What is **SAIBAIX**?

Environment condition & Growth rate management systems

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**Equations chain of Energy and substances balance**

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**Sensors**

- Power meter
- Thermo-hygrometer
- Barometer
- Ion concentration sensor
- Electric conductivity and pH sensor
- Air flow sensor
- CO₂ concentration sensor
- Scanner
- Camera
- Electronic balance
- Quanometer

**Equations**

**Index-Values**

400 Sensors in 10000 heads/day factory

110 Index-Values Jun. 2016

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**Dr. T. KOZAI & PLANTX Engineers**

SAIBAIX is an environment condition and Growth rate management systems in a Plant Factory. It was developed by applying Dr. T. KOZAI's 300 peer-reviewed papers regarding the relationship between rate variables and state variables within Plant Factories. During the last two and half years, Dr. KOZAI and the PLANTX engineers had more than 100 study sessions.

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**Growth rate is managed by index values of SAIBAIX**

Net Photosynthetic rate (NPR) [kg/h] as affected by electricity supply rate for lighting (ESRL) (kW)

Transpiration rate (TR) [kg/h] as affected by electricity supply rate for lighting (ESRL) (kW)

Electric energy supply rate

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Achieved 120g / head average harvest weight of ruffle lettuce.

By implementing SAIBAIX, the average harvest weight has increased from 60g/head to 120g/head in 36 days from seeding.

With the establishment of PLANTX, it is possible to double the productivity in Plant Factories.