

LAWN-GRASS MIXTURES AS PURCHASED IN THE MARKETS COMPARED WITH A FEW OF THE BEST.

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For twenty years or more I have been observing and experimenting on this subject, and twice I have introduced it at meetings of this Society.¹

Usually the surface of the ground will be most thoroughly covered when several to many kinds of plants occupy the surface together, and a mixture will produce a much larger crop than the most vigorous ones of that mixture. This is a principle in nature, and has been again and again proved true.

In a lawn, a heavy growth is not desirable, but objectionable. The most beautiful lawn that can be made to grow, will consist of but one kind of plant, and then the lawn will be of uniform color, texture, and height, if the plants are well grown.

There are a few grasses in cultivation that spread freely by underground stems, known as rootstocks. Such grasses, when well grown, form an even turf and are never bunchy. The grasses in this list consist of June grass (*Poa pratensis* L.), Quick grass or Quack grass (*Agropyron repens* Beauv.), Bermuda grass (*Capricola Dactylon* Kuntze.)

There are a few others which possess this peculiarity of spreading to a moderate degree, but they need not be noticed here. White clover (*Trifolium repens* L.) sends out creeping stems in every direction, which lie on the surface of the ground and send down roots about every half inch.

Sow on a mixture of grasses, such as is contained in any of the samples here referred to, and the lawn will be spotted and streaked. Some species will be lighter or larger than others and some of them will be more or less bunchy. The perennial rye grass found in fifteen out of eighteen mixtures examined, starts promptly with great vigor and makes a fine growth, but it usually perishes within two or three years, leaving vacancies to be occupied by dandelions or other weeds unless there be at

¹Proceedings of Thirteenth Meeting of S. P. A. S., 1892, p. 185. Also Fourteenth Meeting, 1893, p. 28.

hand a plenty of June grass. The seeds are heavy and cheap. Sheep's fescue, or one of the larger fescues, is found in fifteen out of eighteen of these mixtures. These species grow in bunches, and vary much in color.

Four of these mixtures contain seeds of crested dog's tail, a fine grass that is too tender for most, if not all of our northern States, as it is easily killed by the hot sun or by extreme cold.

There is no good reason or excuse for sowing for a lawn, seeds of Timothy, Sweet-scented vernal grass, Red clover, Meadow fescue, Italian rye grass, Velvet grass, Meadow foxtail, all of which are found in one or more of these mixtures.

Most of these mixtures contain certain weeds in considerable quantity, which indicates that some of the seeds are imported from Europe.

The objection to all lawn-grass mixtures, is the extravagant prices at which they are sold; and nearly every mixture examined contains a considerable quantity of coarse or bunchy grasses or those that are tender and short-lived, and the lawn grown from them will be spotted.

For rather light, dry soil, well exposed to the sun, where the lawn is liable to be much trampled, a glaucous Sheep's fescue (*Festuca ovina*, var. *marginata* Hack.) sown very thickly and kept closely mowed, is as good as anything I have found. It will remain and look well in extremely dry weather, when every leaf of June grass becomes dry and dead.

For dry, light soil, exposed to the sun, where there is not too much tramping, a mixture of June grass and Bermuda grass has proved excellent, where tried for some years to a limited extent in Michigan. As previously mentioned, at a meeting of this Society, these grasses supplement each other, June grasses making all the display in spring and autumn, when the weather is cool, but in the hottest and driest weather nothing can be seen except the Bermuda.

For spots that are too much shaded to grow June grass thickly enough to readily cover the ground, a liberal seeding of Red fescue (*Festuca rubra*, var. *genuina* Hackel) is the best thing I have ever seen.

For general use, June grass alone is the best for lawns in

Michigan, though in most ground, Rhode Island bent does well. White clover is a fickle plant, and sometimes does well when mixed with June grass or Bent grass for a lawn.

The accompanying table indicates approximately the relative abundance of each kind of grass seed in each mixture, with the retail prices of some of them:

Henderson's terrace sod mixture.

Sheep's fescue—three or four varieties.	Perennial rye grass.
June grass.	White clover.
Small red top or Rhode Island bent.	Sweet vernal grass.
	Crested dog's tail.

