the national committee on Red Cross nursing service.

**BLISTER BEETLE'S LIFE DUAL**

Both Blessing and Pest, Is Classification of Indiana State Entomologist.

Indianapolis.—A "pest and a blessing all in one," is the classification of the blister beetle by Frank N. Wallace, state entomologist. The beetle is now numerous in the fields of Indiana and is becoming a pest to a certain degree. It is an aid to the farmer because of its appetite for grasshoppers, however. Discussing the insect Mr. Wallace said:

"During the season of 1916 the comparative scarcity of blister beetles was often commented on in this office, and as grasshoppers were quite numerous, a pest of the grasshoppers was predicted for the season of 1917. This prediction came true and more damage has been done this season than for many seasons past.

"However, the blister beetles are found in such numbers over the state that they are becoming a pest in many fields, but also a blessing as they are the greatest means of controlling grasshoppers."

**USE FOR HORSE CHESTNUTS**

British School Children Gather Them to Supplement Grain for Munitions.

London.—School children all over England will devote their leisure time during the next six weeks in gathering horse chestnuts, which the government is able to use in unlimited quantities in the manufacture of munitions. Researches last year by the Royal Society led to the discovery that horse chestnuts provide a satisfactory substitute for the grain used in certain processes of munition making. Every ton of horse chestnuts harvested will save half a ton of grain for human consumption. Plans made by the school authorities indicate that more than 300,000 tons of these chestnuts will be turned over to the government by school children this fall.

**CARE OF LIVE STOCK**

Food Situation Demands That Animals Be Not Neglected.

Supply is Rapidly Being Depleted and Serious Condition Will Develop Unless Conservation Measures Are Taken.

By R. W. CLARK, Colorado Agricultural College, Fort Collins, Colo. Save all the heifer calves and plan to raise more pigs, lambs, colts, calves and chickens next year than you did this year. Do you know the world is being depleted of its live stock?

Keep your pigs growing. They should weigh 200 pounds at six months of age and they are worth \$16 a hundred now. Ten good pigs are worth \$300.

Give your hogs all the alfalfa or clover they will eat winter and summer. Give them skim milk, whey, some grain, or anything else you have but be sure to give them all they can eat.

Keep the calves growing. Give them some grain, separate from milk, and all the good hay they can eat. Veal is now worth 16 cents a pound. A good veal is worth \$35.

Feed the lambs well. They are worth \$20 apiece and wool is worth from 50 cents to 70 cents a pound.

Feed the cows well. Keep them milking. You may dislike to see them eat so much, but please give them all they can eat all the time. The price of milk, butter and cheese is going up of sight. Butterfat may be worth \$1 a pound before long.

Feed and handle the mares so that you will save all the colts next spring. Good horses are worth \$75 a head more than they were a year ago. A good horse is worth \$300.

**COLTS INJURED BY DRIVERS**

Dr. McCampell of Kansas State College Tells How Young Animal Should Be Treated.

Colts are sometimes injured by inexperienced drivers or men who try to do too much when starting to work them. They seem to think that because the colt is large he can do as much as the mature horse.

"Give the colt light work," advises Dr. C. W. McCampell, associate professor of animal husbandry in the Kansas State Agricultural college. "The colt should be prepared for the season's work if he is to do his best. Liberal grain feeding should begin a few weeks before the work starts. A three-year-old colt handled in this manner will be able to do considerable work but of course he should be given a day of rest occasionally.

"Caution should be taken not to overwork the colt at first. There is danger of sweency, broken wind, or other serious trouble which probably would put the horse out of business for an entire season."

**WINTER FARM STORAGE PITS**

Much Fruit and Vegetables Lost Because of Too High or Too Low Temperature of Cellar.

The country has had a load of advice about canning and drying food for winter use. Let us not forget the facts about winter farm storage for fruit and vegetables. Many farmers grow good crops of garden vegetables, and then lose them because the storage place is too hot or too cold. We want to learn all we can about pits and dug-outs and cellars for holding garden and orchard food. Here is the picture of a cabbage pit taken from a



Method of Storing Cabbage.

Colorado bulletin. The cabbages are stored by placing them, head down three in a row and two on top, making a tier of five cabbages, the roots extending in the air. The pile may be as long as necessary. Several inches of straw or leaves should then be put over the cabbage and the same amount of earth thrown on them. Cabbage may be kept frozen solid without injury to the head, provided it is thawed out very gradually.—Rural New Yorker.

