

Tidig detektion av stress i växter med infraröd teknik

Smarta lösningar med ny sensorteknik och bildanalys -
seminarium med fokus på växtskydd
Alnarp, 18 maj 2017



Tobias U. T. Lindblom¹

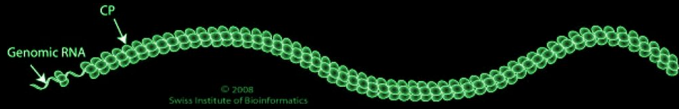
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- ²) Dept. Plant Biology, SLU Ultuna
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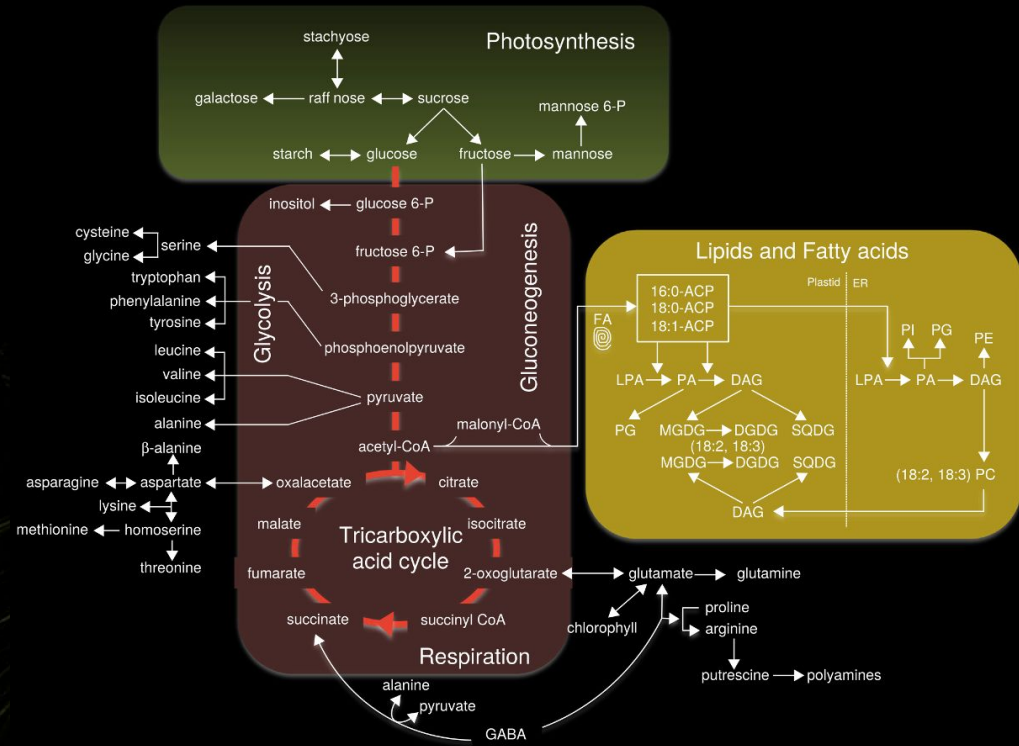
Potatisvirus Y

- Minskad skörd och kvalitet
- Knölar bär smitta till nästa generation
- Sprids via bladlöss





- Tillväxtmönster
- Transpiration
- Sammansättning



Current Opinion in Virology



Llave, César. "Dynamic Cross-Talk between Host Primary Metabolism and Viruses during Infections in Plants." *Current Opinion in Virology, Environmental virology • Viruses and metabolism • Animal models for viral diseases*, 19 (August 2016): 50–55. doi:10.1016/j.coviro.2016.06.013.

