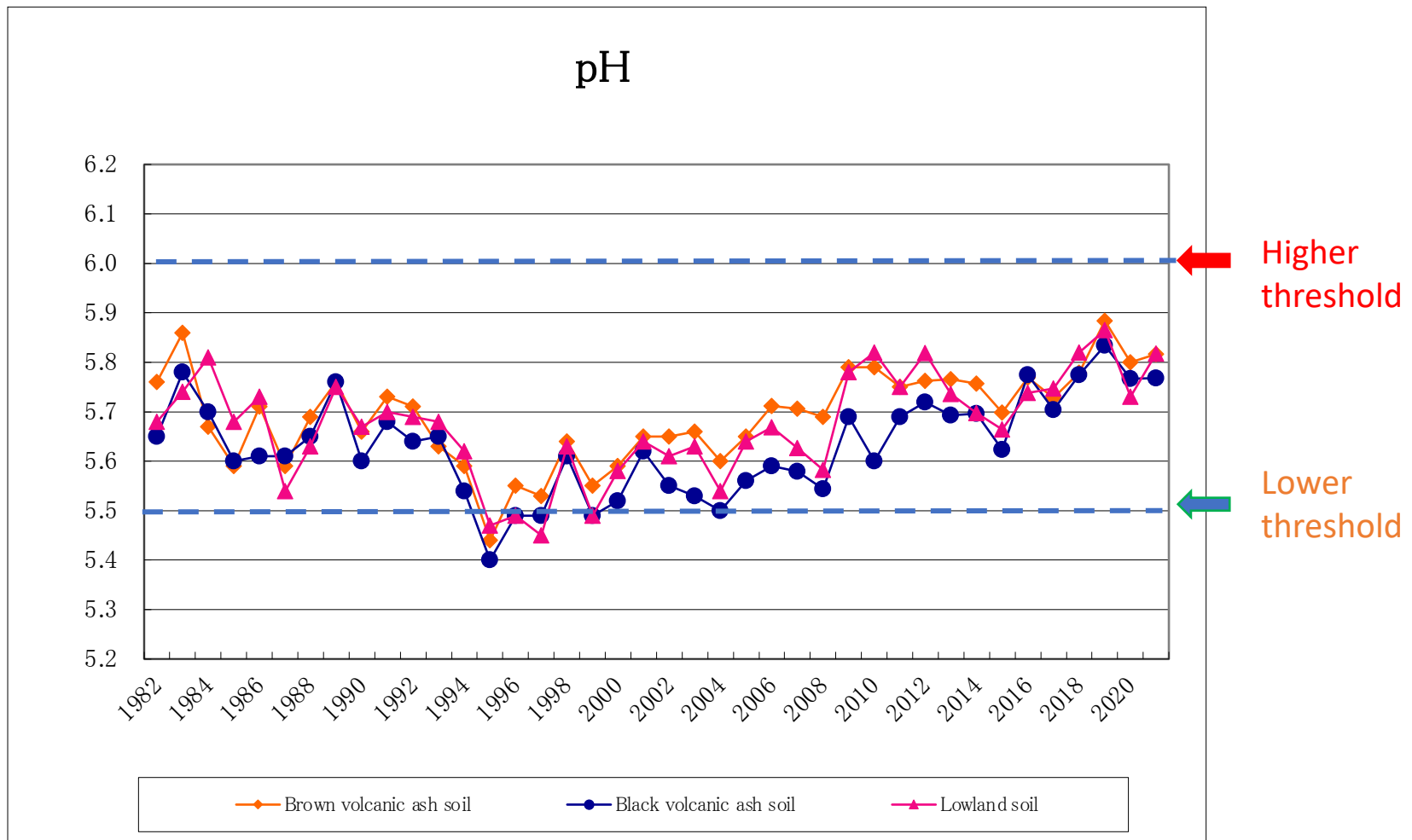