**TERM "COLIC" IS VAGUE ONE**

Impossible to Give One Remedy to Apply to All Affections Commonly Termed "Colic."

(By H. S. EAKINS, Colorado Agricultural College, Fort Collins, Colo.) The term "colic" is a vague one and is generally meaningless. In the horse there are ten common affections of the intestines, four of the stomach, three of the generative system, four of the urinary organs, three of the rectum and seven miscellaneous conditions making a total of 31 common conditions known as colic. There are also a number of conditions not frequently met which are also known as colic. It is therefore out of the question to suggest a remedy to cover all of these conditions, but each case should be studied, and after a correct diagnosis the proper steps in treatment may be taken.

**GRADE ALL MARKET PRODUCE**

Neatness and Cleanliness Are Recommended in Preparing All Farm Truck for Sale.

(By LEROY CADY, Associate Horticulturist, University Farm, St. Paul, Minn.) Do not fail to grade all produce sold. Even potatoes bring a much better price when well graded than when small and large and all colors are placed in the same package. Neatness and cleanliness pay in marketing as well as other places.

**SILO FACTS**

Consider the silo:  
It means larger profits from the cornfield.  
It means less labor in feeding.  
It means better health for the herd.  
It means a larger milk flow from the dairy cow.  
It means more beef at reduced cost.  
It means less grain in the stock ration and more in the soldier's ration.

**WORK HORSES AND SAVE MEN**

Expert of Missouri College of Agriculture Outlines Plan to Solve Labor Problem.

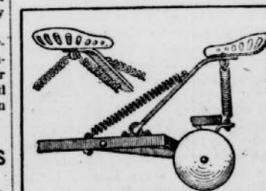
Labor is the limiting factor in crop production this year. Horses are relatively plentiful in comparison. O. R. Johnson of the department of farm management of the Missouri College of Agriculture suggests that farmers lay aside one-man and two-horse tools and use those that require more horses so that more work per man can be done. One man with three horses to a 16-inch breaking plow will turn over three acres or less in a day. The same man with a gang plow consisting of two 12-inch bottoms will average 4 1/2 acres a day and will use one more horse. This means that by increasing the horse stock one-third, one man can increase his efficiency in breaking ground nearly 75 per cent.

Investigations have actually shown that a man on a riding implement will do more work in a day than the same man and the same team with implements that require him to walk. The use of bigger tools and thorough preparation of seed beds will also cut down the time required for cultivation of the corn crop. Cultivation is the operation which limits the amount of corn one man can grow. If a good seedbed is prepared, some time can be saved in cultivating the crop, and consequently more acres can be grown.

**HANDY SAFETY SPRING SEAT**

Contrivance Protects Driver From Severe Jolting and Eliminates Danger of Falling.

For cultivators and certain other farm implements, a shock-absorbing seat has been devised to protect a driver from severe jolting and to eliminate the danger of his being thrown from a machine. The seat post is pivoted to the tongue and held in position by three coil springs. One of these is stretched between the tongue and the upper part of the seat post.



Safety Spring Seat.

while the other two extend diagonally to either side, connecting the seat and the frame. This arrangement prevents undue movement in any direction and supports the seat without its having a rigid connection.—Popular Mechanics.

**PAINT FOR FARM BUILDINGS**

Avoid Cheap Imitations and Use That Made of Linseed Oil and Ground Lead—Color is Important.

Do not use any cheap imitations of paint. The best paint is made of linseed oil and ground lead. Some think that the paint is improved by a small addition of zinc. An unpainted building will not withstand the elements one-tenth so long as a building that is painted whenever it requires painting. Indeed it would seem as though paint would protect a building for a hundred years or more if properly applied at the right time. The color of paint is important. Do not indulge in gay colors.

**GARDENERS SAVE OWN SEEDS**

Little Time Spent in Selecting Best Early Specimens Will Improve Varieties.

Many gardeners save their own seeds, but they are not very careful about selection, using all the plants for the table that are wanted and saving the seed from what happens to be left. As a consequence, in a short time the variety is "run out," the term used when seeds propagate weak, inferior plants. A little time and care in saving the best early specimens will improve the varieties, instead of injuring them.

**GARDENER IS SHORT SIGHTED**

Average Man Does Not Study Fertilizing Problem and Gets Through With Fair Results.

The dairyman tests each cow's milk separately and eliminates the cows proved unprofitable. The farmer studies the demands of each crop on the soil and replaces the fertilizer elements extracted, but the average gardener does not study the problem and usually fertilizes in a general manner and so gets through with fair results for he seldom uses enough to constitute a danger.

