

Farm and Home.

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All Around the Farm.

RAPE AS A FORAGE CROP.

THROUGHOUT a large portion of the United States farmers and stock raisers could advantageously grow more of succulent forage crops for feeding stock during summer and autumn, when the supply of grasses and clovers is often limited. Such crops may usually be grown on land that has already produced an early maturing crop of some sort, such as oats, rye or winter wheat. One of the best of these succulent crops is rape. Much like the Swedish turnip or rutabaga in appearance, the root of rape is more like that of cabbage. The leaves are large and smooth and under ordinary conditions the plant reaches a height of from 1½ to 4 ft. and the strong-growing roots penetrate the soil to a considerable depth.

Rape is best adapted to rather cool, moist climates, such as prevail in portions of Canada and the northern states. It can be successfully grown as a forage crop in many of the warmer and drier sections. In favorable seasons or with a small amount of irrigation, excellent crops of rape are grown in Wyo., Mont., the Dakotas and other states in the so-called semi-arid region.

For its best development rape requires a rich, moist, loamy soil, and will usually do well on any but light sandy soils and stiff clays, such soils being usually deficient in vegetable matter. In general a soil that will produce good crops of turnip, cabbage, wheat and corn will be suitable for rape. Rape is a cross feeder and draws quite heavily on the nitrogen as well as the mineral constituents of the soil and should be used in rotation with crops that feed largely on other elements of plant food. At the N. H. exper. sta., the Dwarf Victoria yielded 50 tons green fodder per acre, and yields of 25 to 30 tons are reported from S. D. Un-

der average conditions a yield of from 10 to 20 tons or more may be expected.

The land should be well pulverized by harrowing before the seed is sown. When the land needs fertilizing, barnyard manure may be applied before plowing in the autumn, or if the land is plowed twice, the manure may be spread on during the winter or early spring before the last plowing. Commercial fertilizers may be applied by harrowing in at the time that the land is being pulverized previous to seeding. A deep, mellow seed bed, free from noxious weeds, should be made.

Throughout the northern states seeding may take place from June to late July. In the south the seed may be sown in Sept. or early Oct. Under favorable conditions use 2 to 3 lbs seed p. a. Plant in drills far enough apart to allow cultivation. For planting small fields any of the common garden drills will be found quite satisfactory, but for large fields a grain drill with some of the feed hoppers closed may be used. When the ground is clean and in proper condition otherwise, good results may be obtained by using the grain drill with all feed hoppers open, and giving no after cultivation. Some plant in wide drills and give sufficient shallow cultivation to keep the soil in good physical condition and destroy weeds. Good crops of rape may be obtained from broadcast seeding, but where there is danger of the surface soil becoming very dry while seed is germinating, drilling will give much better results.

Fine rape may often be grown on land that has already produced a crop of some of the early maturing cereals, such as rye, oats or barley. As soon as grain is removed, plow or disk at once and seed to rape. Field peas and other early maturing forage crops, or rye or winter oats that have been pastured off in spring may also be followed by rape with profitable results. Another practice which is coming into favor in some sections of the country is to sow rape in the spring with some grain crop such as wheat, allowing the former to take possession of the field when the latter has been removed. Rape may also be sown in the corn field just before the last plowing, as is often done with rye and winter wheat.

Rape is usually ready for use in 8 or 10 weeks from time of seeding. The general practice is to use it as a sowing crop or as pasturage. Sheep and swine may be turned into the field and allowed to remain until it is pastured off. Cattle may also be allowed to run in the field, but as they waste much of the forage by pulling up the plants and trampling them down, it is a better plan to cut the rape with a scythe or mower and feed it to the animals. With sheep and cattle care should be taken at first not to allow the animals to eat too much, as there is danger of injury from bloating. Hungry animals should not be allowed to eat their fill, and it is not best to turn them into the rape when the leaves are wet. There is no danger of bloating with swine. It is an excellent plan to have the fields so arranged that the sheep and cattle have access to an open pasture as well as to the rape. Animals should have free access to salt at all times when being pastured on this crop.

On account of the danger of tainting the milk, many people do not feed it to cows until after milking. It can be used to good advantage as a part of the ration for animals that are being fed in pens for market or for the show ring. It is also a valuable food for young lambs at weaning time. By beginning as early as practicable in the spring and seeding at intervals of two or three weeks, a continuous succession of rape can be produced throughout the period when the permanent pastures are most likely to be short. Rape will endure quite severe cold weather and thus will last a long time after the ordinary pasture grasses succumb to the frost. By the use of this crop stock can be gotten into good condition for the holiday markets or for winter, and there need be no check in growth, fat and milk production through insufficient succulent food during the late summer and autumn months as is too frequently the case. Under favorable conditions two or three cuttings may be made in a single season from a field of rape grown as a primary crop.—[T. A. Williams.]

Hill lands planted to corn should be planted in drills rather than in checks, that cultivation may be done at right angles to the slope of the hill.

A NEW STYLE CULTIVATOR.

