

“REAL VALUE.”

In all European seed-testing great stress is often laid on the necessity for ascertaining what is commonly termed the “real value” of a sample. By “real value” is meant the percentage of pure and properly developed seed capable of germination. This is determined by multiplying the percentage of purity by the percentage of germination and dividing by 100; thus,  $\frac{\text{Percentage purity} \times \text{percentage germination}}{100}$  = real value. In order that the determination of real value should be in any way correct it is essential that no empty seeds should be included in the germination tests, as improperly developed seeds would cause a considerable error. This is due to the fact that seeds devoid, or more or less devoid, of kernels weigh individually less than properly matured ones; and, as purity is calculated by weight and germination by number, the presence of any chaffy seeds in the germination tests will seriously affect the correct “real value.” In fact, in order that the real value should be absolutely correct it would be necessary for the seeds that did not germinate to be of equal weight individually to those that sprouted. When it is considered that no sharp line of demarcation exists between fully and imperfectly developed grass-seeds, but that the one kind merge gradually into the other, the great difficulty of determining the real value with any degree of accuracy can be appreciated. That this difficulty is one that is almost impossible to overcome is suggested by the fact that all seed-control stations allow a considerable margin of error—generally set down at 5 per cent.—in making this calculation.

In all cases where the impurities do not include all the light and chaffy seeds, and are calculated by weight, the real value cannot be in any way correctly determined, owing to the great variation in weight of the seeds used in the germination tests and to the living ones being calculated by numbers. It is entirely due to this that the European definition of “impurity” is made to include all those seeds which although correct in name may be more or less devoid of kernels.

The ascertaining of real value by weight is of great assistance to seed-merchants in making their bulk purchases, as it enables any differences that may occur in sale and delivery samples being accurately adjusted between buyer and seller, and that without the arbitration by individual opinion as to the difference in value that may exist. But so far as the farmer is concerned, and especially the New Zealand farmer, real value is not the essential feature of seed-testing that the European school of seed-analysts would lead one to suppose. In the first place, it is quite likely to be incorrect unless the greatest care is taken in separating out the chaffy seeds,