**FEED SHEEP IN CORNFIELD**

No Fear of Animals Pulling or Riding Down Corn If Volunteer Grass is Abundant.

There is not usually much liability of sheep pulling or riding down corn when the pasture of weeds and volunteer grasses is abundant. Young sheep are less liable to work on the corn than the old ones.

**DEFINITE ADVANTAGES OF SELF-FEEDER**



FINE BUNCH OF PUREBRED HOGS ON EASTERN FARM.

(From the United States Department of Agriculture.) There is no advantage in skimping the pig when it comes time to fatten him, the United States department of agriculture points out. During the growing period of his life, pastures with little grain were in order, for scale and constitution were the main objects to be obtained. The last few weeks before butchering the idea is to lay on a good covering of fat, to increase the proportion of high-priced lard, and to add tenderness and palatability to the meat. A fat hog sells to much better advantage on the market for these very reasons.

To add this fat rapidly and most economically, we must feed an abundance of grain. The self-feeder is simply a device to keep before the pigs a constant supply of feed, in order that they may eat of such feeds in such quantities as they desire.

Results With Self-Feeder. A brief resume of results obtained by experiments with over 275 hogs, part of them self-fed and the balance hand-fed in the best possible manner, shows:

1. That in comparison with the hand-fed pigs, the self-fed pigs ate grain 19 per cent more rapidly.
2. That they gained weight 23 per cent more rapidly.
3. And last, that they consumed only 92 per cent as much grain in gaining 100 pounds.

This shows three very definite advantages in the use of the self-feeder. Pigs fed in this manner will eat more grain per day than under any other method of feeding. This maximum consumption is not wasteful of grain; in fact it saves grain, for an increase of 19 per cent in the rate of eating caused an increase of 23 per cent in the rate of gaining. The object in feeding is to put on fat as rapidly and with as little grain as possible. A method which will increase the rate of gaining 23 per cent and at the same time decrease by 8 per cent the grain required to produce a unit of gain is certainly worthy of the breeder's consideration.

How to Use Self-Feeder. Fill part of the self-feeder with corn or other carbonaceous feed and the other part with protein supplement; also take care to see that it is kept filled. Induce well-grown hogs to eat when and what they choose, and save grain, save labor, and get your hogs to market at the earliest possible date.

**SELF-FEEDERS USED FOR FATTENING PIGS**

Most Economical Plan to Finish Off Porkers for Market—Much Waste Eliminated.

(By I. W. CARPENTER, Mississippi A. and M. College.) It is to the interest of farmers having hogs to be finished, either for market or butchering this winter, to get them ready in the quickest and most economical way, since the prices of feedstuffs are so high. This can best be done by putting the hogs on a self-feeder with corn in one compartment and either tankage or cottonseed meal in the other. A self-feeder is nothing more than a hopper which allows the feed to come down as needed by the hogs, and at the same time prevents waste, as it is necessary for the feed already down to be eaten away before any more comes down. These feeders can be made on almost any farm out of scrap lumber if necessary.

Self-feeders pay, even though there are only a few hogs to be fed. They have uniformly given better results than hand feeding, both at the experiment station and on farms in Mississippi. Hogs not only make larger daily gains, but the same amount of feed will make much more pork. This evidently can be accounted for by the fact that the hog was allowed to eat at will, consequently never gorged itself, thus enabling it to digest its food more thoroughly.

For the greatest and most economical gains it is essential to have either tankage or cottonseed meal in addition to corn, as this gives the needed balanced ration. It will also harden pork faster than corn alone. As long as there is corn in the self-feeder, there is no danger of the hogs eating enough cottonseed meal to injure them.

In addition to the feeds in the self-feeder the hogs should be given plenty of fresh water and dry quarters to sleep in, as it is impossible for them to do their best in a filthy pen. Too, the best quality of pork will not be secured from hogs in filthy pens.

**BETTER CARE SHOULD BE TAKEN OF HORSES**

Animal Must Be Looked Upon as Chief Source of Power Required on Many Farms.

Better care should be taken of work horses in order to aid in the effort for increased crop production, believes Dr. C. W. McCampbell, associate professor of animal husbandry in the Kansas State Agricultural college. Horses must furnish the greatest part of the power required on many farms.

