

away all snow, and very often the soil is thawed to a depth of 3 to 4 inches. This climatic peculiarity, together with the strength and persistence of these same prevailing winds, render tree culture, up to the present, a most unsatisfactory pursuit.

From the present indications and conditions, one would say that if there is any place where the "dual-purpose" cow should belong *par excellence*, it is in Southern Alberta. The pastures are well fitted for dairy husbandry, while there will for some time be more or less range available for feeding steers. This is more especially true in the neighborhood of the foothills, whose elevation militates against successful grain-growing, but where excellent pasturage is found.

The Institute party consisted of Angus MacKay, Esq., Manager of the Experimental Farm, Indian Head; Mr. George Lang, recently Horticulturist at the same institution, and the writer. Lectures were delivered to large and representative audiences at Lethbridge, Magrath, Cardston, Mountain View, Fishburn, and Pincher Creek, these being some of the principal centers of farming sections south of the Crow's Nest line of the C. P. R. The subjects discussed were: "Soil Cultivation," "Weed Eradication," "Tree Planting," "Fruit Growing," "Bee Breeding," "Milk Production," "Pig Feeding," "Mixed Farming," and "Hen Culture." All the subjects were apparently quite interesting to the farmers present, and every man is a farmer in this country. The fact of a change being imminent seems to have dawned on many of the smaller ranchers, and the problems of mixed farming were discussed quite warmly in some cases, showing the antipathy of the ranchers to the change now going on. The change is coming, however, and no amount of objection raised will retard it in the least.

Seed Selecting and Testing.

SIR.—Too little attention is given to selecting and testing seeds used for field crops. If we know that seed oats, barley or wheat are of last season's growth, and that they have not been damaged from wet, it may not be necessary for us to worry about their vitality; that can be judged largely from their appearance.

When preparing seed for cereal crops, it is always advisable to use grain that has been grown under conditions favorable to a growth most suitable for producing a maximum yield of grain of the best quality. It cannot be too highly recommended that each spring an acre or so of the earliest and best land be specially prepared and used for the purpose of growing seed grain. Fully as much attention should be given to selecting the seed for such plots as is given to selecting breeding animals for a stud, herd or flock.

Commencing with the seed, careful experiments have shown that the large plump grain selected from ordinary seed gives an increase in yield over the ordinary seed sufficient to add a remunerative profit from the crop, when the crop from the poorer seed would only pay for the cost of production. Again, plants from large, well-developed seeds are more vigorous, and will continue to be more thrifty, from germination until the plant becomes mature, than plants from small or shrunken grain. Selection should also be made in the field. It is from these perfectly-developed plants that the large, plump seed should be selected. From one day's work for three persons among good grain, plenty of large heads can be picked to produce enough good plump seed to sow one acre. From that seed-plot plot large heads should be selected to sow the plot for succeeding year, and the grain harvested from the plot should be used as seed grain for the general farm crop.

The idea that grain after having been grown in one locality for a number of years tends to "run out" is growing less common. It is now more generally believed that the decrease in the vigor and productiveness of grain is largely due to lack of attention in seed selection. If a farmer has been growing a variety of oats, which he finds to be well suited to his soil, for five or six years, without giving any attention to keeping up its productiveness, it can hardly be disputed that it is to his advantage to get fresh seed of a good productive strain of the same variety. Nearly as much attention is now being given to productive strains of old standard varieties as is given to new varieties, and when a good, practicable, systematic selection of seed becomes more general and the results carefully observed, the craze after a change of seed will die out.

Such agricultural education movements as the "Macdonald Seed Grain Competition" are having a good effect, not only with the boys who live on farms, but with the farmers themselves. Each one of those quarter-acre seed plots which are being operated by the competitors in that competition serves as an illustration to many who would otherwise have no opportunity to observe the effects of such a systematic selection when applied to wheat and oats. Farmers who encourage their boys in this work are doing much toward leading them out and helping them to take a deeper interest in the whys and wherefores of agricultural operations in general.