One of the enthusiastic gardeners of southern N. J. is Rodolphus Bingham of Camden Co. Mr. Bingham makes a specialty in the cultivation of fruits. The



THE MELLOWER AT WORK.

cuts show his mellower for working among strawberries both in operation in the field and an under view of it. Mr. Bingham claims that his mellower loosens the soil to any desired depth, and thoroughly mellowed without turning down the surface of richer soil. Of course the subsoil is undisturbed. The perfectly pointed, sharp cutting, steel plow cuts the soil in slices, and with its wings and the teeth of the wheels which carry it, breaks up lumps and lods and prepares the soil far better with one operation than the ordinary methods of plowing and harrowing. The



AN UNDER VIEW.

The teeth of the wheels also catch coarse manure and trash, carry them down to the soil and prevent clogging. Two or more plows with alternating wheels are placed in the gang, according to the number of horses used or power applied. The frame is so arranged that a bar with markers may be put on, or drills for seeds or fertilizers, or a barrel of water, and boy to drop and water plants, and rollers to press the soil to the roots. The machine in general usefulness is in this respect very much in its work like the transplanters which plant, fertilize and water plants all in one operation. By lifting the plows to shallow lines it excels the ordinary cultivator, in that it cuts instead of scratching or scraping, and will work closer to small plants without covering or disturbing them. This implement works three rows and cuts the runners by making one 16 in space for the horse, then two 10 in wide. This allows 43,560 strawberry plants to the acre.

SAVE THE POTATO CROP.

No farmer can afford the loss of one-third of his crop. Yet potato growers who do not use bordeaux mixture often lose more than this. The results of the 8 yrs' trial at the Vt. exper. sta. show average yields of 25 bu p. a. where sprayed and 173 bu where not sprayed. The practice of the Vt. exper. sta. is to use paris green for beetles during June. During July and August two or three applications are made of bordeaux-paris green mixture. This

mixture consists of 6 lbs copper sulphate, 4 lbs lime, ½ lb paris green and 40 or 50 gals water. Slake the lime and dilute with about one-half the water; dissolve the sulphate in the other half, then pour this vitriol solution into the lime water, meanwhile stirring thoroughly. Add the paris green and the mixture is ready for use.

Spraying of early potatoes is begun about July 1 and of later potatoes about July 15. A second application is made two or three weeks after the first. A third application follows two or three weeks after the second if needed. Some years this third application does little good; other years it saves the crop from late blight or rot.

The object is to cover the upper surface of the leaves with a thin layer of the mixture. There is no danger to the vines from using too much and most men make the mistake of applying too little. In a small field the mixture may be put on with a sprinkling can. For an acre or more a spray pump is desirable. There are many of these on the market. The simplest, and therefore best, way to begin is to have a good, strong pump mounted on a barrel which can be carried through the field in either a common one-horse wagon, or better, on a special two-wheeled cart. One or two hose with nozzles, run from this pump, can be directed by one or two men riding, or better, walking. In the latter case, each hose should be 10 ft or more in length.

A good spraying outfit is largely homemade, and each man will soon modify the details of this method to meet his own conditions. Spray promptly and thoroughly or not at all.

A SIMPLE HAY RACK.

The hay rack illustrated herewith is for use on a common high farm wagon. Side sills are two pieces 2x4 in by 11 ft; for a low wagon 2x6 in is better.



A HOMEMADE HAY RACK.

To these attach four strips 1½x3 in on bottom edge by means of ½ in bolts running through sills and also through the semi-circular arms 2½x3 in. Two pieces of 1x4 are laid on both ends of arms and bolted on so that the hind wheels can operate between and up through them. To make an arch, a or h, over hind wheels, three pieces of wood or iron bent in form of a half circle, or two strips cut with an elongated circle and bolted to the 1x4 in strips and covered with short pieces of thin boards, keep hay or grain from coming in contact with wheels. The front guard or standard should be fastened to side sills by means of a full length rod and just back of front arm and attached so as to be raised up or down. The stakes at rear end fastened in same manner. This renders it more convenient to store away under some low shed when not in use.—[H. Logan, Branch Co., Mich.]

The Horse Hay Fork will work easier if knives are put on the points. Without them it is almost impossible to drive the fork into a load of green hay. My blacksmith took two old mowing machine sections, cut off the two upper corners, drilled a hole between them, hammered out the points of the fork so as to admit of making a hole in them and riveted the knives on. Have used a knife pointed fork two seasons and it cuts its way into a load of hay with ease.—[E. E.]

In the Work of Haying modern machinery is making rapid changes and the more or less crude and wasteful process are giving place to improved methods. Much nutritious and digestible matter is lost from hay that lies exposed to the sun too long. Best results follow when grass is air cured rather than sun bleached, and for properly turning hay for curing a side delivery rake, made by the Keystone Manufacturing Co. of Sterling, Ill., fills all requirements. Besides the side delivery rake the Keystone Co. manufacture one of the best hay loaders on the market. The catalog is free to all who send for it.