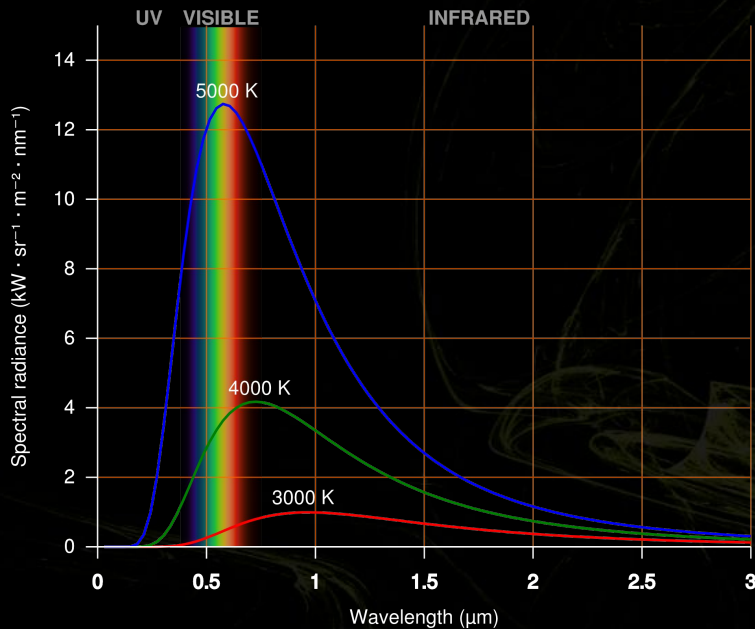
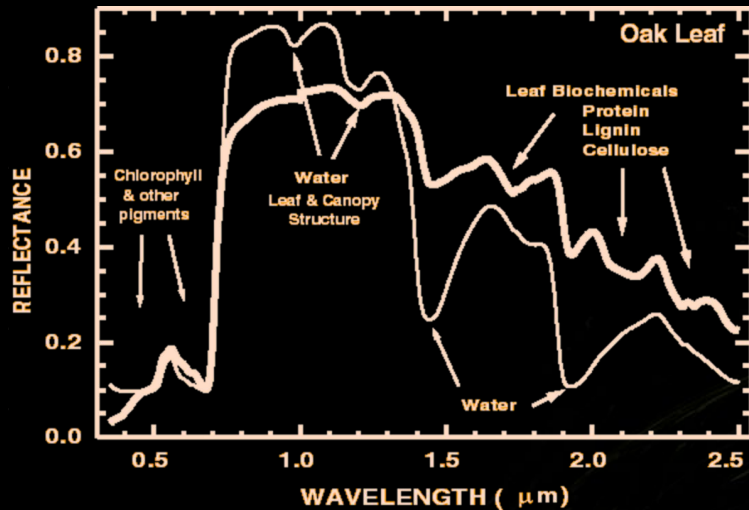


Vårt mål

Hitta och ta bort infekterade plantor!