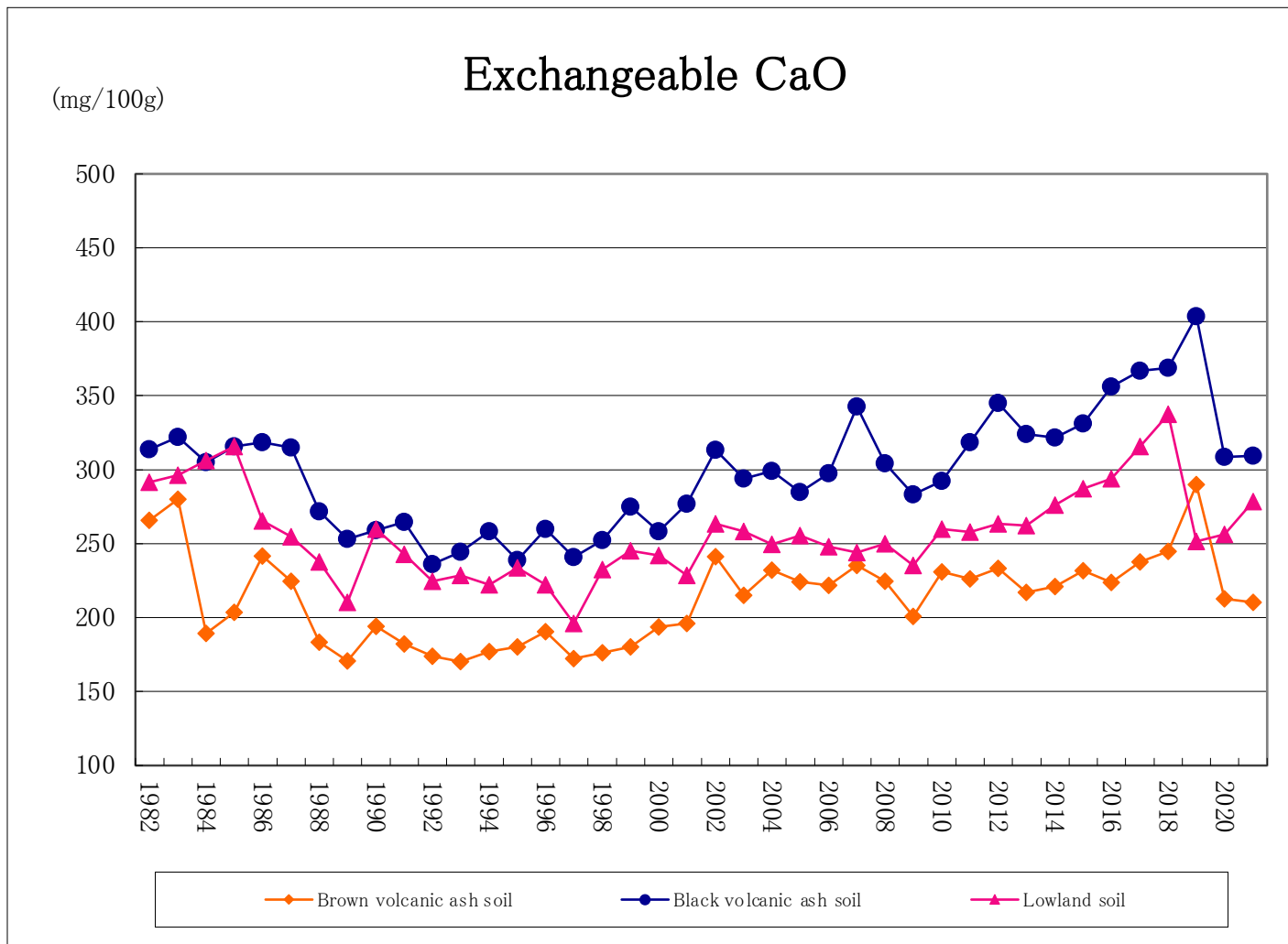


