

Warm up:

- Stretch mouth
- Blow through lips
- Move tongue round teeth
- Hum, Ahh
- Diaphragm
- Tongue twister: The lips, the teeth, the tip of the tongue, the tip of the tongue, the teeth, the lips.

Slides to be remembered

Peter Emmrich, JIC

Slides are there to support your talk

Three sections in this session

Keeping your slides simple

Each element has a purpose

Using Technology

Your slides are for your audience

- Face your listeners, not your slides!
- You have done the work and you have made the slides - you know what's on there
- But if the text is on the slide, you'll be tempted to read it off
- And the audience will read the slides instead of listening to you
- Don't do this!

Don't let your old slides dictate your story

PowerPoint Datei Bearbeiten Ansicht Einfügen Format Anordnen Extras Bildschirmpräsentation Fenster Hilfe 26% Wed 19 Aug 17:55

Grass pea_Peter.pptx In der Präsentation suchen

Start Designs Tabellen Diagramme SmartArt Übergänge Animationen Bildschirmpräsentation Überprüfen

Folien Schriftart Absatz Einfügen Format Bildschirmpräsentation

Layout Neue Folie Abschnitt

Lifting the Curse of the Grass Pea (Peter Bannister, ICRISAT CCA) 1

grass pea world map 2

grass pea seedling 3

grass pea 4

grass pea field 5

world map 6

so why aren't we all eating grass pea? 7

the curse of the grass pea 8

Our vision: Rapid domestication of grass pea 9

can we remove ODAP? 10

by conventional breeding? 11

by genetic engineering? 12

test in seedlings - tested by chemical assay 13

test in individual seeds - tested by mass spectrometry 14

How can we confirm these results? 15

why are none of them toxin-free? 16

Transcriptomics 17

RevGen 18

test in seedlings 19

test in mature plants 20

map of global distribution 21

grass pea field 22

Acknowledgements 23

Today received 15 hours from the rain... That's a lot of rain in the rain! 24

Why do grass peas produce ODAP? 25

NIAB Cambridge UK 26

Kalukila India 27

National Research Institute Nairobi, Kenya 28

High priority mutants 29

Toxin distribution in mature plant 30

a different approach? 31

The culprit: α -methyl- γ -2,3-dihydroxypropionic acid (β -ODAP) 32

Characterization of mutant P1-CODR 33

ODAP acts as a glutamate analogue 34

P1-CODR 35

Lathyrus sativus only in conditions of malnutrition, cysteine and methionine are protective factors 36

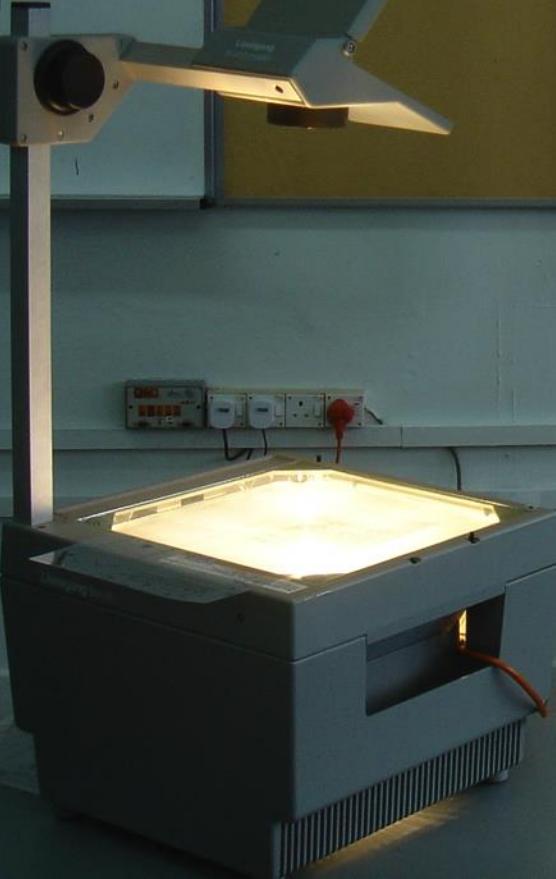
2.1 High throughput screen - method (1) 37

