

acter on soils of a different texture, such as changing from a sandy to a clay or lime soil. It also mentions the benefit derived from a change of seed from one locality to another, notably from North to South.

#### GOOD ROADS — BROAD VERSUS NARROW TIRES.

Experiments conducted at the Missouri Station for two years on macadam, gravel and dirt roads, in all conditions, and on meadows, pastures and plowed fields, both wet and dry, showed that, as a general rule, the draft was considerably less when tires 6 inches in width were used than when the tests were made with tires of standard width, viz., 1 1/2 inches.

It was found that on a macadam road a load of 2,518 lbs. could have been hauled on the broad tires with the same draft that a load of 2,000 lbs. required on the narrow tires. On a gravel road except when it was wet and sloppy on top the results were about the same. The same favorable results were found on a dirt road when dry, hard, and free from ruts. When, however, the surface was covered with two or three inches of very dry, loose dust, the draft of the broad tires was greater than that of the narrow tires, as it was, on a clay road, muddy and sticky on top and firm underneath. When tested on a clay road with mud deep and drying on top, or dry on top and spongy underneath, the difference in favor of the broad tires amounted to from 52 to 61 per cent., or, in other words, a load of 3,200 lbs. could have been hauled on the broad tires with the same draft required to draw 2,000 lbs. on the narrow tires. As the road dried and became firmer, the difference in favor of the broad tires diminished until it reached about 25 or 30 per cent. On the other hand, as the mud became soft and deeper, the difference diminished until the condition arrived when mud adhered to both set of wheels when it was found that the narrow tires pulled materially lighter.

On a clay road with a dry surface, with deep ruts cut by the narrow tires in the ordinary use of the road, the first run of the broad tires over the ruts showed a materially increased draft as compared with that of the narrow tires. The second run of the broad tires, however, in the same track completely reversed this. Where the ruts were 8 inches deep, with rigid walls, three runs of the broad tires over the ruts in its own track eliminated any disadvantage against them in favor of narrow tires.

A large number of tests on meadows, pastures and plowed ground, in every condition, proved without exception that there was a difference in draft in favor of broad tires of from 17 to 120 per cent.

Six inches is recommended as the best width of tire for a combination farm and road wagon. Both the axles should be the same length, so that the front and hind wheels will run in the same track.

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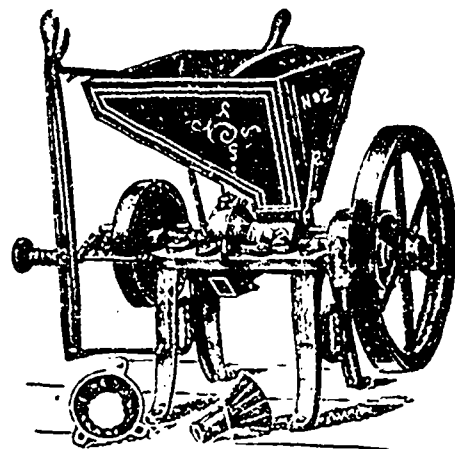
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