Mellaninfraröd radiografi



USGS Spectroscopy Lab

Wikipedia

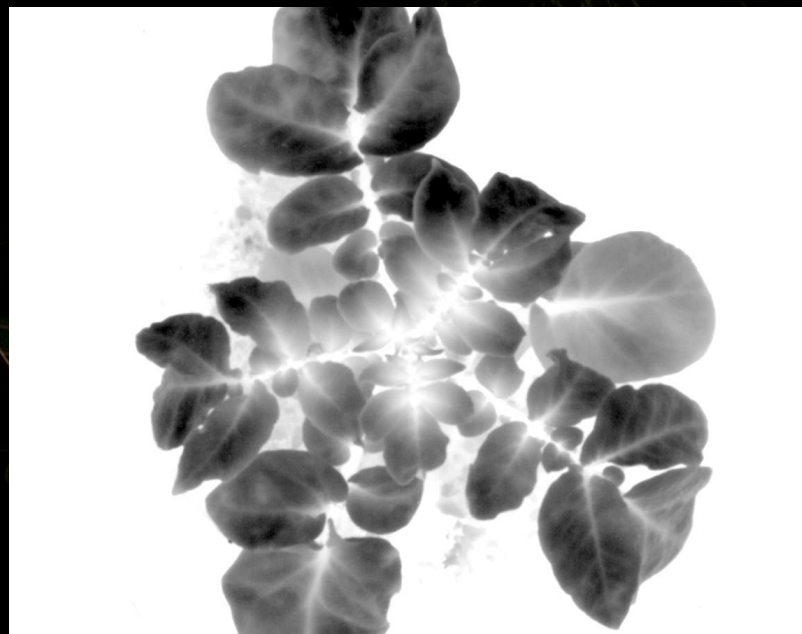
Continuous operation

imaging during motion

Pro Echo
PROVISION

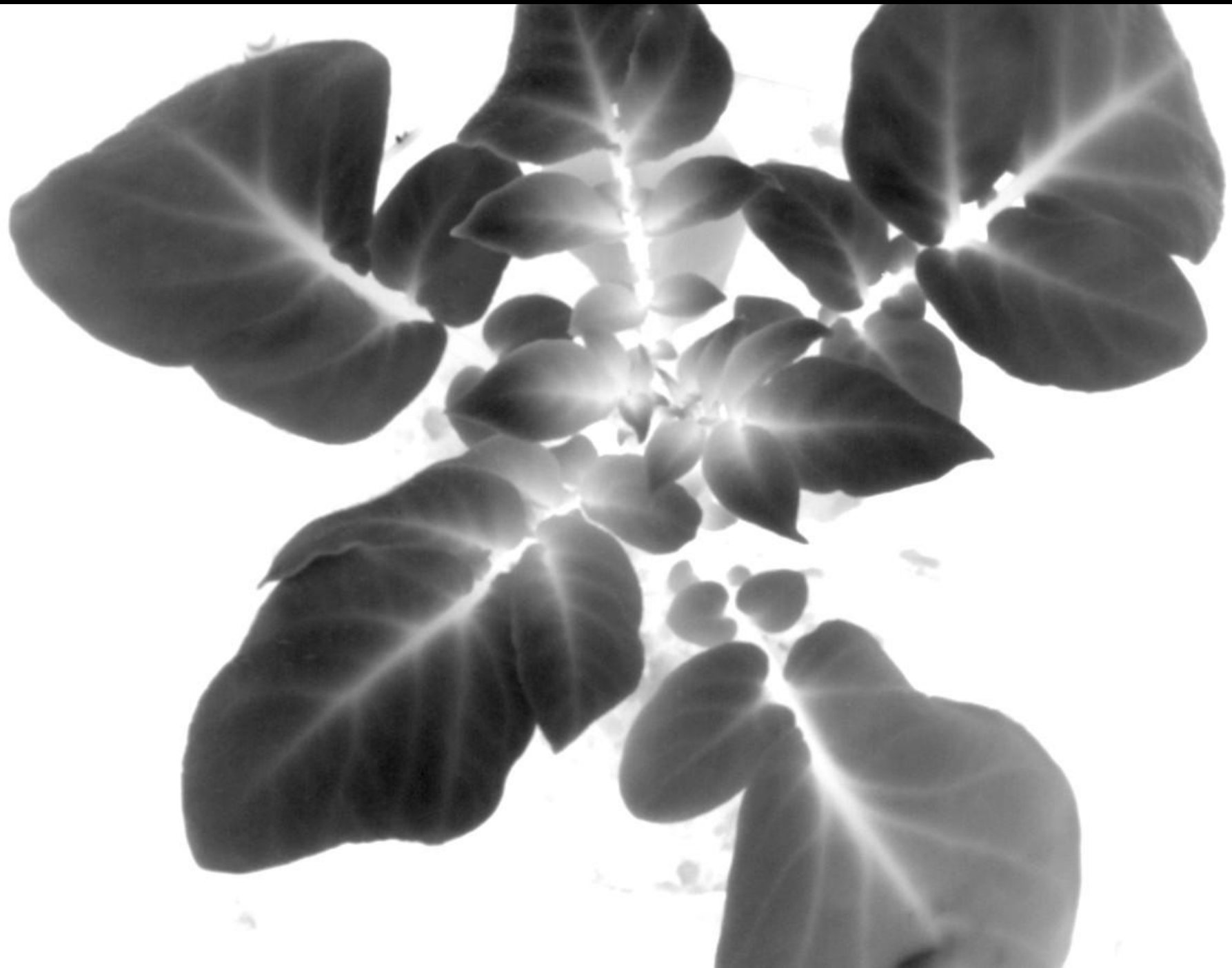


Exempel (PVY i Potatis)



project: PIRI
№ 2412
Solist
potatoplant
2016-07-05
PVY in source
sources: 538
contact:
tobias.lindblom@slu.se
0704917030