Various soil problems in Tokachi

- Decreasing soil pH
- Imbalance in soil nutrition (Excess P_2O_5 , decrease in Ca, Mg)
- Micronutrient deficiency (Cu, Zn, Mn, B)
- Deterioration of soil physical properties
- Soil erosion
- Water and land pollution by animal wastes



Change in soil pH in Tokachi; normal Andosols, wet Andosols, and lowland soils. Data: Tokachi Federation of Agricultural Co-operatives.



Standard for CaO differs by soil CEC. The range is 40 – 60 % of CEC.

Change in exchangeable CaO in Tokachi; normal Andosols, wet Andosols, and lowland soils. Data: Tokachi Federation of Agricultural Co-operatives.

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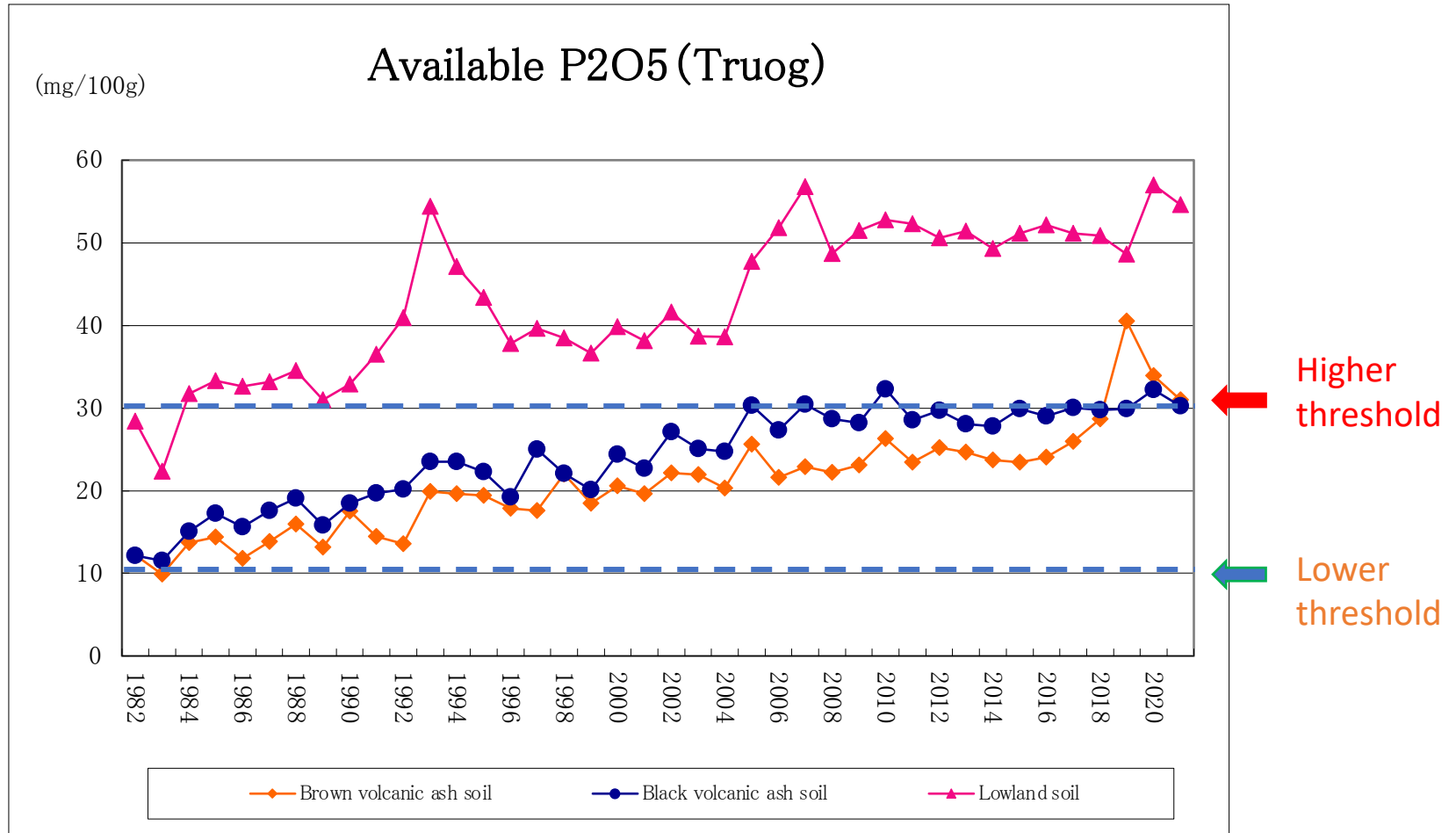
Calcium deficiency

Calcium deficiency is common in broad leaf crops.



