From the results already obtained by Sexton and Clark[1] we may infer that this recessive gene is somewhat widely spread in the wild population, and any further information on this subject appears to be of value.

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[1] Sexton, E. W. and Clark, A. R., NATURE, 131, 201; 1933.

Composition of Interveinal Mosaic of Potatoes

IN a recent paper from Madison, Wis., Koch and Johnson[1] state that they have found in interveinal mosaic of potato received from this laboratory a "streak" (Table VII) which is presumably identical with the new virus described in the text (p. 45) as "potato streak virus". We had already found in 1933 and 1934 that this interveinal mosaic results from the combined action of viruses of two different types, one of which may correspond to the streak of Koch and Johnson, since there is no present evidence of a further constituent. In the circumstances, it is desirable to publish this note although the work is not complete.

One of the constituents of interveinal mosaic is a virus of the X-type which has no known insect vector. The other constituent is selectively transmitted under certain conditions by the aphis *Myzus persicæ*, Sulz., contrary to the conclusion of Koch and Johnson regarding their virus, and it has been isolated both in this way and by passage of interveinal mosaic through the potato variety Arran Crest, in which the X-virus does not survive.

The virus thus separated by the two methods sometimes produces on the foliage of President potato a slight transient mottle, but one of its diagnostic features is the production of irregularly arranged necrotic blotches in the cortex and pith of the tubers of this variety, and it is regarded as responsible for this symptom in interveinal mosaic. Koch and Johnson make no reference to this, and they were consequently not in a position to know that the virus is related to, if not identical with, that causing phloem parenchyma necrosis (or pseudo-net necrosis) as defined by Quanjer, Thung and Elze[2,3]. Its full identity, however, has not yet been satisfactorily established, and it is provisionally entitled the 'tuber blotch virus'.

Another diagnostic character of the virus is its power of combining with simple mosaic (virus X), thereby intensifying it to interveinal mosaic, and the latter has been synthesised in this way. This reaction can only follow in a variety which is tolerant of both viruses, for if it is intolerant of either, 'streak' results. Thus the simple mosaic element alone would cause this symptom in Arran Crest, while the tuber blotch virus was presumably responsible for the 'streak' which Koch and Johnson produced in the experimental Bliss Triumph, since the plants already carried the equivalent of simple mosaic.

The tuber blotch virus is readily inoculable into tobacco (var. White Burley) and *Datura Stramonium*, but it is carried by the latter and also probably by the former. It does not survive nine days *in vitro* at room temperature, and does not pass the L3 or L5 Pasteur-Chamberland filters, while the X virus does so, and has been readily separated in this way.

Whatever the identity of the tuber blotch virus turns out to be, it is unfortunate in the present circumstances that Koch and Johnson should have given the virus they worked with the new name of "potato streak virus". This term is likely to lead to further confusion, since it had been used previously in a looser sense, and at the present time the name 'streak' as applied to potato viruses is devoid of meaning, seeing that the majority, if not all, of them produce streaking on intolerant varieties.

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[1] *Ann. App. Biol.*, 22, 37–54; 1935.
[2] *Meded. Landbouw., Wageningen*, 33; 1929.
[3] *Phytopath.*, 21, 577–613; 1929.

Physiological Polarity in *Aspergillus*

WORKING with a certain strain of *Aspergillus nidulans* (Eidam), Winter, I have proved and described a particular type of 'physiological polarity'[1]. It is important to verify this polarity with other strains of the same species.

I should be obliged therefore if mycologists would send me specimens of *Aspergillus nidulans* with perithecia, and indication of the origin. I require the fungus from its natural sources, and not from strains found in the laboratory, as it is necessary that I should carry out the isolation myself. I should be grateful to have the material sent c/o Centraalbureau voor Schimmelcultures, Baarn, Holland, where I am working at present.

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[1] "Polarité Hérédité et Variation chez diverses espèces d' *Aspergillus*," *La Cellule*, 43, 350–424; 1934.

Preparation of Diazomethane and its Homologues in the Free State

WE have recently prepared for the first time an extended series of the homologues of diazomethane, but only in ethereal solution[1].

For the systematic study which we contemplate of the physical and also of the chemical properties of this series, however, it is requisite that the several compounds should be available in the free condition. We have now achieved this in a number of instances by decomposing the nitroso-β-alkylamino*iso*butyl methyl ketones in a reflux apparatus at 70° under somewhat reduced pressure in presence of a small quantity of anisole, by means of sodium benzylate, and obtained yields which in certain cases even surpass those already recorded; for example, of diazomethane 81 per cent, of diazoethane 64 per cent, of diazopropane 59 per cent, of diazobutane 46 per cent.

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[1] *J. Chem. Soc.*, 286; 1935.