physiologically unsound stem. The “hishage” stem is flattened as if crushed, and is fatter in the affected parts than a healthy stem.

Addition: — In studying the amount of the cystine- and cysteine-compounds contained in the mulberry leaves, I have also examined the amount of these compounds contained in a silkworm made to abstain from food. I found that the quantity of the S–S form increases gradually, contrary to that of the SH form.

The Quantitative Studies of some Chemical Constituents of the Mulberry Leaves. Part II.

The Acid–base Balance of the Ash in the Mulberry Leaves.

By

Yukitaro Kishi.

(Received August 9th, 1932).

Résumé.

(1) I made a study of the acid–base balance of the ash in the mulberry leaves.

(2) The total alkalinity of the ash in the mulberry leaves was determined after incineration, with or without the addition of magnesium nitrate. In either instance, the alkalinity increased in proportion to the growth of the mulberry leaves, as the contents of the ash in the leaves increase in proportion to the growth.

(3) The total alkalinity of the ash in the mulberry leaves treated with magnesium nitrate is generally a little less than that obtained by the ordinary method.

(4) The alkalinity of the ash which is soluble in water decreased in proportion to the growth of the mulberry leaves, as against the total alkalinity in the two instances mentioned above, which increased in proportion to the growth. Consequently, the alkaline ash constituents which is insoluble in water showed an increase in proportion to the growth of the leaves.