WINTER WHEAT.

scults of Experiments Conducted at the Ontario Agricultural College, 1900

-Work of Thirteen Years. Upwards of three hundred plots Were used for the winter wheat experiments conducted at the Ontario Agricultural College during the past year. The greater number of these tests have been carried on for several years in succession and the average results are of greater value than those obtained from tests of only one season. The following summary results of some of the experiments are presented with the hope that they may prove of service to the people of Ontario who are interested in the production of winter wheat.

One hundred and fifty-nine varieties of winter wheat have been grown at the College within the past thirteen years. These include the Canadian varieties and also those imported from Germany, Russia, France, England, Scotland, Australia and the United States. Ninetyfour kinds have been tested for at least five years and only the best kinds have been retained. The thirtythree most worthy varieties in the five years' tests were all grown again this year. The five varieties which gave the highest and the three

Strength Lbs. Bush | tires: of per per acre Straw, Bush. (60 108.

1. Dawson's gold chaff 2. Egyptian amber Weak 61.3 3. Imperial amber Weak 60.6 4. Early Genesee Glant

(white Strong 60.5 5. Reliable (red)Weak 61.4 B1. Trendwell (white) .. Strong 60.7 82. Turkey red Weak 61.9 83. Velvet chaff (red) .. Strong 62.5 The grain of each of these varie-

ties was recently judged for milling qualities by representatives from the Jas. Goldie Milling Co., Guelph, with the following results: Dawson's Golden Chaff, good; Egyptian Amber, extra good; Imperial Amber, extra good; Turkey Red, good; and Velvet Chaff, poor. Some millers speak against and some in favor of the Dawson's Golden Chaff as a milling wheat. The grain of the Turkey Red is very hard and evidently is well liked by the millers of some of the Western States.

For of each of the four years different selections of seed have been made from each of two varieties of winter wheat and have been sown on separate plots. The average results in yield of grain per acre of the eight tests thus made are as follows:

Large plump seed, 42.1 bushels; small plump seed, 35.0 bushels; shrunken seed, 35.5 bushels, and broken seed, 7.3 bushels. The grain produced from the large plump seed also produced a heavier weight per measured bushel than that produced from any other selection.

The average of several years' reshow that the grain which was sown on or before the 9th of September gave a considerably larger yield of mitted to the two-inch space theater both straw and grain than that which was sown after that date. The very best yields were obtained from the wheat which was sown in the last week of August. · An experiment with different pre-

parations of winter wheat land has been conducted in duplicate in each of four years. The average results in bushels of grain per acre of the eight tests are as follows: Twenty tons of farm-yard manure per acre on bare summer fallow, 40.9; crop of peas plowed under, 36.1; bare summer fallow, 33.8; crop of buckwheat plowed under, 29.6. These results show that peas give much better results than buckwheat when used as a green manure on land to be used for winter wheat.

In an experiment conducted during the past year in growing wheat on grass sod and on clover sod it was found that the former gave 28.2 per cent. less in yield of grain per acre than the latter. Ten plots were used for the experiment. The crop of both grass and clover was removed from the land in 1899 after which the land was plowed and the wheat was sown during the first week of September. The experiment

has been conducted in duplicate by sowing winter wheat broadcast and with a drill. The results from sowing the same quantities of seed by the two methods are very similar, the land was in a good state of cultivation when the seeding took place in every case.

In order to find out the influence of cutting wheat at different stages of maturity upon the quality of the grain for seed purposes, samples were taken from the crop cut on different dates and these samples were carefully sown upon separate plots. In the average results of these tests made with two varieties in each of five years, it was found that the heaviest weight of grain per measof grain and straw per acre, were Farmer. produced from seed taken from the crop which had been allowed to become very ripe before it was cut. Co-Operative Experiments Throughout

Ontario.

Five varieties of winter wheat were sent out for co-operative experiments in the autumn of 1899. These were divided into two sets, with three varieties in each set, the Dawson's Golden Chaff being used in both sets as a basis by which the results of all the varieties could compared with one another. have received one hundred and fourwinter wheat experiments for 1900.

