

use of purebred sires is shown in the customary way in the following table:

Generations	Sires	Dams	Offspring
	Pct. of Pure breed	Pct. of Pure breed	Pct. of Pure breed
First	100	0	50
Second	100	50	75
Third	100	75	87.5
Fourth	100	87.5	93.75
Fifth	100	93.75	96.87
Sixth	100	96.87	98.44

Hypothetically, the offspring from the sixth generation will have retained on the average 1.55 percent of unimproved blood from the original dam or the dam of no breeding. (This applies only to the average of large numbers, and does not apply to individuals.)

The breeder must be reminded that to produce the high-grade no other sire than a purebred of the breed selected can be used. No progress will be made by using a grade, scrub, or crossbred sire. Nor can progress toward eventual purity of blood be made by using purebred sires of different breeds for each cross or occasional cross. Grading-up means using a purebred sire for the first cross and continuously crossing the female offspring with purebred sires of the breed first selected, until all impure blood has been practically bred out.

It is not necessary for the farmer who is producing pork for the market to keep a breeding herd of registered sows. A herd of high-grades will answer the purpose nearly as well and they can be purchased at a much cheaper rate. The one important thing is that the breeder use a purebred sire. If he must start with a herd of inferior sows, by using a purebred sire it will only be a question of two or three years until he will have a herd of good grades.

#### LOCATION AND GREEN CROPS

The ideal farm for raising hogs is one that will afford an abundance of shade, with enough fresh running water, and in addition a liberal amount of grazing. It may not be possible to find all of these conditions naturally in one field, but they can be supplied at a comparatively small outlay. Shade can be furnished in a short time by planting some quickly-growing trees or shrubbery. If necessary, some annuals may be grown for the first year until the permanent plantings become large enough to supply the shade. If there is not already a sufficient amount of water at hand, it can be supplied by putting down a well and