The Henderson lawn grass seed.

Perennial rye grass.	Timothy.
Small red top or R. I. bent.	Sheep's fescue.
June grass.	Sweet vernal.

White clover.

Henderson's sunny south lawn grass.

Small red top or R. I. bent.	Perennial rye grass.
Sheep's fescue.	Taller fescue.
June grass.	Yarrow.
Bermuda grass.	Price, per qt. 35c.; per
White clover.	bu. \$7.00.

Henderson's terrace sod lawn grass.

A second lot purchased on a different year contained the same grasses and the white clover in about the same proportions as the other lot reported, with some differences in the weeds included.

Price, per qt. 35c.; per bu. \$7.00.

Henderson's lawn grass seed.

A second lot with another date consists of the same kinds of grasses.

Henderson's golf link lawn grass.

Small red top or R. I. bent.	Sheep's fescue.
June grass.	Timothy.
Perennial rye grass.	Velvet grass.
	White clover.

Price, per lb. 30c.; per bu. \$6.00.

Henderson's shady nook lawn grass.

June grass.	Meadow foxtail.
Sheep's fescue.	Sweet vernal.
Small red top or R. I. bent.	Perennial rye grass.
White clover.	Smooth chess.

Price, per lb. 35c.; per bu. \$7.00.

In general terms, Henderson recommends five bushels of seed to the acre, which would cost \$35.00.

D. M. Ferry's extra fine mixed.

June grass.	Taller fescue.
Fine red top or R. I. bent.	Perennial rye grass.
White clover.	Sweet vernal.
Sheep's fescue.	Timothy.

Price, per lb. 50c.; per 100 lbs., \$25.00.

D. M. Ferry's fine mixed.

June grass.	Perennial rye grass.
White clover.	Taller meadow fescue.
Timothy.	Velvet grass.

Another lot purchased in another year contained June grass, fine Red top and Timothy.

D. M. Ferry's extra fine mixed.

A second lot with a different date.

June grass.	Sweet vernal.
Crested dog's tail.	Perennial rye grass.
Sheep's fescue.	Taller fescue.
White clover.	Velvet grass.
Fine red top or R. I. bent.	Soft chess, and many weeds.

J. C. Vaughan's lawn grass mixture.

Small red top or R. I. bent.	Timothy.
June grass.	White clover.

Sweet vernal.

J. C. Vaughan's Chicago Park mixture.

June grass.	White clover.
Small red top.	Timothy.

Price, per lb. 25c.; per 100 lbs. \$15.75.

J. C. Vaughan's Columbia mixture.

June grass.	Timothy.
Small red top.	Italian rye grass.
Perennial rye grass.	Taller fescue.
White clover.	Velvet grass.

Sweet vernal.

Price, per lb. 25c.; per 100 lbs., \$14.00.

J. C. Vaughan's golf link lawn grass.

June grass.	Taller fescue.
Fine red top.	White clover.
Sheep's fescue.	Timothy.
Perennial rye grass.	Velvet grass.

Sweet Vernal.

Price, per lb. 25.; per 100 lbs., \$18.00.

Landreth's lawn grass seed.

June grass.	Alsike clover.
Perennial rye grass.	White clover.
	Timothy.

Gardener's special evergreen lawn grass seed.

Small red top.	White clover.
June grass.	Timothy.
Crested dog's tail.	Sweet vernal.
Sheep's fescue.	Perennial rye grass.
	Red clover.

G. W. Hill's lawn grass mixture.

June grass.	White clover.
Fine red top.	Timothy.
Perennial rye grass.	Soft chess.
Taller Fescue.	Velvet grass.

Sweet vernal.

Price, per lb., 20c.

I have named grasses best suited for lawns in certain places or subject to certain conditions. My observations and experiments show that lawn grass mixtures that are in the market seldom produce as fine and permanent a lawn as one, two or three of the best. I find that mixtures sell for from two to three, or even four times as much as the best grasses will cost, if purchased separately.

The above facts should be kept before the people, till some of the most intelligent, at least, comprehend their full meaning. Agricultural College, Michigan.