The vitality of grass, clover and root seeds should be tested before they are sown. We have limited means of finding out when or where our root seeds, and in most cases our clover and grass seeds, were grown, and it is a regrettable fact that we are at the mercy of the seedsmen so far as the vitality of such seeds is concerned. It is noticeable that seed dealers take care to insert inconspicuously on their invoices

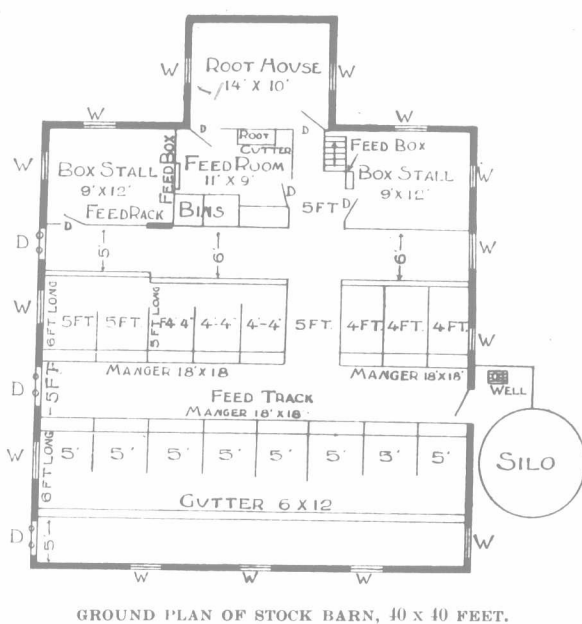
or elsewhere, that they will not be held responsible for the purity or vitality of the seed supplied. If our legislative machinery were brought to bear, and unscrupulous seed dealers were asked to substitute for their provision—which is a safeguard to themselves—a guarantee, which would be a safeguard to the purchaser, as to the purity and vitality of the seed supplied, the percentage of loss sustained with such crops as mangels and carrots, and, to a less degree, with clovers and grasses, would be materially decreased.

In order to be assured that the seed which is to be sown this spring will readily germinate, arrangements for thoroughly testing it should be made. It is always well to carry on such tests in duplicate and under different conditions *re* moisture and temperature. One hundred seeds may be tested in a pot or box of soil under the most favorable conditions, while another hundred should be tested under field conditions such as are common at seeding time. If less than eighty or ninety per cent. of the seeds germinate, and the growth from those is weak, it will be wise to discard it as unfit for use and endeavor to get seed that will be sure to produce a strong growth of good uniform plants.

RURAL SKETCHER.

Plan of Basement for Barn 40 Feet Square.

In answer to N. McP., in your March 1st issue, I send you plan of a basement beneath a barn 40 by 40 feet. In the following plan the entrance to the basement is on the south side and the driveway is on the west side. On the east side is a row of cows, tied with their heads towards the feed alley. The best cattle-tie is a swinging stanchion, although many prefer tying with a chain, but swinging stanchions give every freedom of movement necessary. The well and silo are situated near the end of the alley, and are, therefore, easily accessible for feeding and watering. The cow stalls are 5 ft. wide and 6 ft. long, while those made 4 ft. wide and 5 ft. long are for young cattle, and the two box stalls are very useful in keeping calves. The root room is under the driveway, and from it the roots are taken into the feed room, where they are cut up and then distributed to the stock. A small car may be used in the feeding alley, and I also use one in hauling out the manure. I also have a manure shed, into



GROUND PLAN OF STOCK BARN, 40 X 40 FEET.

which the car runs. The partitions are from four to five feet high, and, therefore, there is plenty of light all over the basement.

J. R. B.

[NOTE.—There are several features about this basement plan that might be changed with advantage. A cow stall five feet wide is too narrow for two cows and too wide for one. A double stall should be from 6½ to 7 feet, and a single stall 4 to 4½ feet. There should also be a passage connecting the east cow stable with the feed passage. We would also find fault with the 6-foot length of stall, which should not be more than five and one-half, if the cows are to be kept clean. If silage is to be fed alone, perhaps the position shown in the cut will do, but most feeders like to mix the silage with cut feed and roots. In that case the silo should stand beside the root house, next to the feed room.—EDITOR F. A.]

The First Number More Than Paid the Bill --- Mandescheuri or Mensury.

To the Editor FARMER'S ADVOCATE

SIR,—One of my neighbors, Mr. Charles Krenger, who is a subscriber to the ADVOCATE for the first time this year, informs me that the first number saved him more than the price of the whole year's subscription. He had a fine pure-bred Yorkshire sow that was killing her young pigs, and in reading the ADVOCATE he saw the information he was just in need of; he took the advice and saved the young pigs. To say he is pleased with it is putting it very mildly.

Which is the best kind of barley to sow if wanted only for feed, Mensury or Mandescheuri? My soil is a good clay loam and in fine shape for crop.

Bruce Co., Ont. SAM'L MILLER.