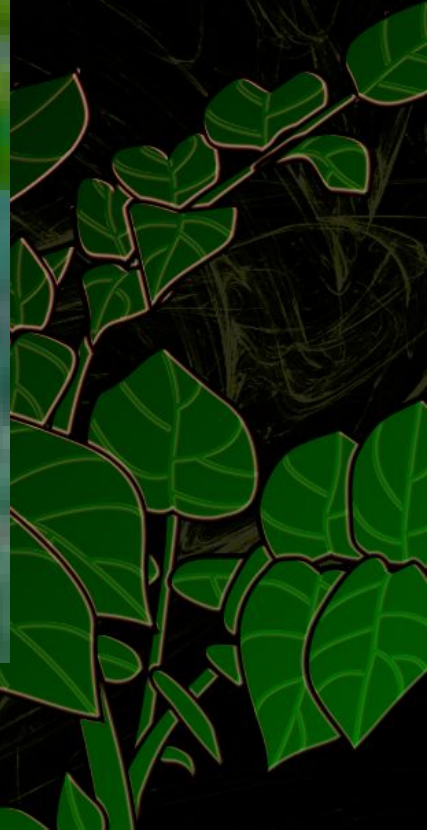
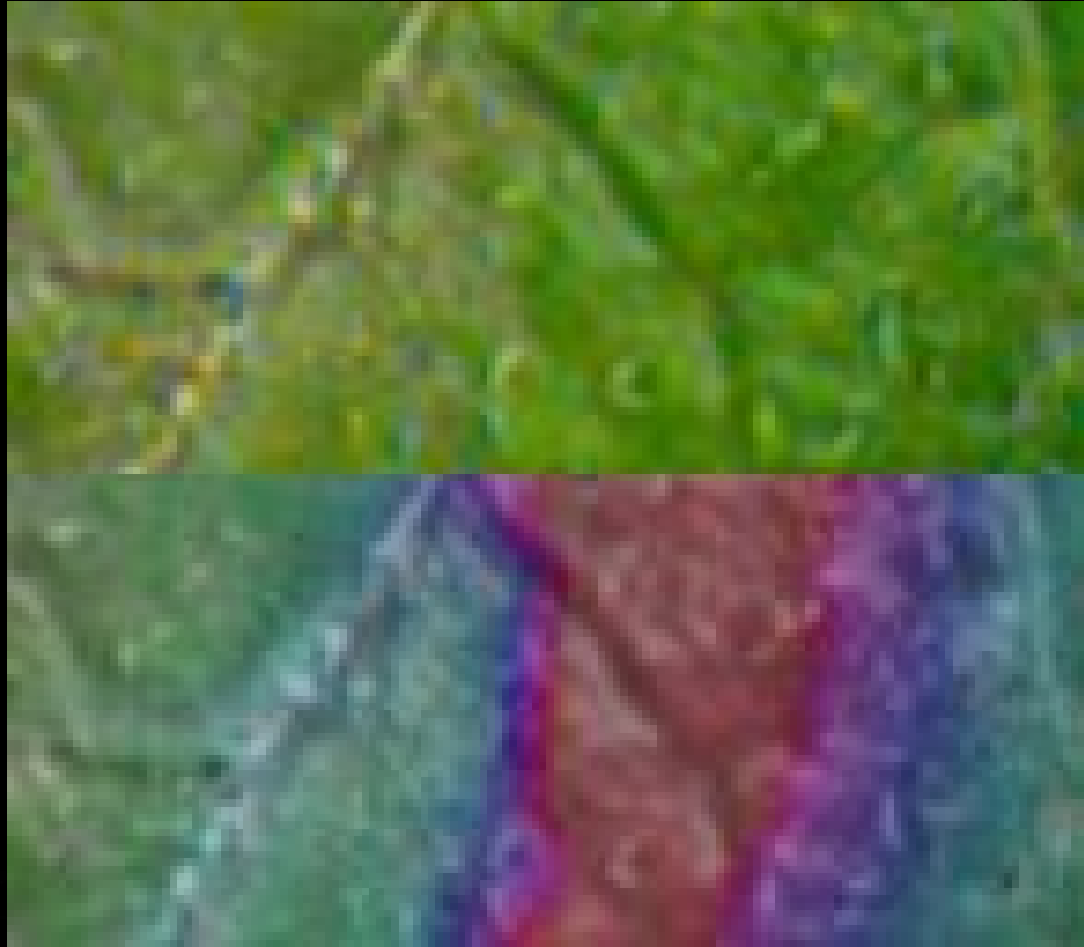