- metabolic pathways of ODAP production
- B77 mutants that accumulate odapic acid and DMAP normal functionality but produce no ODAP
- P1-CODR mutant that produces no ODAP but has normal functionality
- P1-CODR plants not carrying codarone have been found

2.2 P1-CODR plants not carrying codarone have been found 38

An
where the borders shd b
drawn.
Yes → author's belief
— Instif = .
— du
· N

Much advice on slides is from pre- digital times



3 Beyond these realities, the patient is
obliged and the physician's duty is to be the
surgeon.

This is why the doctors in Singapore were right
to re-arrange their clinics.

The war was a battle between two very
different ways of life. One was natural
and the other was man-made. The
battle was fought and the
lesson learned was that it was too deadly, ordinary.

They were asked for nothing special, nothing
superior, nothing radically enhancing of
the human condition. They were only seeking
a return to a more natural, more human

way of life. The doctors were willing because, the
doctors. They should feel no guilt, only sorrow
that victory once again went to nature, in all its
cruelty.

It's very hard to see anything here

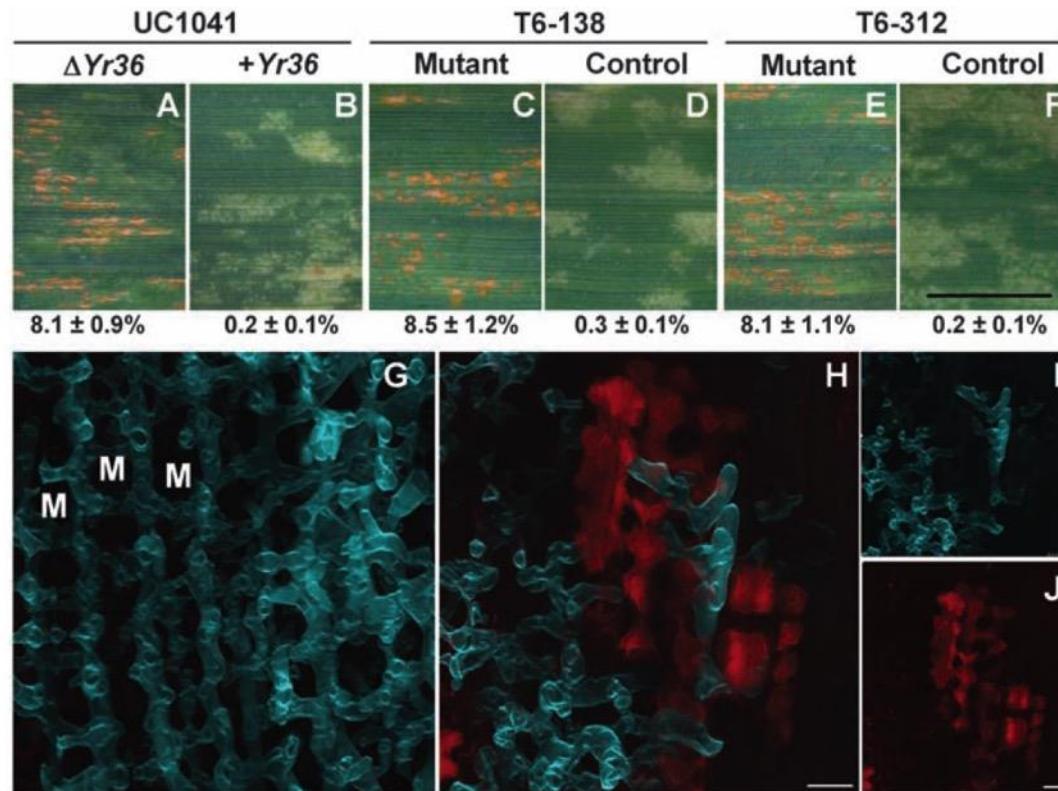
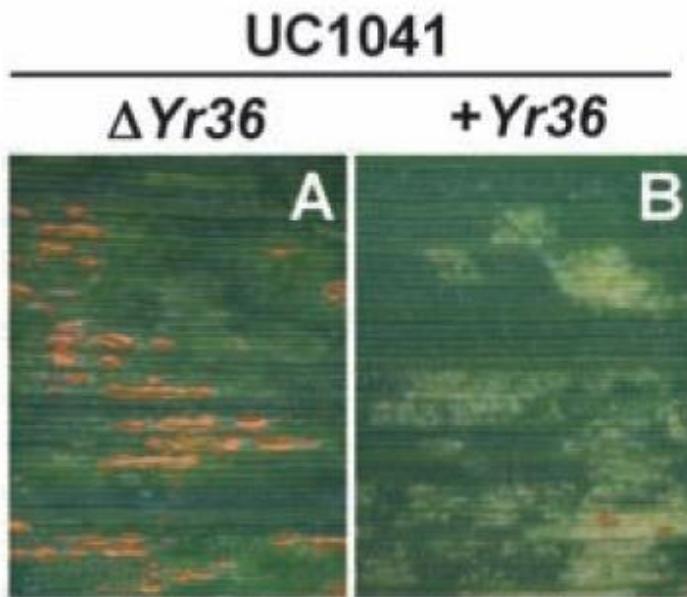
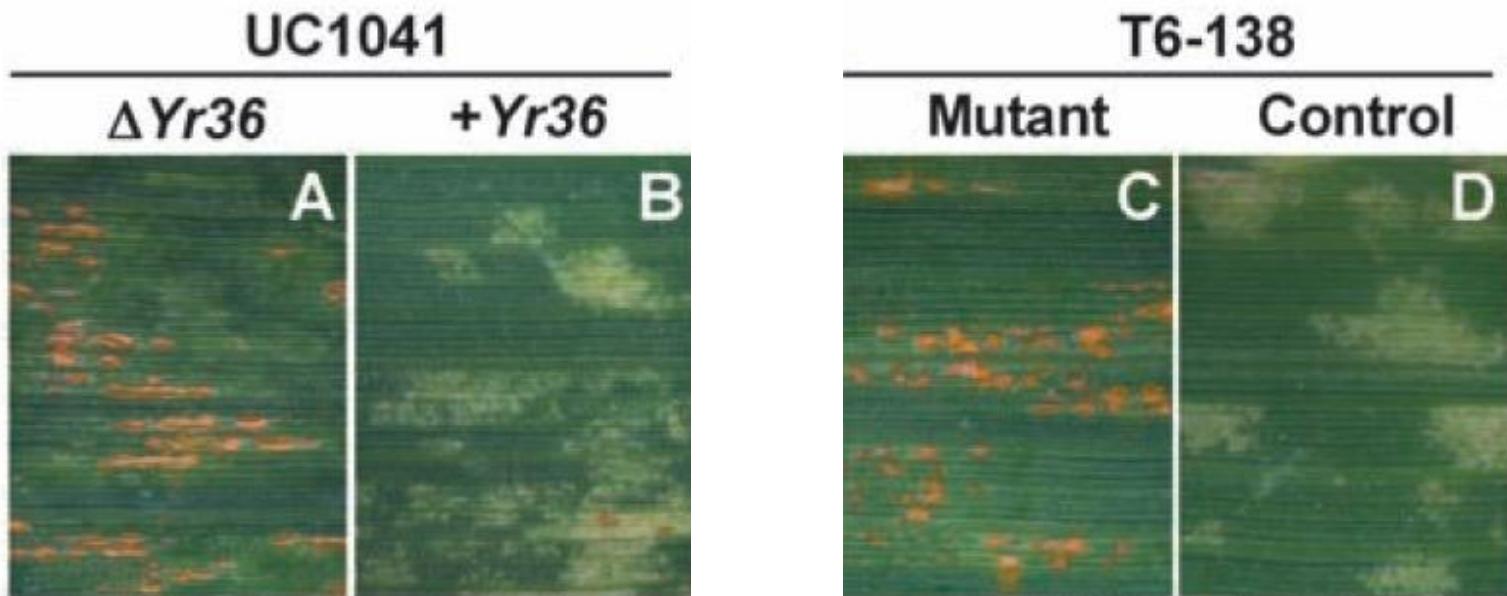