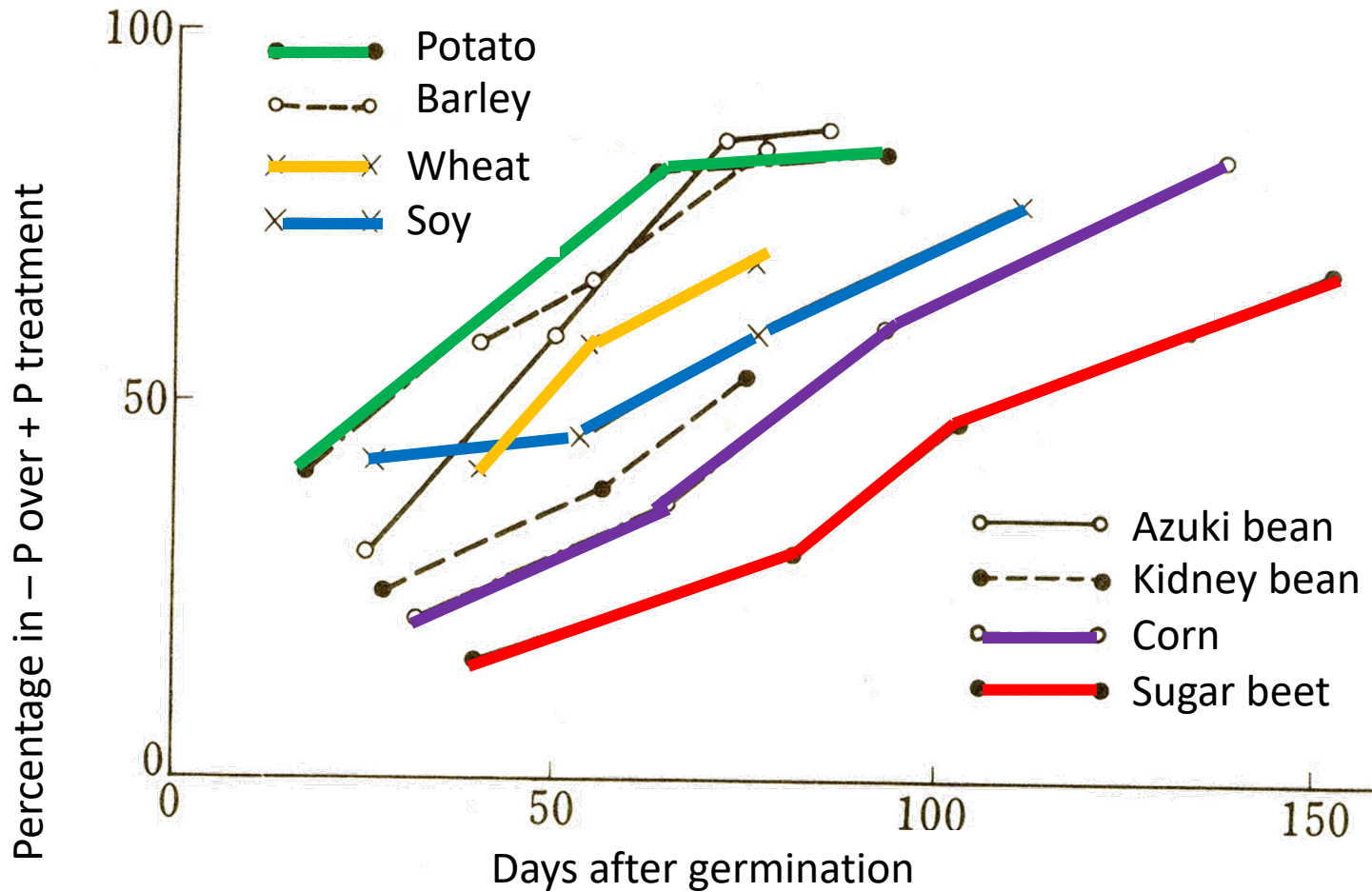
Blossom-end rot in
tomato.

