

ROAD RESEARCH INVESTIGATIONS  
OF DEPARTMENT OF AGRICULTURE

A Macadam Road in Virginia.

(Prepared by the United States Department of Agriculture.)

The road research investigations of the bureau of public roads of the United States Department of Agriculture at the Arlington experiment station are now well under way.

A new portable road-impact machine has been received and is giving most satisfactory results in testing the series of road slabs placed earlier in the season. This series consists of 120 concrete slabs ranging from four to ten inches in thickness and from lean to rich mixtures. Some of the slabs are reinforced and others have a two-inch topsoil top. There are at least two slabs of each type of construction, one on a dry subgrade and another surrounded by ditches, which are kept flooded.

## What the Machine Does.

Briefly the new machine consists of a typical truck wheel with spring and variable load above it, which is raised and allowed to fall on the slab from any desired height by means of an electrically-driven ram. Recording devices measure the deceleration or rate at which the wheel is brought to rest after coming in contact with the slab, the deflection of the slab at a number of points on a line across the slab, settlement of the slab into the subgrade, permanent set of the slab and the maximum instantaneous fiber stress at the point where the blow is struck.

On the first slab tested the various recording devices checked each other with surprising closeness. For a series of blows varying slightly in intensity, curves for the fiber stress, deceleration and deflection showed corresponding variations and gave assurance as to the accuracy of the new methods of measuring. Some interesting information as to the variation of the support offered the slab by the subgrade under a series of varying blows is being secured.

## New Light on Impact.

With the information and experience gained from last year's experiments in impact testing possible refinements in the new tests, it is thought that an

analysis of the data when all of the slabs are tested to destruction will throw a great deal of new light on truck impact on rigid pavements.

The circular track for the testing of asphaltic concrete to determine the cause of wearing is now about ready for the automatically controlled truck traffic. Twenty-seven sections of asphaltic concrete of various mixtures have been laid on a cement base, the coarse aggregate of the bituminous mixtures ranging from 40 to 70 per cent, with variations in the grading of the finer material. The amount of asphalt varies from 5.0 to 7.0 per cent and has a penetration value of from 45 to 85.

In line with the bureau's policy of cheapening the cost of road construction by the use of local material whenever possible, a circular track for a wear test on concrete has been completed. Sixty-one sections of concrete have been placed. The aggregates used vary in kind and quality, ranging from hard to soft, and there is variation in the amount of mixing water and time of mixing. In order to eliminate the effect of differences in the subgrade the sections are of reinforced T-beam construction, the slab being 4 feet wide, 10 inches deep, with the T-beam in the middle of the slab. The traffic test on these sections will begin soon and the load on the pavement will be made to represent the rubber-tired rear wheel of a 3½ or 5-ton truck moving at a speed of 15 to 20 miles per hour. Specimens of concrete for beam strength and compression tests have been made from each mix and are being cured under the same conditions as the corresponding sections.

Change in Specifications.

Results of this wear test, representing modern traffic conditions, together with the beam strength and compression tests which will be made for this investigation and on a similar set made in connection with the impact investigation and which will serve to tie the two together, will furnish a sound basis for the consideration of suggested changes in specifications for concrete road aggregates.

TIMBER SALE SHOULD  
BE ARRANGED AHEADQuick Action Needed to Prevent  
Deterioration.

Logs and Other Rough Material Should Not Be Allowed to Remain Long on Ground After Cutting—Ends Should Be Piled.

(Prepared by the United States Department of Agriculture.)

To prevent the deterioration of felled timber farmers and owners of woodlands should allow as little delay as possible between the cutting of the tree and its manufacture into rough products, advises the forest service of the United States Department of Agriculture. This means that sales should be arranged for prior to beginning cutting. It is often necessary or desirable, however, to put off the delivery of logs, bolts, or poles until some months after cutting, either to allow them to season or because a good sale cannot be arranged at once. Much of the weight of freshly-cut timber is due to the water it contains, and a few months seasoning will often reduce this to a marked degree, the amount of reduction depending, of course, on the climate, the weather, and the exposure to sun and air. At the same time, unless preventive measures are taken the products are sure to deteriorate through decay, insect attack, checking, or some other agency.

Logs and other round timber should never be allowed to remain long in the woods after cutting. As soon as possible they should be taken to a dry, well-aired, and unshaded area and placed on skids well off the ground; otherwise the opposite extreme should be attempted—keeping the timber in water. Within a few days after the trees are felled the bark should be removed from poles, posts, and other material which will not be injured by checking or season cracks. The ends of the logs should be coated with paint, creosote, or tar. This will aid in preventing decay and keep the logs from checking badly.