Fig. 2. Functional validation of *Yr36* by mutational analysis. (A to F) Leaf surfaces 11 days after PST inoculation. Scale bar, 5 mm. Numbers below leaves are average percent leaf area with pustules ± SEM ($N = 8$, fig. S2). An analysis of variance (ANOVA) of the log-transformed data showed significant differences ($P < 0.01$) between mutant and control lines. (A) UC1041 without *Yr36*. (B) UC1041+*Yr36* isogenic line used for mutagenesis. (C and E) Lines T6-138 and T6-312 with homozygous mutations in the *WKS1* kinase domain. (D and F) Sister lines without the mutations. These and additional mutant lines are described in table S7 and figs. S6 to S9. (G and H) A dual-channel, confocal microscopic z-series inside a wheat leaf 13 days after PST inoculation. Scale bar, 20 μ m. The fungus stained with Uvitex 2B (Polysciences Inc., Warrington, PA; false-color blue) and autofluorescing wheat leaf cells (false-color red) are visible. (G) The susceptible T6-312 mutant has an extensive mycelial network in which each (invisible) plant mesophyll cell (selected cells shown as M) is encircled by a hypha. (H) The T6-312 control line has a poorly developed fungal network surrounded by autofluorescent mesophyll cells that presumably were involved in the resistance response. (I and J) Separate channels of (H). Scale bar, 20 μ m.