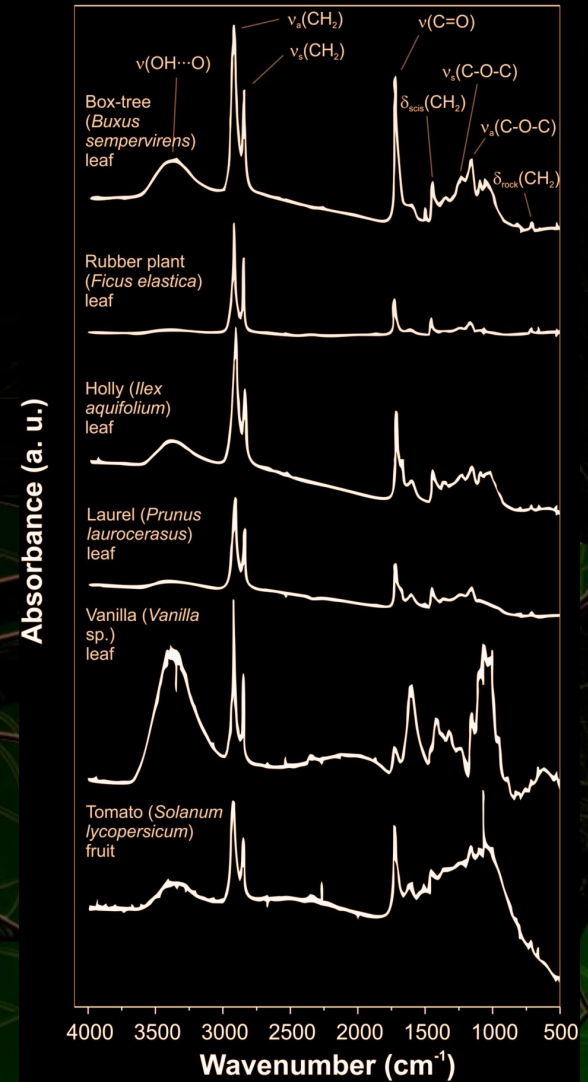
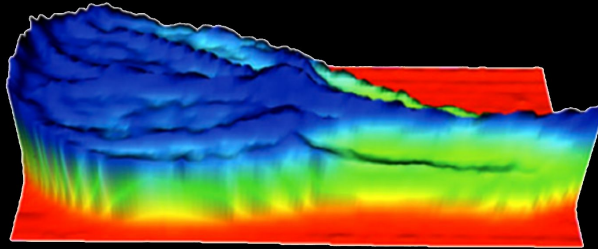
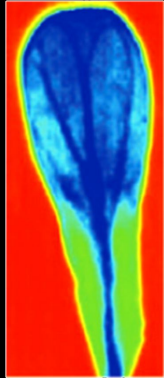
Segmentering



Lyserande celler



Kutikulans kemi?



Heredia-Guerrero et al. "Infrared and Raman Spectroscopic Features of Plant Cuticles: A Review." *Frontiers in Plant Science* 5 (June 25, 2014). doi:10.3389/fpls.2014.00305.



Kommersialisering av metoder och kunskap

Smart kamerateknik

Robotik för kopplade åtgärder