

into a dark green than it is to lighten the color of potatoes which receive nitrogen: a solution of nitrate of soda will effect the one in a very few days, but as both potash and phosphoric acid form insoluble compounds with the soil, they are much more slowly taken up by plants.

We always, however, obtain a larger crop of potatoes where we apply the mineral-manures alone than where we apply the nitrogen without the minerals, though in the next field, salts of ammonia applied without minerals for thirty-nine years in succession, have grown larger crops of wheat over the whole period than mineral manures without ammonia. To explain this apparent inconsistency we must consider the great difference in the character of the two crops.

Wheat in England is sown in the autumn, and being a deep-rooted plant, it has a greater range of soil to obtain a supply of mineral food than the spring-sown potato. The relation between the potash and the phosphoric acid and nitrogen in the two crops is also very different. In the wheat crops, grown by salts of ammonia alone, mixed samples, taken over a period of ten years, give the products per acre of the total crop—straw and grain—as follows: nitrogen, 36 pounds; potash, 23 pounds; phosphoric acid, 13 pounds. The relation, therefore, between these two important minerals and nitrogen is as 1 to 1.

In the potato crop, on the other hand, the proportion of nitrogen to the minerals is nearer 1 of nitrogen to 3 of minerals, the demand upon the soil for potash being much greater in the case of potatoes than where wheat or barley is grown. It must be a very large wheat crop indeed which removes 50 pounds of nitrogen from the soil; but in some of our potato crops we carry off more than 100 pounds of that substance per acre.

As very few soils could furnish so large an amount as this from their own resources, when potatoes are continuously grown, it becomes necessary to furnish a supply of potash either in dung or chemical salts. The following table gives the products of the crop grown in 1883, being the ninth in succession without any change in the manures:—

|                               | Potatoes per acre in long tons. cwt. |
|-------------------------------|--------------------------------------|
| 1. 14 tons of dung.....       | 6                                    |
| 2. Minerals without nitrogen  | 5                                    |
| 3. Nitrogen without minerals  | 3                                    |
| 4. Minerals and ammonia.....  | 8                                    |
| 5. Minerals and nitrates..... | 8                                    |

Amount of mineral matter and nitrogen per cent. in dry tubers:—

|           | Mineral matter. | Nitrogen. |
|-----------|-----------------|-----------|
| 1. ... .. | 3.05            | 1.09      |
| 2. ... .. | 3.86            | 0.73      |
| 3. ... .. | 2.64            | 1.47      |
| 4. ... .. | 3.67            | 1.08      |
| 5. ... .. | 3.86            | 1.37      |

The character of the manure is most clearly shown in the composition of the crop. In No. 2, manured with minerals, the minerals are more than five times as high as the nitrogen; while in No. 3, where ammonia or nitrates are used, the minerals are considerably less than double the amount of nitrogen. In both cases there is a waste of power, shown by small crops and unused manures. The loss, however, is not equal in both cases, as the minerals remain in the soil to be taken up at some future time, while the nitrogen is probably lost.

**VALUE OF A HERD BOOK.**—The influence and value of a pedigree is frequently underrated. A herd register is simply the outward mark and record of what we consider an inward quality. If it were not it would be quite worthless, and a man who should pay \$500 for a recorded animal would be simply throwing away his money. As an example of the value of a herd record we might mention a recent sale of Jersey cattle in Tennessee, at which several animals entered in the American Jersey Herd Book were sold for \$75 to \$135 each, while others entered in the American Jersey Cattle Club Register sold for \$400 to \$600 each.

Now there must be a good reason for this difference, as few men are stupid enough to pay \$500 for a whim or a false notion, and when we look for it we find it in the fact that the Jersey Cattle Club Register has been remarkably exclusive, and none but the very clearest evidence of the quality of the animals offered for entry in it has been received. In addition to this the greatest care has been exercised to prevent inferior cattle being accepted for registry, and to avoid and reject all fraudulent entries. So it is known that a record in this Herd Book means an assumed relationship to the very best Jerseys in existence. The other Herd Book has not this exclusiveness, and consequently its reputation is worth \$500 less than that of the other.

It is important for farmers to know this, because it has a relation to their own circumstances. \* \* \* It is not all foolishness, as some pretend to believe. Every man knows better, whatever he may please to say about it, and if every farmer would guide himself by his knowledge in this respect our common cattle would very soon become greatly more valuable and greatly improve their already good reputation.—*Live Stock Journal.*

JONATHAN THORNE, the first importer of Ducker's Short Horns in America, died in New York, Oct. 9, in the 84th year of his age.

S. M. 1884.

Thou wert not, Lady, of their common clay,  
Who, sheltered by the vantage of their sex,  
In soft affection dream their hours away,  
And 'neath the shadow of another's love  
Forget to share the toils that others vex!  
But the large talent given thee from above  
For help, thou, husbanding the sands of day,  
Didst multiply; and now the crown that decks  
Their brows, who thro' long years of effort strove,  
Bound with the giraffe that their Master wore,  
Before the lowliest feet their life to lay,  
Is thine: 'tis thine for us to work no more  
Nor weep: that glance of cheer and welcome gay  
Is changed for rapture on the eternal shore.  
Windsor, } N. S.  
Sackville, }

We are always glad to notice any valuable addition to the live stock of the Province. A valuable Boar and Sow of the Berkshire breed were imported by Mr. Rupert Davis, Kentville. They arrived at Halifax on 25th August per S. S. "Worcester" from Boston, were quarantined at Mr. McKerron's barn, Coburg Road, until 10th September, and then forwarded to destination. The following are the pedigrees:—

Boar—Dropped 29th March, 1884. Sire—Belladonna Dynasty; his sire, Dynasty out of Sweet Diana, No. 1284, by Earl of St. Bridge, No. 1284. Dam—Helle Favorite, No. 8854. Sow—Dropped 8th June, 1884. Sire—Belladonna Dynasty, as above. Dam—A Sow from imported stock.

THE announcement of a special meeting of the stockholders of the Canada West Farm Stock Association for the purpose of appointing "liquidators" will be read with regret by the Shorthorn breeding fraternity of America. The company which, several years ago, acquired control of the Bow Park property, it seems have been unable to "make ends meet," and, as we understand, the English holders being unwilling to advance more money, the affairs of the Association have been brought to a close. Just what disposition may be made of the property we have not yet learned. It is to be hoped that the herd will not be dispersed, as it represents years of patient work in breeding.—*Agricultural Gazette.*

CRACKING in pears is attributed to exposure. A screen to keep off the cold winds diminishes the tendency. In sheltered gardens in cities, it is alleged, pears do not crack.

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