But here you know what you need to look at

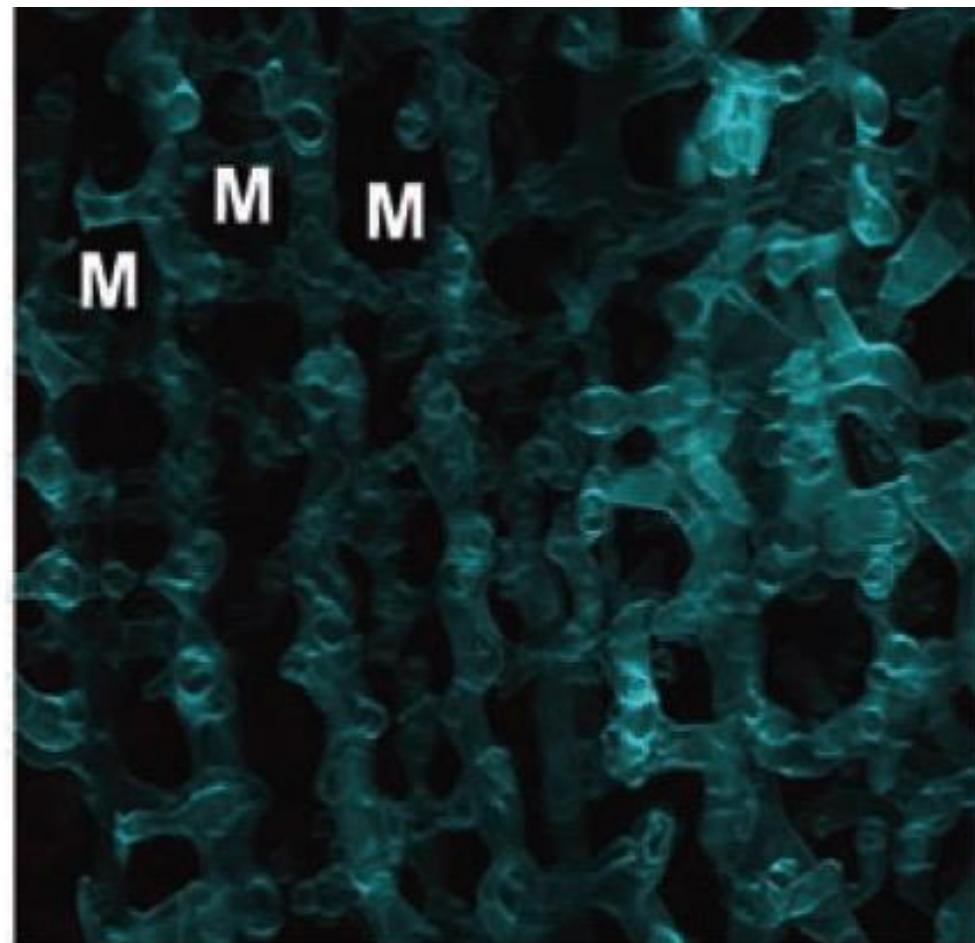


Keep your slides in balance

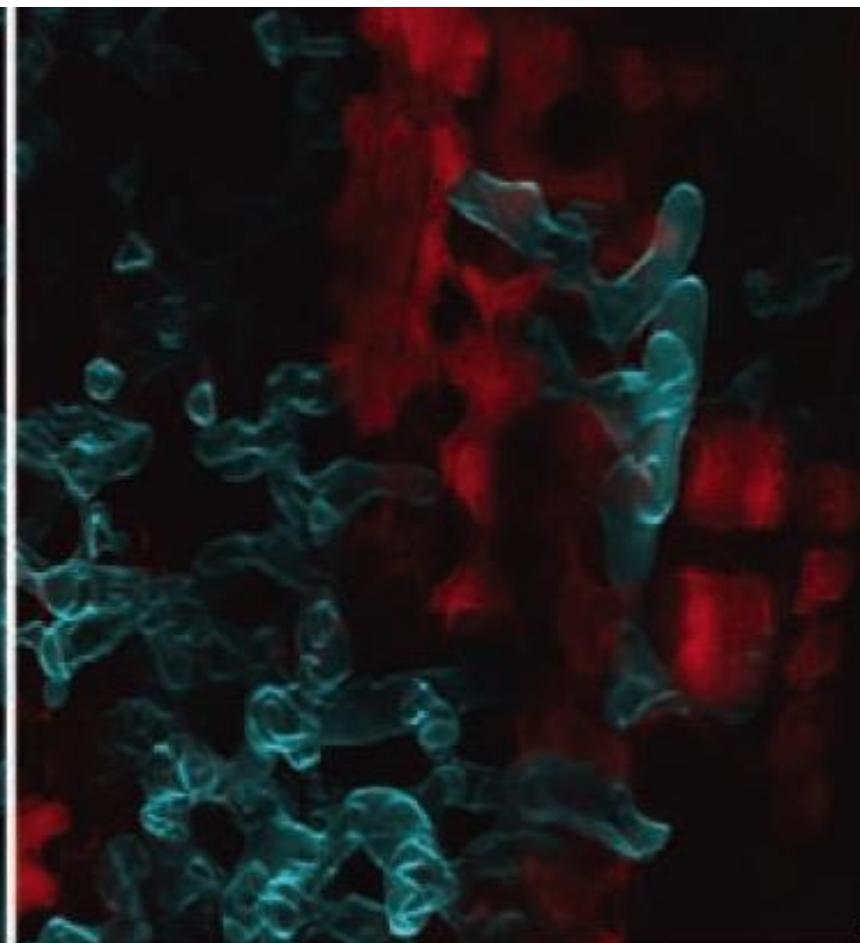


Don't lose elements at the edge

Mutant



Control



Fungal hyphae

Auto-fluorescing wheat cells

Using text

Only write what you want people to read

- That point has really been made
- I could have just said this
- and already this is too much text

Sans-serif fonts are easier to read

like Arial,
Trebuchet MS,
or Calibri

than serif fonts

like Times New Roman,
Courier,
or Cambria

18 point

20 point

24 point

28 point

32 point

36 point

40 point

44 point

48 point

AVOID USING ALL-CAPITAL LETTERS
BECAUSE THEY ARE REALLY HARD TO READ

(ALSO VERY AGGRESSIVE)