The following table gives the comparative yield of straw and grain per acre of the varieties of winter wheat tested in 1900 on 114 Ontario farms:

Tons of Bush.of grain Varieties. Straw (bush. 60 lbs.) Dawson's Golden chaff .. 1.8 Gold Coin18 Early Genesee Glant -- 17

Marly red Clawson16 Diamond Grit ... verser.1.8 the popularity of the varieties

with the experimenters is represented by the following figure: Dawson's Golden Chaff, 100; Early 60 see Giant, 84; Gold Coin, 73; Diamond Grit, 71, Early Red Clawson, 69. The Diamond Grit variety was sent out owing to its quality rather than its yield of grain. The Early Red Clawson, which is a soft red wheat made comparatively poor results in the co-operative experiments over Ontario. The Dawson's Golden Chaff gave a yield of upwards of 40 bushels of grain per acre in twenty-

one of the experiments. The one hundred and fourteen reports of successfully conducted experiments came from twenty-nine of the counties of Ontario. The comties which sent the largest number of good reports were Grey, Huron and Middlesex in Western Ontario; York, Muskoka and Northumberland in Central Ontario, and Hastings, Frontenac and Lanark in Eastern Ontario.

Many of the experimenters deserve much credit for the care they have taken in conducting the co-operative tests with winter wheat during the past year.

THE WIDTH OF TIRES.

Regulated by Law in All the Good Road Countries of Europe.

Prof. H. F. King, physicist of the varieties which gave the lowest av- Wisconsin agricultural station, in erage yields in the six years' tests of the bulletin prepared by him on the the thirty-three varieties are as fol- construction and maintenance of country roads, says concerning wide

> When we come to have a system of good roads and the means for maintaining them it will be necessary to have ordinances regulating the width of tire and diameter of wheel which may be used on the roads when carrying the specified loads. In Europe, where better roads are found and a better system for maintenance exists, width of tire to be used with given loads. In Bavaria the regulations are as follows:

4.133 inch tires.

6.180 inch tires. 2.596 inch tires.

lorses, 6.180 inch tires.

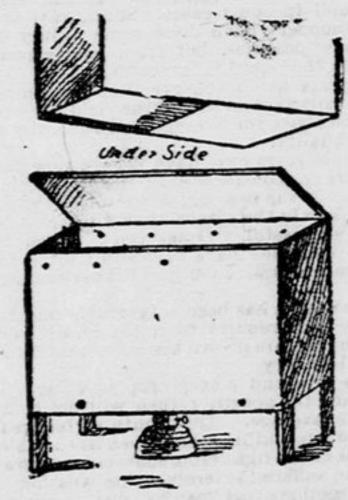
Carts with more than four and thod of sighting with poles. wagons with more than eight horses are not allowed to use the roads without a special permit from the authorities.

Other countries of the old world have found similar ordinances necessary and it is clearly rational and just that such matters should be regulated, for otherwise one man may easily put in jeopardy the interests of a whole community.

SIMPLE FRUIT DRIER.

Homemade Device That Does as Good Work as Some of Those Patented.

Fruit can be dried in the house with such a homemade device as is shown in the cut. The box has a sults from seeding at different dates | bottom of sheet iron, with a wooden bottom two inches above this perforated with holes. Air is ad-



HOME FRUIT DRIER.

holes in the sides of the box. one-burner oil stove beneath causes a constant current of warm air to pass up through the box (in which the fruit can be placed on tiers of slatted shelves) and out at will likely be repeated for several the top through the small openings in the sides. The whole of the bot-In each of six years an experiment tom of the box is covered by the sheet iron .- N. Y. Tribune.

Timely Dairy Notes.

Dairying robs the soil less the yields per acre being practically of butter takes a half dollar's worth Review. equal. It should be understood that of plant food from the farm, but it sells at from \$400 to \$600.

It is not very long since butter was habitually "traded out" at the store. Much of it can only be disposed of in this way still, but good butter is always a cash article.

It is the gentle bull that needs watching. They are treacherous animals, and become very cross as they grow older. Bulls should always be "ringed" in order to have them under control. If given a y for exercise, the fence should be could and high, in order to shut out surroundured bushel, and the largest yield ing objects. - Barnum's Midland

Protecting Stock From Flies.

