

to be made and recorded of the influence of climate and salt air upon each.

Of late, bread has been included within the economical movement of an association of labor, so manifest in many parts of Europe and America. In Amsterdam, Holland, is a joint-stock-bread-making Company, organized to produce unadulterated rye bread for the million. Its capital is 250,000 florins. In Stuttgart a similar Association manufactures 500 pounds of bread every 45 minutes, and in the 24 hours (the bakers work night and day) 16,000 pounds. Ten journeymen are employed, six of whom are constantly at work, while three rest, and one is taking a holiday. The flour is kneaded by machinery moved by a small steam engine. The bread is sold a kretzer less than the police price, yet so sweet and good is it, that every loaf is eagerly bought, and the capacity of the factory is to be doubled, and two larger concerns in the same city are to be started. Orders for this bread come in from neighboring towns daily, and are daily filled by railway.

In Prussia, the high price of bread has induced inquiry into the waste caused by separating the bran from the flour at the mills. It is found to be from 12 to 20 per cent, whereas the great German chemist Liebig has stated that wheat contains only 2 per cent of indigestible ligneous matter. There is a growing disposition among the better classes of that capital, to eat their bread hereafter unbolted. While their loaves will be cheaper, they will be more nutritious and digestible. And if the suggestion of the French Emperor is confirmed by extended experiments and observations, the hydraulic press will come into use among the millers in flour producing countries like America, and a material saving will be effected in the cost of freight, with a corresponding advantage both to producer and consumer, and *Vive l'Empereur* will be the exclamation in more parts of the world than one.

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AGRICULTURE, PAST AND PRESENT.

Professor Buckland, of Toronto, delivered, on Friday, the 21st December, a very interesting and practical lecture at the Mechanics' Institute, Toronto, "on Agriculture, Past and Present." In the last number of the *Farmer's Journal* we advocated the introduction of Lectures and *conversaciones* on Practical Husbandry in Lower Canada, feeling that *viva-voce* ex-

planations and illustrations are calculated to interest in a very high degree all engaged in agricultural pursuits. We are pleased to find that the same view is taken of the matter in Upper Canada, and hope we shall be enabled to follow the example of our western friends, in this as in other points of progress.

By the courtesy of Professor Buckland we were favoured with his notes of the lecture, and only regret that our synopsis of this valuable address must necessarily be short. We have reason, to hope however, that it will be published entire in the Upper Canada *Agriculturist*, and we refer to that publication for a very masterly treatment of a large and important subject. Professor Buckland is a thorough practical agriculturist, and we believe would have great and merited success if he could be induced by our Societies and Institutes to address himself to the farmers of Lower Canada.

The Lecturer began by stating that he would attempt, for the information of the audience, to sketch the progress of agriculture from the earliest periods of authentic history to the present times, and would glance rapidly at a few of the more prominent points which have distinguished or characterized this invaluable art at its successive stages of development. He said he would offer no apology for bringing a subject like agriculture before a general audience; in a country like this, so peculiarly adapted to agricultural pursuits, and in which probably three fourths of the entire population is engaged, and on the extension and improvement of which the progress and prosperity of our country must so much depend. Agriculture can never want earnest and zealous advocates, sincere admirers, and intelligent and ardent cultivators; the first and most pressing want of man being food, and agriculture being the only means of obtaining it with certainty and abundance, it behoves every one interested in the pursuit to study the most judicious and successful methods of cultivating the soil. The history of agriculture he contended was the history of civilization, and its various epochs constitute the history of the world's progress in wealth, knowledge, happiness and freedom.

The Lecturer then gave a rapid résumé of the history of agriculture, beginning with the Mosaic account. Our first parents were placed "in a garden to dress and keep it." Abel was a "keeper (i. e. a feeder) of sheep." Cain a "tiller of the ground."

Evidence in the very infancy of the human race, of the two great departments of husbandry, precisely as they are divided and followed in the present day. He next passed on to the records of agriculture in which Noah and his descendants were engaged, and thence to the Agriculture of Egypt, Syria, and the Holy Land. How easy, says the historian Pliny, is the husbandry of Egypt, for there the River Nile, serving the turn of a good husbandman, begins fairly and gently to rise and cover the land, and if it do not rise above twelve cubits, and leave its deposits to enrich the land, the people are sure to have a year of scarcity. After the agriculture of the Asiatic Empires, that of Greece and Rome was rapidly glanced at, and the rich and varied agricultural literature of these great empires was pointed out as evidence of their high agricultural acquirements, and of the taste and genius displayed in the pursuit. The prose of Pliny and Cato, and the poetry of the prince of Latin Poets, Virgil, were quoted to show how far the science was advanced so many centuries ago.

After dilating on the classic literature and progress of agriculture in the early ages, Professor Buckland passed on to its progress in the mother country during the middle ages, and to its condition when the Saxons, Piets, and Scots severally possessed themselves of portions of the British Isles, to the introduction of Norman Husbandry, and the labors of the monks in extending agriculture, and the evidences they have left of those labors in many of the loveliest districts of the British Isles, and in the records handed down to modern times. Coming thence to the labours of Davy and Liebig in agricultural Chemistry, and to the impetus given to agriculture by the Highland, English, and Irish Societies, admirably copied and imitated by the Societies of Canada and the United States, the Lecturer concluded with the following beautiful preroration.

"Thus physical things and the science which relate to them became invested with garments of meaning and of purpose altogether new. The drained morass, the fresh turned fallow, the waving cornfield, the meadow with its herbage interspersed with flowers, no longer stand separately before us, as things of mere labor, utility, or beauty, or our relation to them as the accident of a day. "Day unto day uttereth speech, and night unto night giveth knowledge" of nature. A higher ordinance and appointment, enveloped