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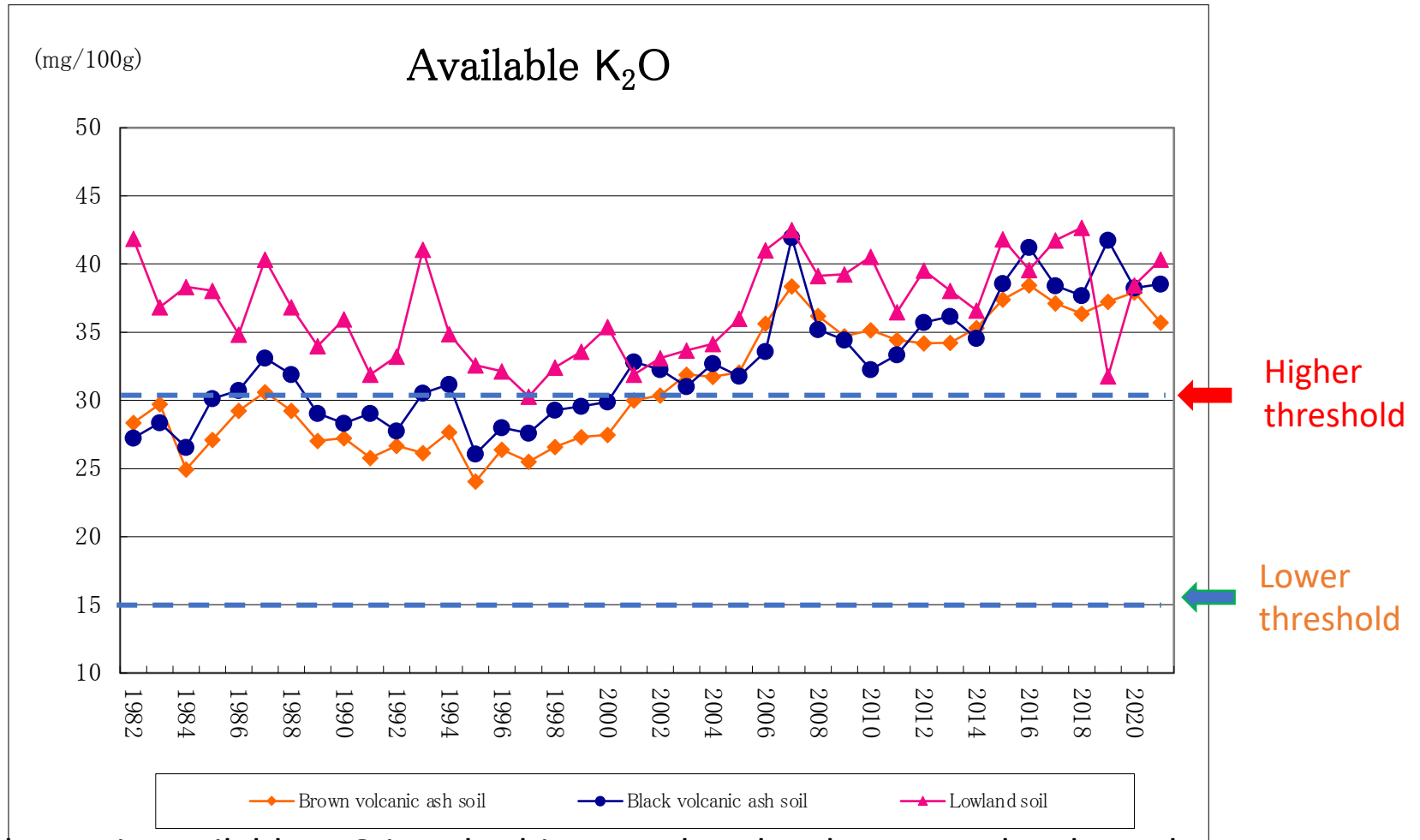


Change in available P₂O₅ in Tokachi; normal Andosols, wet Andosols, and lowland soils. Data: Tokachi Federation of Agricultural Co-operatives.

