possibility of converting waste material into valuable food products.

In view of the interesting results obtained in Germany during the recent war, on the action of alkalis on chopped straw, this matter is well worthy of a thorough study. In a recent lecture by the writer to the Syracuse Section of the American Chemical Society on "The rôle of alkali in the future development of the cattle food, cellulose, paper-pulp and liquid fuel industries," attention was drawn to the fact that experiments carried out at the behest of the German War Office show that by the simple process of boiling chopped straw for three hours with a one per cent. solution of sodium carbonate a 75 per cent. yield of material is obtained, of which 75 per cent. is digestible, and this in spite of the relatively high lignin content. A full account of this work is to be found in the recent pamphlet by Hans Magnus entitled, "Theorie und Praxis der Strohaufschliessung," published by Paul Parey, Berlin, 1919. Further information and additional references are to be found in the recent work of Hans Pringsheim, "Die Polysaccharide," Berlin, 1919.

It would seem that the treatment with soda ash is peculiarly applicable to American conditions and offers to the individual farmer the possibility of obtaining a cheap cattle food from such waste materials as chopped straw, ground corn cobs, etc., by the use of a chemical product with which he is familiar and employing only the simplest type of machinery. The resulting material when mixed with molasses apparently yields a profitable and palatable cattle food of high nutritive value.

Lantern slides have been made of the various tables quoted in the pamphlet by Magnus, and the writer will be pleased to loan them to any one interested in lecturing on this subject.

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BUTYL ALCOHOL AS A REAGENT IN HISTOLOGY

PROFESSOR GRIFFIN'S article in SCIENCE for March 10, recommending the use of isopropyl and methyl alcohols for histological work, impels the writer to call attention to the practicability of using butyl alcohol, as recently suggested by Larbaud,[1] for similar purposes. Among the advantages claimed for this reagent are that it obviates difficulties due to the presence of slight amounts of water in so-called "absolute" ethyl alcohol, and that it does away with the contraction and hardening due to xylol, since butyl alcohol is a solvent of paraffin and therefore takes the place of xylol or chloroform as well as of the higher alcohols. As butyl alcohol does not mix readily with water, Larbaud recommends a mixture of equal parts of butyl and 95 per cent. ethyl alcohols in appropriate dilutions for the lower grades in the dehydrating series. There seems to be no *a priori* reason why a mixture of butyl and methyl alcohols would not serve equally well. The writer has used Larbaud's methods, with slight modifications, for the dehydration and infiltration of fungus tissues for cytological study, with entirely satisfactory results.

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GENETICS OF THE VIENNA WHITE RABBIT II.

IN SCIENCE for March 10, I described the genetics of a variety of white rabbit having colored eyes, which I supposed to be identical with the variety known in Europe as Vienna White. This variety I had synthesized by crossing albinos carrying the gene for yellow coat, with chinchillas, and I showed the white variety with colored eyes to be genetically a "yellow chinchilla." Since writing that article I have been able to obtain from Europe a pair of Vienna White rabbits and I find that, though they look like my synthetic white rabbits, they breed very differently. When crossed with yellow rabbits, they produce not *yellow* young, as my synthetic whites should do, but blue, black or gray young, according to the genetic constitution of the yellow parent, and these young are invariably *Dutch-marked,* pre-

[1] Larbaud, Mlle.: Nouvelle technique pour les inclusions et les préparations microscopiques des tissues végétaux et animaux. *Comptes. Rend. Ac. Aci. Paris,* 172: 1317-1319. 1921.

cisely as in the experiment of Baur. This result shows that the Vienna White rabbit is in reality a Dutch rabbit, with a completely white coat, as suggested by Punnett. Its eyes are blue as in blue rabbits regularly, but the choroid is white as in the whitest Dutch rabbits. The white rabbit which I have synthesized is a new type of white rabbit, entirely distinct from Vienna White.

W. E. CASTLE

BUSSEY INSTITUTION,
MARCH 28, 1922

UNIVERSITY PROFESSORS AND MAJOR-GENERALS IN POLAND

A RECENT statement by the official Polish Bureau of Information in New York indicates the existence of an interesting condition in Poland regarding the status of university professors in that so-called backward country. The following is the statement, *verbatim:*

University professors in Poland have equal ranking with major generals, and, being state officials, are accorded all the rights and privileges enjoyed by major generals. According to a recent announcement, there are at present 638 full professors in the Polish universities and higher academic schools. The salaries of professors are somewhat higher than that of the undersecretary of state.

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QUOTATIONS

"THE SCIENTIFIC SIDE"

"Mme. Bisson assisted Mlle. Eva in a cabinet in which I was present with other observers," he said. "Mlle. Eva was wrapped in a heavy rubber coat in order to protect her body from the light as much as possible. She entered into a trance and after a short time an aperture was opened in the front of the rubber coat so that I could look within. I saw the ectoplasm in a thick slimy band encircling her body like some monstrous worm.

"'May I touch it?' I asked Mme. Bisson.

"She replied, 'Yes.'

"I reached within the aperture and firmly grasped between thumb and forefinger the belt-like mass, and as I held it I felt it writhe—a living, pulsing substance."

Sir Arthur stated his belief that the medium would have died from shock had any attempt been made to remove this reputed ectoplasm, but the observers finally managed to pinch off a small portion, and this was hurried into a laboratory where Professor Richet of the University of Paris made a microscopic and chemical examination.

"It was found to consist of mucoid cells, epithelial cells, a clear, slimy fluid, certain carbonates, and other compounds. It was a sort of etherealized matter, if such a term may be employed.

He cited the circumstances of a number of seances, and in one case read testimonies of other observers who were present.

"In one instance Mrs. Wriedt of Detroit, an American medium of great power, came to my house and we held a séance in the nursery, a room certainly devoid of suspicious surroundings. My wife and I, Mrs. Wriedt, and my secretary, Major Wood, held hands as we sat around a table, and having learned the value of singing in such experiments we all sang softly in chorus. We knew the words of the hymn, 'Onward, Christian Soldiers,' and by common consent took up this air. Suddenly there burst out overhead a clear joyous baritone voice, singing with us word for word. I stopped and heard the voices of my wife, of Mrs. Wriedt, and of Major Wood. And above them all was this ringing baritone voice.

"If that isn't a spiritual phenomenon, what is it?" he cried. "I have a right to ask that question."

He narrated details of numerous other séances, of one in which he declared he saw the face of his dead mother, "as plain as a Rembrandt portrait emerging from the dark," every wrinkle and line as he had seen her last.

"Again," he said, "I went to Southsea, where a Welsh miner was staying. This was the medium, Evan Powell.

"In this séance there were four other observers besides myself. Powell sat in my room

[1] Concluding part of a lecture with this title given by Sir Arthur Conan Doyle in Carnegie Hall, New York City, on April 12, as reported in the *Evening Post.*