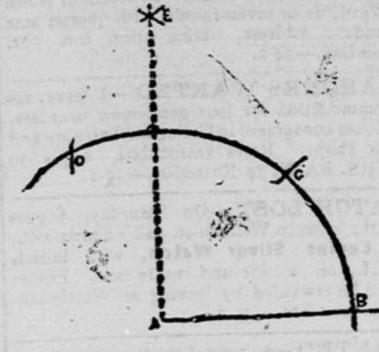
It is rather difficult to protect horses and cattle against the attacks of flies when outdoors or in pasture. The farmers in Holland endeavor to protect their cattle while in pasture by covering them with thin muslin blankets. Washing the animals repeatedly with a decoction of walnut leaves has been recommended, but having no experience I cannot say whether the protection is a complete one or not. I am inclined to doubt it. The small flies which usually atteen reports of successfully conducted take the eyes are probably best wardlittle extract of gentiana .- Farm and

> Value of Birds. A French scientist has tated that without birds to ea weed seeds the earth w years become uninhabitable for man. When it is considered that almost the entire food of the majority of birds consists of seed of some sort and insects or worms, the statement is not improbable.

RECTANGULAR FIELDS.

They Are Less Wasteful Than Other Shapes and Are Not Much More Diffleult to Make. Every farmer is willing to agree

that rectangular fields are less wasteful of land than fields of other shapes, and that straight lanes and roads running at right angles to or parallel with the sides of these fields are not only more economical of space and time, but are neater than irregular roads. It is not every man, however, that has a satisfactory way of making his roads and fields take these forms. Of course, where ravines and other formations of the surface occur roads and fences must conform to the surface more or less; but for ordinary places the fol-



PLAN OF RECTANGULAR FIELD. lowing method, that the writer has used recently with satisfaction, may be employed.

Decide upon a straight base-line, and work from that. Start at one of the corners, A (see illustration), and measure back on the line any convenient distance, B, say 20 feet, using a piece of rope that will not stretch. Hold the rope tight, and there are ordinances which fix the draw the arc BCD. Now start at B, and keeping the rope tight, mark the point C. From C mark off D, and !! also draw a little arc passing Two-wheel carts with two horses, through E, which will be definitely located when the stationary end of Two-wheel carts with four horses, the line is placed at D and the distance, 20 feet, marked off. The line Four-wheel carts with two horses, drawn from A to E will be perpenpendicular to the base-line, and all Four-wheel carts with five to eight | that will now be necessary will be to extend this line by the usual me-

The Cultivation of the Orchard.

The ideal orchard is kept free from all vegetation, and the surface soil cultivated frequent enough to keep it in a loose, porous condition. Weeds are not allowed to grow, and the ground is kept shaded and cool by a mulch, either of the soil itself or the annual deposit of leaves left to decay. The tree, after it has growa to any size, will furnish shade. Some farmers utilize their orchards by planting root crops between the trees. The cultivation of these will keep down the weeds and keep the ground loose at the surface.

Where the trees are large and close together some crop that will need but little tending should be put in. Cowpeas will be of benefit to the soil, and will fornish an abundance of exercise and food for the fowls if allowed to r n in the orchard. Beside this the clarkens will destroy many insects that pro injurious to the trees and fruit. There is no better crop than clover, especially the crimson variety. The roots keep the soil in good condition and add nitrogen to it. The heavy annual deposit of leaves and stems act as a mulch, while the heavy growth of the plants shade the ground and keep it cool. As to the labor involved, this crop will need no attention except plowing up and reseeding every third or fourth year.

Scale Insects on Grasses.

We generally think of scale insects as damaging trees and tree fruits. Most of us have never felt that we need concern ourselves about these inects on grasses. It is a fact, however, that in some parts of the country scale insects abound in the grasses. Whether or not they are to become a pest remains to be demonstrated. The Kansas Agricultural College has been investigating them and has just published a bulletin describing a considerable number of species. Nothing is said as to their harmfulness or necessity for measures of destruction. These points must yet be learned. The grass scales attach themselves to the plants near the roots or on the crowns. The greatest danger from them seems to than be in relation to grasses on ranges any other branch of farming, A ton and permanent pastures .- Farmers'

How to Fight Brown Lice.