And bold letters sometimes merge

Each element has a purpose

Three routes of information

what you show



what you say



what you write



Different kinds of slides

Using Next Generation Sequencing to assess the diversity of MCMV and associated viruses in Mozambique

Your Name,
Research Assistant

Your Home Institution, Mozambique

SUPERVISORS: Someone Here, Someone Back-
Home

RESEARCH ASSISTANT: Another Person
Week 40/40

A viral diversity database to fight Maize Lethal Necrosis

Your Name,
Research Assistant

Your Home Institution, Mozambique

SUPERVISORS: Someone Here, Someone Back-
Home

RESEARCH ASSISTANT: Another Person
Week 40/40

A viral diversity database to fight Maize Lethal Necrosis

Your Name

Your Home Institution

Your Research Group

Titles of your slides

Slide titles should be useful statements

Tissues used for DNA extraction



DNA was extracted from leaves and roots



This is an interruption slide



Using slides to mark progression

Not a useful home slide

- Introduction
- Objectives
- Methodology
- Results
- Conclusion
- Project output
- Impact pathways
- Acknowledgement

A more meaningful home slide

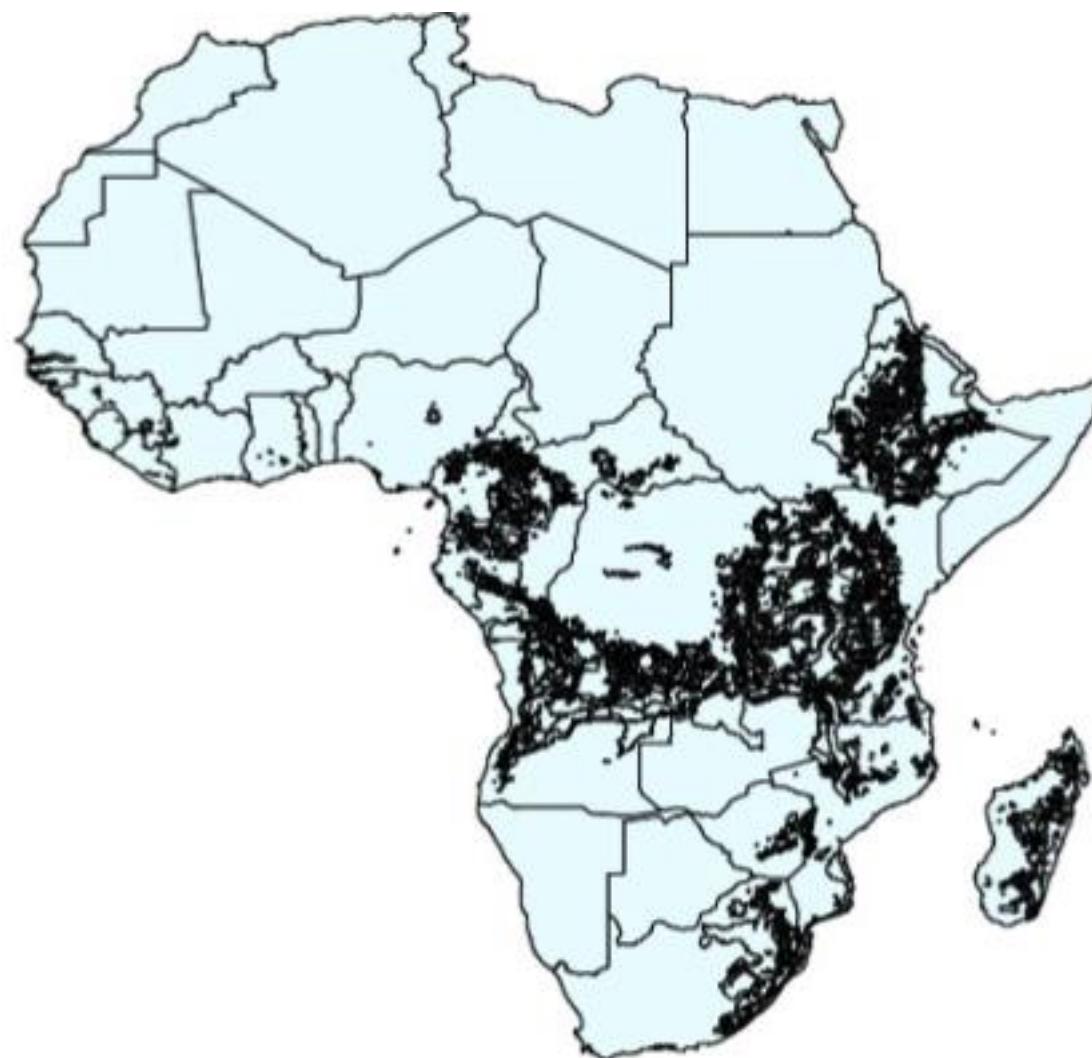
- Maize Lethal Necrosis is a threat to food security in Sub-Saharan Africa
- Knowing the viral molecular diversity can help us predict virulence and spreading
- We have built a sequence database of MLN-associated viruses in Mozambique
- This can help farmers with selecting the most suitable maize genotypes