"The tractor, of course, has its part to play, but statistics show that there are more than 15,000 acres of cultivated land in Kansas for every tractor in use," said Dr. McCampbell. "This should be evidence enough that the horse must be looked to as the chief source of power on the farm. Because of this fact he should be given more consideration and greater care so that his productive power may be as large as possible.

"Feed the horse one-fourth of his ration in the morning, and the remainder at night. Little hay should be fed at noon as it is bulky and a full stomach cuts down efficiency. At the present war prices oats are cheaper than a grain feed than corn, and good bright cottonseed meal is the most economical source of protein and the cheapest supplementary feed to be had. A maximum of about two pounds a day of cottonseed meal is all that should be fed and the horse should become accustomed to it gradually. Begin with one-fourth pound the first day, increasing it a quarter pound each day until the right amount is reached. None but the best quality should be fed and should contain not less than 41 to 43 per cent protein."

A ration of eight pounds of oats, two pounds of cottonseed meal, fifteen pounds of straw, and one pound of molasses a day for each 1,000 pounds live weight is given by Doctor McCampbell as one of the most economical to feed under the present conditions and high prices. The straw should be fed in the morning and evening and the molasses sprayed on it. This ration has proved successful and has given good results.

Another point often neglected with the horse is that of watering. Water immediately after a meal washes the feed from the stomach and thus decreases the value received from it by the horse. The farmer should take a barrel of water to the field with him and give his horses a bucketful at least once each half day.

Cut the grain ration down to one-half on Sundays and any other time when the horse is not working. Full feeding while not at work causes disorders and the disease known as azoturia or "Monday morning sickness." Feeding less while not at work is an economical practice and much better for the horse.

**SANITARY HOG HOUSE IS MOST IMPORTANT**

Clean Surroundings Tend Toward General Thrift Among Hogs to Prevent Disease.

Sanitary conditions tend towards general thrift among hogs. It pays in dollars and cents to keep the surroundings clean, points out Ray Gatewood, instructor in animal husbandry in the Kansas State Agricultural college.

"Prevention is always the cheapest and easiest manner in which to deal with disease," said Mr. Gatewood. "The houses should be kept clean, dry, and free from dust. In case the house becomes foul it should be cleaned, disinfected and a small amount of lime scattered about the floor. It is also good practice to whitewash the walls frequently.

"The lots should be kept clean. Cobs should be burned and the ashes and charcoal given the hogs. The pens should be kept free from manure and, when possible, it is a good practice to move the hogs to new soil. This helps to keep them in a more healthful condition.

"Keep a close watch for the appearance of disease. Find the trouble and act accordingly. Do not put it off too long for a great loss will be incurred by waiting. Unthrifty hogs and profit do not go hand in hand."

**Help Out the Meat Supply.**

Keep chickens on city lots. They utilize kitchen waste, require only light labor such as children, old folks, and convalescents can supply, and make quick and economic returns in meat and eggs.

**Blanching Celery.**

Celery may be blanched by placing boards, paper or dirt about it. A drain tile will do. Soil is likely to cause decay in the early varieties if put on during hot weather.

**Save All Feed.**

Save everything in the garden and orchard. If there is no sale for produce, can all that is suitable, and feed the remainder to the stock.

Hog is Pork Factory. A hog is simply a pork factory, and if run on good business lines, he will do all that is asked of him.

**Breed Suitable Mares.**

Breed all suitable mares to the best stallion available.

**NURSING SERVICE TO BE VERY BEST**

Sick and Wounded Soldiers to Get as Good Care as in Any Hospital.

**RED CROSS MOST EFFICIENT**

Best Surgeons and Best Nurses in United States Sent With Army to France—Only Graduate Nurses May Serve.

Washington.—The greatest advance made by the American Red Cross in the science of nursing after an army's welfare is in its nursing service. The United States is the only nation which entered the present war with a fully enrolled and organized service of trained nurses. The most rigid rule of the Red Cross is that none but graduate nurses shall be permitted to serve as nurses in American war hospitals.

For the first time in history the United States has sent to the front with its forces a modern hospital equipment. The sick and wounded will receive as good care as they could get in any hospital in the United States. Fine buildings do not make a fine hospital—it is the surgical and nursing attention which the patient receives, and this attention can be given in a tent as well as in a million-dollar hospital building. The American Red Cross is sending with the army the best surgeons and the best nurses in the United States—the best in the world.