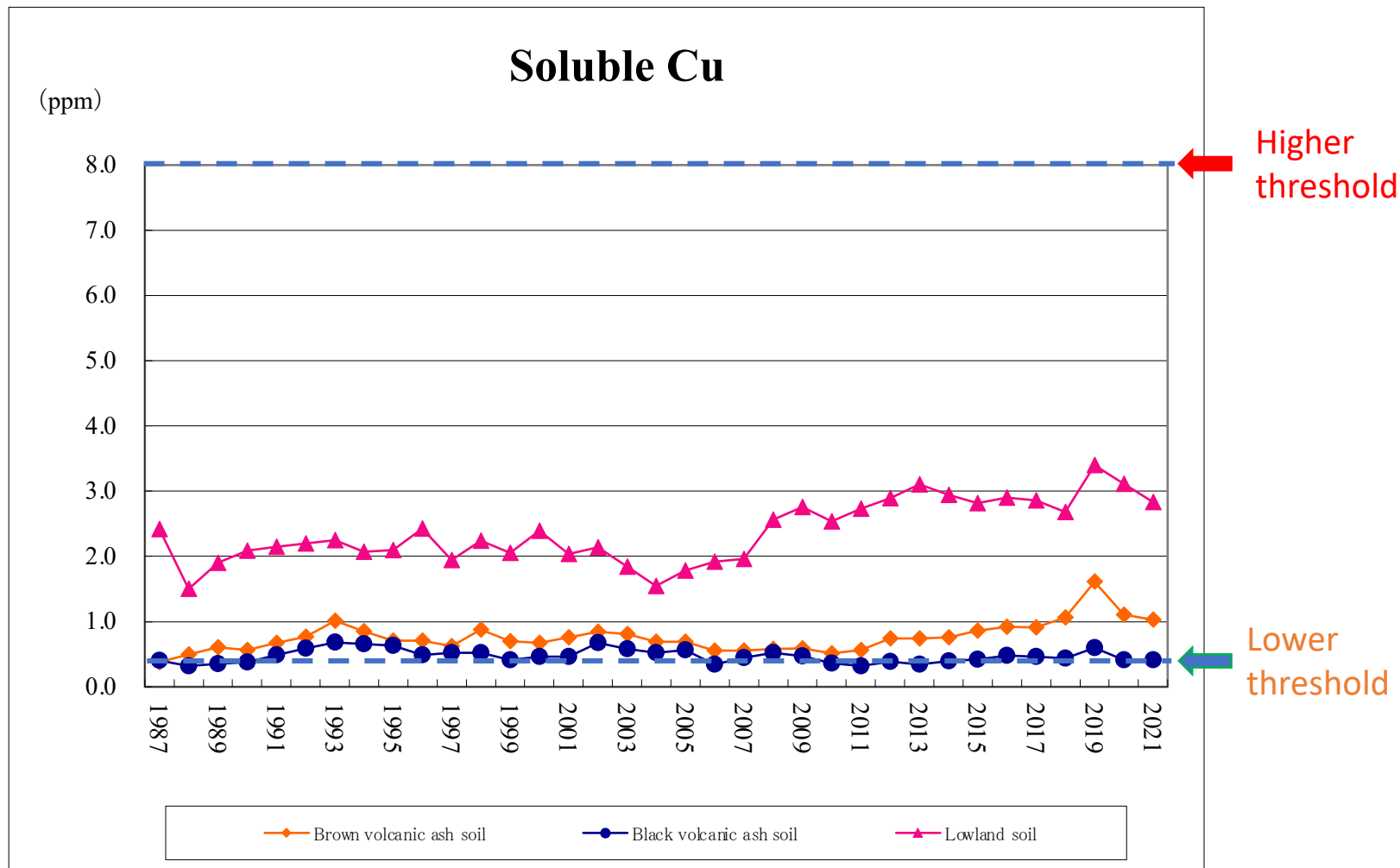
Dry matter production in -P treatment compared with +P treatment.