Poles should be peeled and hauled or dragged to a place free from debris or rank vegetation, and freely exposed to the sun and wind. When ties are cut, it is usually cheapest and most desirable to haul them, at any

convenient time without regard to seasoning, directly to the railway, and pile them according to the specifications furnished by the tie buyer.

Corroded should be stacked in loose piles in a sunny, well-aired, and well-drained place free from rank vegetation. Two sticks on the ground running the length of the pile will keep it from contact with the soil and thus prevent decay in the lower layers.

Additional information on this subject is contained in Farmers' Bulletin 1210, Measuring and Marketing Farm Timber, copies of which may be had free upon application to the division of publications, United States Department of Agriculture.

## Why Dairymen Co-Operate

1. To assemble their products most economically at country points.
2. To establish and maintain plants for handling their products at country points.
3. To become a factor and wield an influence in the marketing of their products.
4. To undertake actual commercial distribution of their products.
5. To obtain commercial efficiency in the marketing of their products.
6. To stabilize the supply in accordance with the market demand.
7. To secure for producers the services of marketing experts.
8. To reduce the cost of supplies required in marketing.
9. To eliminate speculation and waste.
10. To secure direct and orderly distribution.

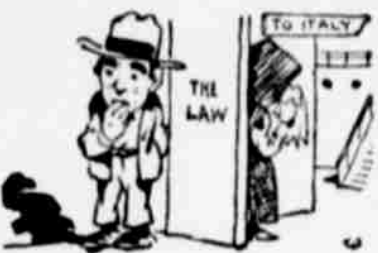
## ANIMAL FEEDS FOR POULTRY

Pullets Fed Skim Milk and Meat Scrap Make Most Profitable Record at Purdue.

Animal feeds have a decided value in the ration of laying hens and pullets. Experiments made by Purdue university showed an average egg record of 180.2 eggs in a year from a pen of pullets fed skim milk; 135.9 eggs from those fed meat scrap; and 61.2 eggs from those that received no animal feed of any kind.

HAPPENINGS  
in the  
BIG CITIES

## She Loves, But Alas, She Cannot Read



NEW YORK.—For ten days, until they found and dragged him away, Francesco Tata, whose home is in Detroit, sat on a bench in a big hall at Ellis Island looking into the black eyes of comely Antonia Martino, who loved him when he was a boy in Naples and who, as his proxy wife, arrived on board the steamship Guglielmo Perce to join him. Now the chances are Francesco never will see her again.

When Antonia arrived she produced a certificate from the Italian government that she intended to join her husband.

Francesco went to Ellis Island to claim her, but since they had been married only by proxy and not by the

good old method, he was threatened with arrest for perjury.

Francesco was frightened at that, and disappeared. He thought he had been arrested for perjury, and for several hours he milled about the halls. When night came and the guards hustled all the men into one hall, Francesco went along, too. The immigration officials forgot all about him.

The next day Francesco found Antonia. They picked out a bench and there they sat and talked. And every night she was herded into the women's hall and he into the men's.

In the meantime the police of Detroit, assisted by Italian organizations and consuls, began a search for Francesco. Finally they found him sitting on the bench with Antonia. They told him to leave.

At that the agents believed they could let Antonia enter the United States. She is proficient in embroidery work, she does housework well, and she is said to have many other useful accomplishments.

But it was discovered that she could not read 40 words of any language. So Antonia may be sent back to Naples.

## Emmett Says the Dalton Gang Was Loco

CHICAGO.—Thirty years ago five men rode into Coffeyville, Kan. It was just a coincidence that a party of United States marshals, looking for the dreaded Dalton gang, had just ridden in. The five dismounted and proceeded to rob—not one bank, but two! A battle ensued and the famous Dalton gang, Bob and Gratton Dalton and Powers and Broadwell, were exterminated—all but Emmett. He lived.

A large man, with a drooping hat, draped himself over a hotel desk in Chicago and scrawled on the register "Emmett Dalton, Los Angeles." Then he sank into a lounge chair and pulled the large hat over his face.

"Ah'm a sad man," he drawled. "Ah'm on mah way to see President Harding and Ah think maybe Ah'll tell him a whole lot."

"Dalton gang?" he shouted. "Huh? Say, those boys were loco. There wasn't no sense in robbing banks and trains and things with a whole lot of sixguns when any hombre can start himself a restaurant. Why, say there's a coyote down the avenue here that just got finished charging me 20 cents



for a hunk of milk. Every time I bump up this ole hat it costs me a dollar."