Many plum and locust trees are infested with a brown louse. They work chiefly on the underside of the leaves and on twigs. The lice should be carefully sprayed with kerosene emulsion made as follows: Dissolve 11/2 pounds of soap in a gallon of hot rain water and when cool add two gallons of coal oil and agitate vigorously until a creamy mass is formed; use one part of the emulsion to nine | parts of water for all sucking insects. Apply in a fine, even spray so as to wet the insects thoroughly. second application may be necessary.

Headless Colonial Fowls.

Poultry have need of their heads and feet even when they are dead, a fact our colonial cousins do not seem to be aware of. A large consignment of fowls and ducks have just arrived in London from New Zealand, all destitute of these important adjuncts, a deficiency which renders them unsuitable for show in the forefront of the shops. This is the more to be deplored, as home supplies are plentiful, and irreproachable as is the quality of the colonial birds, they will find it difficult in their maimed condition to compete with the unsullied home product.

Some Pig-Pen Hints.

Pigs of much difference in age or size should not run together, as the stronger will drive the younger from

Keep the young pigs growing, feed them liberally in the side pen. In this way they will gradually learn self-dependence and not draw so heavily on the dam,

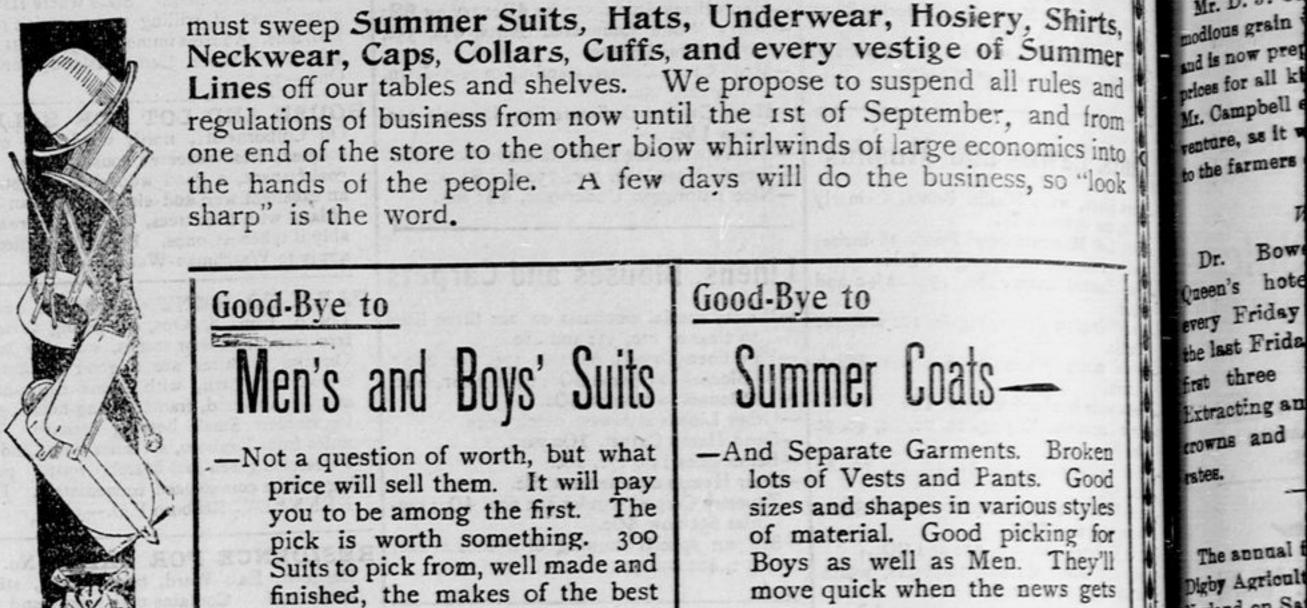
Good-Byes and Let-Goes

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Watch him carefully,-on the first indication of Diarrhos give Dr. Fowler's Extract of Wild Strawberry. Hot weather con



hard on babies, espe As you love your child, mother, 19 wish to save his life, give him Dr. Fowler

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finish guaranteed. J. J. RICH,

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