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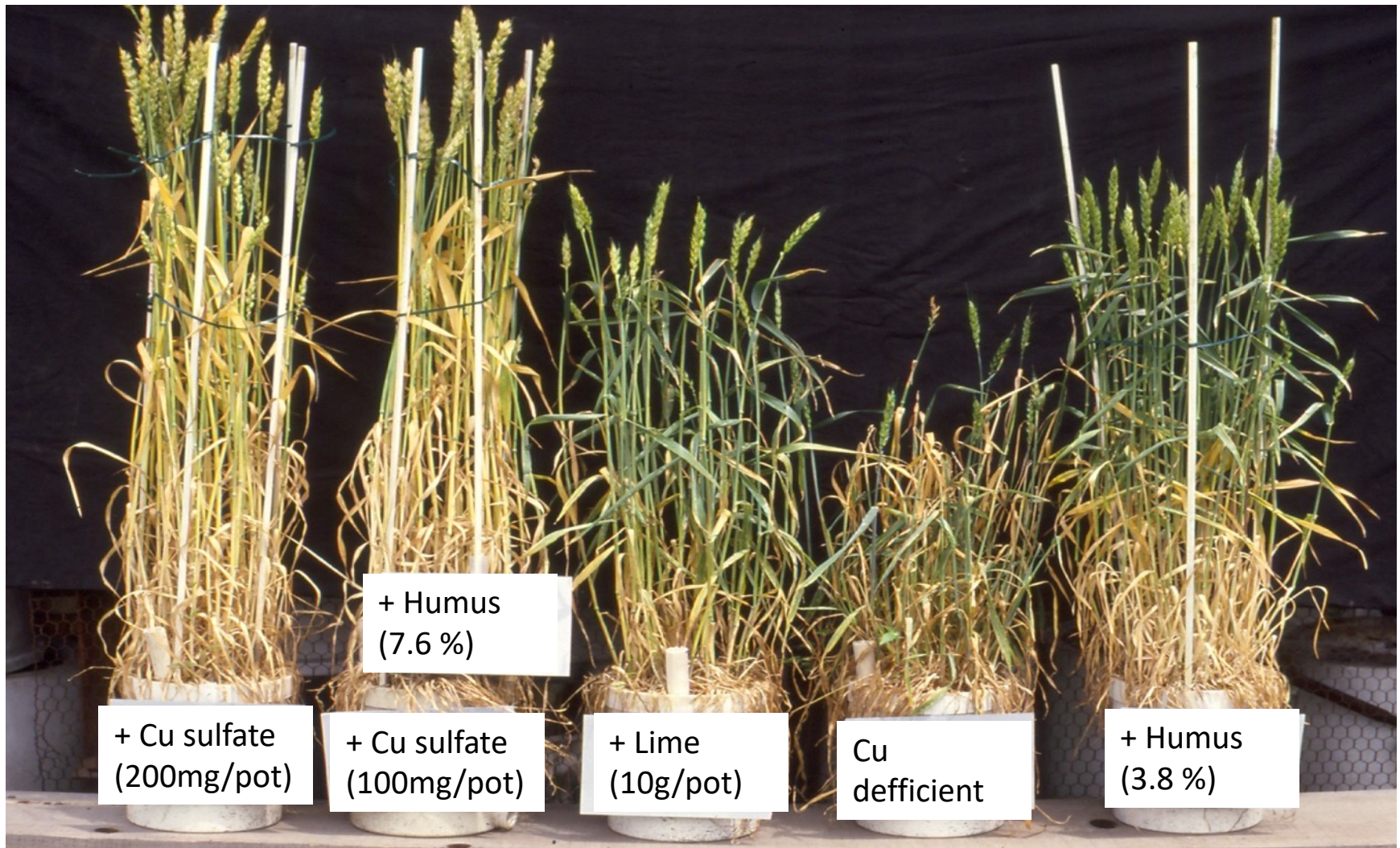


Change in available K_2O in Tokachi; normal Andosols, wet Andosols, and lowland soils. Data: Tokachi Federation of Agricultural Co-operatives.

