THE FARMER'S ADVOCATE.

Who's Your Miller ?—Old vs. "New Process" Bran and Flour.

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The tendency of the age is to separate the nutritive properties of our natural foods from the luxury constituents, feeding the former to our domestic animals and the latter to human beings. We have not space at present to go through the whole catalogue, but the principle is well illustrated by the bran and flour question which has of late been vehemently discussed in milling and agricultural papers. A class of milling papers is rapidly gaining influence-organs of the milling fraternity-and as some of them contain articles from leading scientists, other journals follow in their train. It must be borne in mind that millers are interested in obtaining the maximum amount of milling as well as maximum prices; and any "new process," whether it is a genuine improvement or not, has a similar effect as the discovery of a new strawberry or a new breed of cattle. People must have something new, even at the expense of a transitory boom, and they must move so fast that they have no time to exercise their common sense. Thus we only hear one side of the question ; and when any authority tends to favor the "new process" his arguments are placed before the people in popular language, while if any objections are observed they are clad in tabulated technicalities. Nobody appears to be concerned in the health or intelligence of the masses. If they were educated up to the required standard, the occupation of many organized interests would be gone.

It has been proved that roller bran contains more nutriment than that made under the "old process," as will be seen by examining the following table :

CHEMICAL COMPOSITION OF BRANS.

2	Roller Bran.	"Old Process" Bran.
Ash (mineral matter, or salts)	7.11	5.59
Protein (albuminoida)	17.64	14.79
Woody fiber	8.46	9.23
Starchy matter	61.54	66.12
Fat	5.25	4.27
	100.00	100.00

classes, viz. : those who can digest whole-wheat bread, those who can only digest the "old process," and those whose stomachs are too feeble to digest any brand except the "new process." These classes bear a direct ratio to those who can perform heavy labor, those who can take a moderate amount of physical exercise, and those who are incapable of exercising their muscles to any appreciable extent. The same physiological laws apply in both instances. Continued disuse of an organ tends to its extinction; hence we find that people who engage their millers and cooks to do their mastication, have heavy dentist bills, and are subject to all sorts of disorders of the stomach and liver. The human system can only be kept in a well-balanced state of repair by a moderate exercise of all the organs. What we, therefore, want specially to enforce is this, that although "new processes" may be necessary for invalids, or such other persons who are unable to exercise those functions which Providence has provided for them, yet they are entirely out of place for farmers and others who are engaged in manual occupations. White appears to be the fashionable color for bread; the whiteness is caused by a superabundance of starch, and a consequent diminution of the nutritive constituents.

But it is urged that the nutritive constituents are obtained in other foods. Insanity can not go further than this. Let us grant for a moment that such constituents are so obtained. Nature furnishes them in the form in which they are intended to be used, and we in our slavish folly attempt to improve upon nature, and by doing so we increase the cost of living from fifty to a hundred-fold. But, we do not, as a rule, get these constituents in other forms of diet, for by our present modes of manipulation, we serve other natural foods like wheat, or at least the results are, for the most part, equally disastrous.

Let us illustrate in another way : Wheat consists of fifteen elements, but we cannot eat these elements separately and imagine that we are eating wheat in any form of manufacture. We would perish almost instantly, just as if we had taken a dose of poison. In the same manner we cannot live on the separate constituents of wheat. For example, if we take a bushel of wheat and separate it into its proximate principles, viz.: starch, gluten, fat, the various salts, etc., and then attempt to live upon them, we would starve. There is a vital principle in all our natural foods which no chemist has yet been able to fathom. And yet, what are our millers doing? Every "new process " tends to separate the wheat more into its constituent parts, and when the ingenuity of man shall have completely accomplished this end, alas for the human race !

Aug., 1885

Destroying Quack Grass.

It requires more labor in digging and cultivating to destroy quack grass in a single season than most people are willing to give, says the American Cultivator. Digging out every root will do the business, but the roots run deeply, and it is almost impossible to get all. Smothering is an easier remedy, and, for a small patch, more certainly successful. Cover the piece a little beyond the outside of the patch with straw to the depth of two feet. Watch this through the summer, and should any plants appear outside the patch, cover them to the same depth. One season with this treatment is effectual. Where large fields are overrun by quack, entire killing is scarcely to be hoped for in one season, unless the field is free from stones and trees and the quack does not extend into the fences. By plowing deeply early many of the quack roots will be turned to the surface, where they may be raked into windrows and burned during the heat of summer. Land thus summer fallowed will give an immense crop of wheat, and the quack will be little trouble for a number of years thereafter. We have never known a large field of quack to be so killed in one season. Some roots will escape, but the pest may be reduced to a few small patches, and these subdued by smothering with straw.

Cheat Chit-Chat.

The cheat or chess question is not defunct yet, notwithstanding the thrusts it has received in the recent issues of the ADVOCATE. Several practical farmers have had their chat in our columns, the majority of whom will not be convinced that wheat does not turn to cheat, and the wheat cheat chit-chat will have its periodical airings in the future as in the past.

The committee of botanists recently appointed by the Michigan Agricultural Society for the purpose of examining the ear of wheat containing a spikelet of chess, sent to us by Dr. Dunlop, an illustration of which appeared in our last September issue, having examined the phenomenon with a microscope, unanimously came to the conclusion that the chess be accidentally clasped in the axil of the wheat stalk, and was not exactly a case of natural grafting, although it appeared so to the naked eye, and they, as well as Mr. Saunders, of this city, who also examined it, acknowledged that they were at first deceived by superficial observation. We have these assertions from communications received from the committeemen, and one of them, Prof. Spalding, thus comments upon the matter : "The wheat-chess question will never be settled. So long as farmers continue to trust to such observation as chess coming up where wheat has been sown, etc., etc., they will be fully persuaded that chess does turn into wheat, and on the other hand botanists, however cordially they may accept Darwin's views concerning the origin of species, are not likely very soon to believe in the unparalleled phen-omenon of the transmutation of one genus into a remotely related one at a single leap. Dar-win would have been appalled at the suggestion of such a catastrophe, and believers in the reign of universal law and order do not expect to see the vegetable kingdom turned topsyturvy in this way, nor has it ever been done, so far as trustworthy observation and experience go.'



100.00

It will be seen by this table that roller bran is much richer both in bone-forming (ash) and in muscle-forming (protein) constituents, both of which are the most valuable compounds in any food, not to speak of the fat, which has also a high feeding value. Millers are, therefore, justified in booming up the superior excellence of roller bran; but how is it with the flour, pray, Mr. Miller? Even granting that the middlings are the same under both processes, which is doing more than justice to the miller, then the superior nutritive properties of the roller bran proves the nutritive inferiority of the roller flour. "Oh, but roller flour brings a higher price, it makes finer and nicer bread, it is a greater luxury," is the sagacious reply.

"Old process" is a sort of medium between whole wheat 'flour and the "new process" brand, and the objections raised against brown bread will in the main apply to that made from the "old process" flour. The main argument in favor of "new process" bread is that it is more digestible. Upon this hangs one of the most vital physiological truths that can affect the welfare of mankind. From a milling standpoint mankind is divided into three artificial

A writer in the N. Y. Times estimates that the loss sustained in the U. S. by destructive insects amounts to \$200,000,000 annually.

In different parts of Manitoba fall wheat was sown last autumn as an experiment; but the reports show total failures in every instance except one, viz., two acres in the Turtle Mountain district, which was not injured by the severe winter, and looked well in the latter part of June. It is generally accepted that fall wheat will flourish in the sheltered districts.

Dr. Dunlop, on the other hand, asserts that