Mr. Dalton is president of a picture corporation and he dreams the making of western movies. Since his release from prison in 1907, when he was pardoned after serving 14½ years of a life sentence, he has "come straight." Much of his time is devoted to lecturing on the folly of a criminal career. On the trip with Mr. Dalton is his wife, Mrs. Julia Dalton. She was his childhood sweetheart of Tulsa, Okla., and waited through all the years of his imprisonment to marry him when he was released.

## Listen With All Your Cauliflower Ears



CHARLOTTE, MICH.—If there is some enterprising young prize fighter anxious to make a little money on the side in the crowd, let him step forward.

Included in the usual assortment of mail addressed to the sporting editor of her favorite daily paper the other morning was a touching little appeal from a Charlotte woman who is seeking a "reliable prize fighter" to clear up a bit of domestic difficulty. Her letter follows, in part:

"Dear Sir: I am writing you to find if there is not some way in which I

can obtain the services of a reliable prize fighter for a little outside work."

"My husband, who up until the advent of prohibition, was about as model a spouse as can be imagined, has lately come under the influence of a man whose intentions, I fear, are not the best. This man, I have reason to believe, is a bootlegger, or even worse, and he insists on taking my husband away from home."

"Now, my husband is neither strong nor strong willed and while I think he would like to be rid of this fellow, he is afraid to break away. I believe that some muscular gentleman of the pugilistic profession could effect a separation of the two. I would be glad to pay the usual fee attached to such proceedings. Yours, very truly, MRS. S."

"P. S.—I will also bail the man out of jail in case he collides with the law, which does not protect me or mine."

P.S. It's a snap. You can write your own ticket and swear its "the usual fee."

## An American Woman Without a Country

DETROIT, MICH.—Mrs. Virginia L. Roth, 130 West Grand boulevard, has made the startling discovery that she is a woman without a country. By birth she is an American. By her marriage to Dr. Edward T. Roth she became a German subject. Yet neither country will claim her as a citizen and both refuse to grant her a passport.

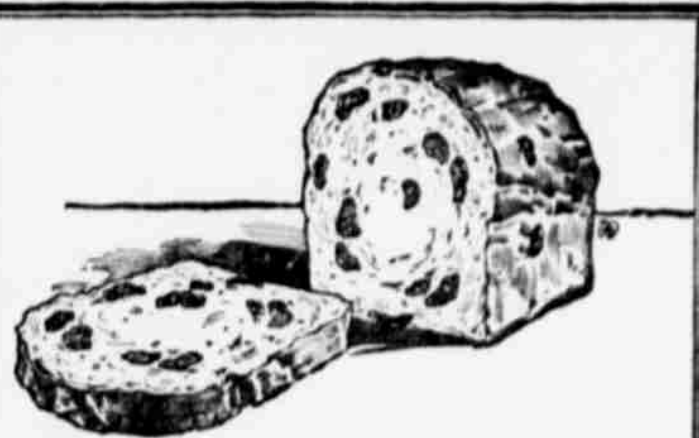
As a result Mrs. Roth filed a petition for her first naturalization papers in order to become a citizen of the country in which she was born.

Recently Doctor Roth, a German by birth, received his second papers, making him an American citizen. The couple then applied for passports as Americans to Germany, for which they had planned to sail on October 4. It was then Mrs. Roth learned of her plight.



A native of Alabama, Mrs. Roth was an American until her marriage in 1920 to Doctor Roth, who was at the time a German subject. Under the old law Mrs. Roth then lost her American citizenship and became a German. Although her husband has become an American citizen, this does not alter the citizenship of Mrs. Roth. She continues to be what she was before her husband changed his nationality—a German citizen even though only by marriage.

Under the German law, however, as interpreted by Fritz Hailer, German consul, Mrs. Roth is an American citizen because her husband became an American citizen. Accordingly she could not be granted a German passport.



## Bakers Bake It For You

—no need to bake at home

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You may be offered other brands that you know less well than Sun-Maid's, but the kind you want is the kind you know is good. Insist, therefore, on Sun-Maid brand. They cost no more than ordinary raisins.

Mail coupon for free book of tested "Sun-Maid Recipes."

SUN-MAID RAISINS  
The Supreme Bread Raisin

Your retailer should sell you Sun-Maid Raisins for not more than the following prices:

Seeded (in 1½ lb. blue pkg.)—20¢  
Seedless (in 1½ lb. red pkg.)—18¢  
Seeded and Seedless (1½ lb.)—16¢



Blue Package

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