

maintain their digestibilities when they were redispersed in an artificial environment (phosphate buffer). In the course of this experiment, many interesting points of difference between the two caseins, revealed themselves. As compared with cow's casein it was difficult to redisperse the casein from ass's milk in the M/15 phosphate buffer (pH 7.7); and it is therefore clear that although the same buffer and the same concentration of the two caseins were used for the digestion experiments, the substrates were, therefore, not dispersed to the same extent. Ass's casein is much harder and denser than cow's casein prepared and purified under the same conditions. The casein particle in ass's milk exhibits a powerful tendency to aggregate and the exceptionally high ratio of albumin to casein (1 : 2) is Nature's provision to protect the highly dispersed casein particles and keep them from coalescing.

It has been found that the rate of digestion of albumin from ass's milk is only a fifth of the rate at which ass's casein is digested. This circumstance is of great importance from the point of view of digestion of the casein particle since the albumin continues to offer colloidal protection until the casein attains a reasonably advanced stage of degradation.

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An Ageotropic Mutation in X-Rayed Rice.

IN the course of studies on the mutations obtained in X-rayed rice, a plant with a prostrate habit was isolated in the second generation of plants raised from one of the pure lines, Co. 4, the dry seeds of which had been exposed to X-rays for one hour under a Coolidge tube with copper anti-cathode operated at 53 kv. and a tube current of 10-11 m.a. at a target distance of 17 cm. without filter. Only a few seeds were obtained from this plant as by the habit of the plant, most of the seeds had fallen into the field. The seedlings raised from the seeds in the usual swampy seed-bed were of two kinds, the natural erect ones and the prostrate ones like the parent. In the prostrate type the inclination of the shoots did not present any regularity as it was in all directions. The seedlings were later transplanted in

regular plots. Generally rice seedlings grow erect after they strike root, which will be in about a week after transplantation. In this particular progeny it was found that while many of the seedlings were growing in an inclined direction, some were like the normal seedlings growing erect. The segregation was a mono-hybrid one, indicating the dominance of the prostrate habit.

	Observed	Expected
		(3 : 1)
Prostrate ..	28	30
Erect ..	12	10
		$\frac{\text{Dev.}}{\text{S.E.}} = 0.72.$

These prostrate plants are unique and are different from the type described by Ramiah (1930) where the prostrate habit of the plant was due to the spreading nature of the tillers. During the heading time, the tillers bend at the nodes and become erect and later on again assume a spreading habit at maturity. The type described here, on the other hand, presents an appearance of a plant completely or partially lodged without any bending or curving in any of the nodes against gravity. It resembles the 'lazy' plant described by Jenkins and Gerhardt (1931) in maize where the prostrate nature of the plant was suggested by Eyster (1934) and later on by Overbeek (1936) as due to the stem being 'ageotropic' or gravitationally indifferent.

Seeds of one of this prostrate plant and of the normal Co. 4 strain from which this mutation arose, were sown in a line centrally, each in a separate pot. As soon as the tip of the seedlings were visible above the surface of the soil, both the pots were tilted and kept in a horizontal position with the soil surface vertical. While the seedlings from the prostrate plant grew horizontally, the normal seedlings curved up and grew vertically (Fig. 1). In another set both the pots were hung inverted, top downwards soon after germination. The prostrate plant progeny grew downwards while the normal seedlings bent flat in their attempt to grow vertically upwards against gravity.

Fig. 2 shows the same control and prostrate progenies sown in a pot and allowed to grow without any change in the position of the pot. While the seedlings of the control are erect, those of the prostrate show inclination to the vertical. This inclination is more enhanced if these are raised in wet seed-bed.

The progeny of all the plants both erect