[NOTE.—In comparative tests over Ontario Mandescheuri barley has yielded better than Mensury on all classes of soil. —ED.]

GARDEN AND ORCHARD.

Flowers.

HELPFUL SUGGESTIONS FOR THEIR CULTIVATION.

I hope every one of the home-makers who read the ADVOCATE has decided to have flowers in their vegetable garden this coming summer. It is such a rest and relaxation for tired nerves to go out and work among the flowers for a few minutes now and then. In recent years there has been a return to the lovely old flowers of our grandmother's days in flower gardening, and beautiful flowers they are.

Sweet Peas.—Nothing could be more daintily exquisite than the sweet pea, once so dear to our grandmothers. It is easily grown and comparatively free from insects, but it must be planted very early to make sure of doing its best. One can, and should, sow the seeds of the sweet pea just as soon as the frost is out of the ground. This will be about the first of April. The small velvety-looking brown seeds have remarkable vitality, and a little freezing of the surface of the ground after the seed is sown will not hurt them in the least. Be sure and sow the seed at least five inches deep. It is a good plan to dig a trench about six inches deep and sow in it a double row of seeds, covering them to a depth of about two and a half inches at first, and filling in the rest of the trench as the plants grow. This will make the plants stronger at the roots and bloom late in the summer. Early planting enables the sweet pea to become a strong and thrifty plant before the extreme heat of summer sets in. It is sensitive to the heat, and is a great drinker. Give it water in great quantities. Do not allow it to become dry around the roots or its vitality will depart, not to return. It is difficult to restore them to their former vigor after the vines have once begun to turn yellow. Do not let the flower form seed-pods or the bloom will soon cease entirely. Pick them at least every other day.

Shirley Poppy.—A flower of somewhat recent origin is the Shirley poppy. One can not do better than have part of a row of these if one wants something that will make a brilliant show in the flower garden. They are apt to be of every conceivable tint and hue. I once saw a small bed in which there were more than one hundred blossoms, and no two were alike. They were infinite in variety, and it would have been hard to say which was the most beautiful. If you have never had any experience with this beautiful little flower, give it a place in your garden this summer and it will be sure to delight you.

The Morning Glory is another old-fashioned flower that has again come into favor. It is no longer spoken of as "such a common flower," and there are some new varieties that are extremely beautiful. The Japanese varieties grow like weeds, and send forth thousands of beautiful blossoms. Give the seed ordinary garden soil, plenty of water in times of drought, and you will have flowers galore.

The Nasturtium is another easily-grown plant that is immensely popular, and justly so, for it is a remarkably prolific bloomer, and its flowers are of so many tints and shades. The climbing varieties do not bloom so freely as the dwarf plants. The seeds of this beautiful plant are very inexpensive, and the plant is so easily grown that anyone can succeed with it. It is admirably adapted to window boxes.

The Aster is another fine flower for late blooming. It is a plant of rather slow growth, but it will be sending forth its purple or pink or white flowers when other flowers have had their day. The aster seeds should be sown in boxes about the first of April, as seed sown in the open ground may not develop into blooming plants before early frost cuts them down.

California Poppy.—A dainty yellow flower is the California poppy. Its foliage is as finely-cut as the fern, and is of a pale green, contrasting charmingly with the pale yellow flowers. But one must enjoy its beauty while it is on the parent stem, for, like other members of the poppy family, it wilts almost as soon as it is cut. You will find the poppy to

"Pay you more than double
For all their cost and trouble."

Phlox.—Then one will want at least half a row of Phlox Drummondii, with its flowers of every conceivable shade and hue. The Grover Cleveland is a splendid variety, with its large and snowy-white flowers with a bright crimson center. Then there is the Stelleta, which is a glowing scarlet, with contrasting eye of white.

The Petunia is one of the flowers that grow with weedlike vigor. Some of the double varieties are as beautiful as roses. They have lovely curled edges, and are very handsome. I find the petunia does not always come true from seed.

The Pansy is one of my favorite flowers, and oh! how I love the baby-faced darlings. First of all, pansies are big eaters, so must have a very rich soil. They are hard drinkers, so must have a sprinkling every evening of warm sunny days, but do not freeze them with cold well water. That seems like queer advice when we have picked pansy blossoms from under the snow. Yet the cold water from the well will surely injure, if not kill them. Stir the soil lightly around each plant every week. This may seem too much work for a few flowers, but if you do not love them well enough to care for them, let them alone. The blossoms should be picked as soon as they reach perfection, and not allowed to seed, although a few of the choice plants