

detailed account of his experiments and observations, presented to the United States Agricultural Society by Mr. Joseph S. Lovering, a practical Sugar Refiner, as well as Agriculturist, in Pennsylvania.

APPEARANCE.

This Plant presents much of the appearance of Maize, or Indian Corn ; and I may state here that the same analogy holds, in a general way, with respect to the mode of cultivation, the soil and climate required, and the seasons of growth and maturity. The *sorgho* is, however, much more graceful in appearance than the Indian Corn, growing to an average height of about eleven feet, and each stalk being surmounted by an elegant tuft, forming the panicle or seed head ; and, unlike the Maize, this is the only fruit produced by the plant. As it approaches maturity, the seeds undergo progressive changes in color and density, passing from green to violet, brown, and finally to a deep purple, almost black ; at which latter stage, and when the seed has become quite hard, the plant is ripe, and will yield its greatest amount of sugar. The stalks rarely grow single, but in groups, issuing from the same seed, forming a large stool, and occupying a considerable space. The general thickness of the stalk, when ripe, is about one and a quarter inch at one foot from the ground.

ADAPTATION TO CLIMATE.

In the systematic treatment of the subject, climate is the first essential element which claims to be considered ; and the method which I propose to adopt is, not to enter into any abstract or theoretical enquiry on this head, but simply to state the results of experience in climates similar to our own. From long habits of association, we are accustomed to regard sugar as the product of tropical and juxta-tropical regions ; and it is an undoubted fact that the plants which yield this precious commodity most luxuriantly and abundantly flourish best in proportion as they are grown nearer to the Equator. But waiving in the meantime all such considerations, I shall proceed to shew that this plant is capable of being successfully cultivated in Western Canada ; reserving the results for the concluding part of my Essay.

Mr. Hind, in his admirable "Comparative view of the Climate of Western Canada," has expressed the opinion that all those portions of the Province lying south of the 44th parallel of latitude, enjoy a climate superior to those parts of the United States which lie to the north of the 41st parallel ; the latter comprising the whole of the New England States, together with the whole of New York, Michigan, Wisconsin and Iowa, and the Northern half of Pennsylvania, Ohio and Indiana. Mr. Hind's enquiries were made with special reference to the agricultural capabilities of the Province, and embraced all the considerations which these involve ; such as—adaptation to the growth of certain cereals—uniformity of distribution