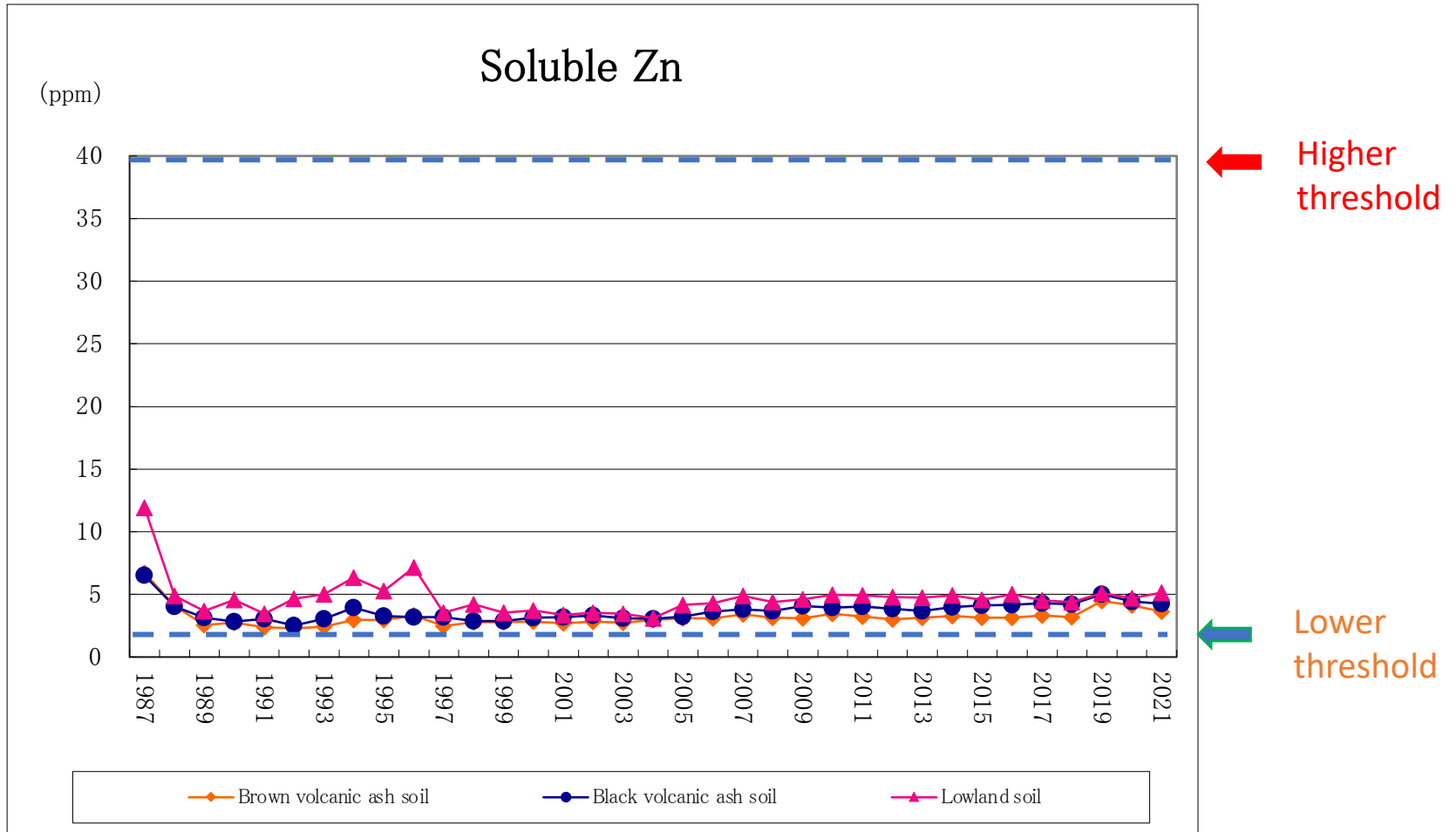


Change in soluble Cu in Tokachi; normal Andosols, wet Andosols, and lowland soils. Data: Tokachi Federation of Agricultural Co-operatives.

Copper deficiency in wheat.



Data and photo from Dr. Y. Yokoi.



Change in soluble Zn in Tokachi; normal Andosols, wet Andosols, and lowland soils. Data: Tokachi Federation of Agricultural Co-operatives.

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Zinc deficiency in adzuki bean.

Zinc deficiency is common in high pH and low humus soils.
Growth of young leaf is suppressed.



Conclusion

Farmers in Tokachi have faced various difficulties originating from severe climate conditions and unfavorable soil conditions.

However, they solved the problems by themselves and with the help of agricultural cooperatives, agricultural experiment station and the local and national government policies, and have built the most important upland and dairy farming area in Japan.

Index of my home page:

<http://timetraveler.html.xdomain.jp>

Please visit my home page and click the lecture button.

Thank you for your attention.

Click



The screenshot shows the homepage of the 'Time Traveller' website. The title 'Time Traveller' is in blue at the top left. A yellow banner at the top right says 'Welcome to the web-site of Woodpecker!' followed by a paragraph: 'Everyone is traveling in time and occupying the one moment of eternal flow of time. I just wanted to record my trail of life on this web-site. Last update: April 3, 2023.' Below the banner is a large photo of white lily of the valley flowers. Under the photo is the caption 'Lily of the valley, Obihiro.' and a red arrow pointing to the word 'Click' in red text. Below the photo is a row of blue buttons: '近況(Recent)', '入門化学', '人新世を耕す', 'エゾリスの会', 'Lectures', '皆既月食', and 'ひとりごと'. Below this row is another row of blue buttons for months: 'Jun.2022', 'Aug.2022', 'Oct.2022', 'Nov.2022', 'Dec.2022', 'Feb.2023', 'Mar.2023', and 'Apr.2023'. At the bottom right, there is a text box that says 'Thank you for visiting my web-site. I feel happy to welcome you in this homepage.' A red arrow points to the 'Lectures' button in the top row of buttons.