**Only Trained Nurses Serve.**

When the new Red Cross was organized in 1905 the principle was adopted at once that not only trained nurses but nurses of character and experience should be enrolled in the nursing service. Also it was recognized that unless such a service were gradually built up in time of peace, unsatisfactory nurses would be bound to get into it in time of war. And so, although it seemed then that our country could never again be drawn into war, the work of organizing a war-nursing service was started, with the result that today the Red Cross has enrolled nearly 12,000 nurses—the pick of the trained nurses of the United States. It is the one branch in which the United States is thoroughly prepared for war—better prepared, in fact, than any nation which ever went to war.

These are the qualifications of a Red Cross nurse: She must have had at least a two years' course of training in a general hospital with a daily average of at least 50 patients; she must be registered in states where registration is required; she must be at least twenty-five and not over forty years of age; she must be approved in a personal interview with a member of the local Red Cross committee; she must show her intelligence by writing an essay on some subject of nursing; she must be endorsed by the executive committee of an approved nurses' organization, by the superintendent of the training school from which she graduated, and by two members of the local committee on Red Cross nursing

**LETTER BY LUTHER FOUND**

Written by Great Reformer on Day He Nailed Nails to Church Door.

Stockholm.—An important addition to Lutherania has been made by the discovery in the royal archives of a letter written by Martin Luther, the reformer, on the day on which he nailed his immortal theses on the church door in Wittenberg. The letter is of particular interest from the fact that it was directed to Archbishop Albrecht of Mayence, who was Luther's immediate superior. It contains, like the famous theses, a strong protest against trafficking in spiritual indulgences.

The letter appears first to have been found in a German city by a Swedish official, who brought it to Sweden some time in the seventeenth century. A very old copy exists in Germany, but the very existence of the original appears to have been forgotten and its absence long ago caused

**SAWMILLS TO BE KEPT BUSY**

Camp Hospitals and Reconstruction Hospitals Will Use About 300,000,000 Feet—More Millions for Camps in France.

Wilmington, N. C.—With government construction of 19 "reconstruction" hospitals in all parts of the United States, and 32 local hospitals at each of the army cantonments and National Guard camps, nine officers' training camps in this part of the country, and as many more aviation camps down on the boards for immediate construction, it is given out in unmistakable language that the sawmills of this country will have all they can do to take care of government contracts during the balance of the year and for a good portion of the time during the first half of next year.

**Makes Big Lumber Demand.**

Reviewing the situation at short range, the Southern Lumber Journal of this city says: "The announcement from Washington of the decision of the war department to build at once 32 hospitals, one at each of the army cantonments and National Guard camps, spells many additional lumber contracts, running into the millions of feet, that will have to come from the South, as the great majority of these training camps are located in the South and southern mills are therefore the logical sources of

**NEED MILLIONS OF FEET OF LUMBER**

Military Camps in Course of Construction Will Use Up Vast Quantities.

**supply for this material, in addition to all this comes the further announcement that the government has decided upon building immediately 19 "reconstruction" hospitals in as many different cities, to wit: Boston, New York, Philadelphia, Baltimore, Washington, Buffalo, Cincinnati, Chicago, St. Paul, Seattle, San Francisco, Los Angeles, Denver, Kansas City, St. Louis, Memphis, Richmond, Va., Atlanta and New Orleans.**

"By some it is contended that it will require 4,000,000 feet of lumber for each of the training camp hospitals, while another report fixes the amount at 7,500,000 feet. For the "reconstruction" hospitals 6,000,000 feet of lumber will be required in each case and possibly more.

**Lumber for Camps in France.**

"On this basis it is easy to see that the lumber companies will be called on for at least 150,000,000 feet of lumber for the training camp hospitals and 120,000,000 feet for the "reconstruction" hospitals, or a grand total of 270,000,000 feet for these combined purposes. Should these orders overrun as much as the training camp orders did, the amount of lumber and timbers for these hospitals will be nearer 300,000,000 feet less. In the meantime lumber for the American troop camps in France will call for many more millions of feet of lumber in the near future.

"There are besides all this work of future construction several officers' training camps yet to be built in different parts of the country, for which the contracts will soon be let, aviation camps of different kinds that the government will have to build, the exact type of which has not as yet been fully agreed upon, all of which are under consideration by the proper heads, however."

**Method of Storing Cabbage.**

The German copy to be considered a forgery. A copy of the Wittenberg theses, signed by Luther's own hand, was found with the letter and probably accompanied it originally.

The psalter was a stringed musical instrument to accompany the voice in the prayer book version of the Psalms the Hebrew word is given as "lute." This instrument resembled the guitar, but was larger with a convex back, resembling a gourd.