A more meaningful home slide

- Maize Lethal Necrosis is a threat to food security in Sub-Saharan Africa



MLN is predicted to spread across Sub-Saharan Africa
(ASARECA, 2014)



Your home slide as a summary

- Maize Lethal Necrosis is a threat to food security in Sub-Saharan Africa

Your home slide as an anchor

- Maize Lethal Necrosis is a threat to food security in Sub-Saharan Africa
- Knowing the viral molecular diversity can help us predict virulence and spreading

Highlight the relevant section

- Maize Lethal Necrosis is a threat to food security in Sub-Saharan Africa
- Knowing the viral molecular diversity can help us predict virulence and spreading
- We have built a database of MLN-associated viruses in Mozambique

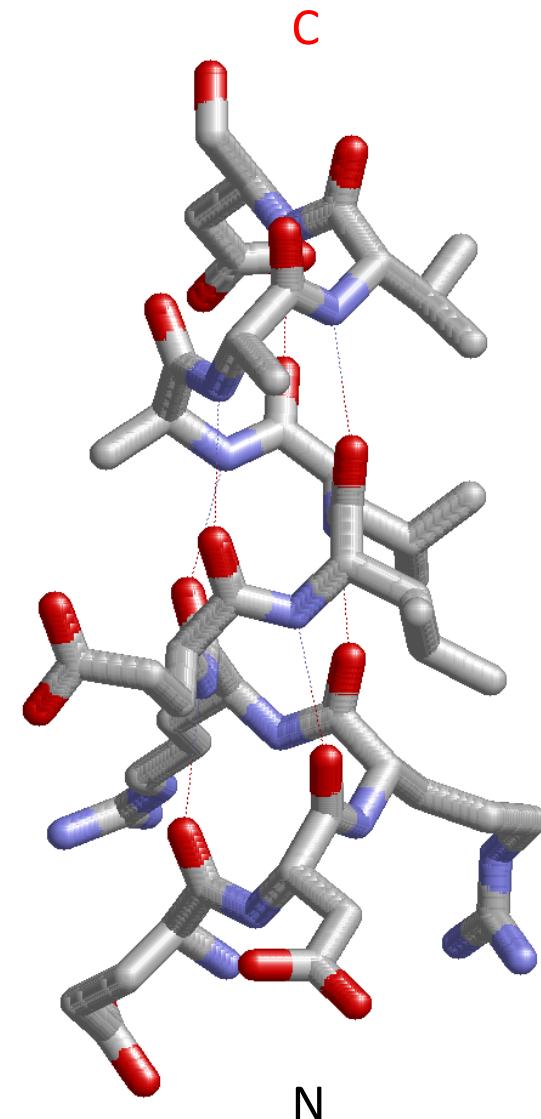
And your whole story is on it

- Maize Lethal Necrosis is a threat to food security in Sub-Saharan Africa
- Knowing the viral molecular diversity can help us predict virulence and spreading
- We have built a database of MLN-associated viruses in Mozambique
- This can help farmers with selecting the most suitable maize genotypes

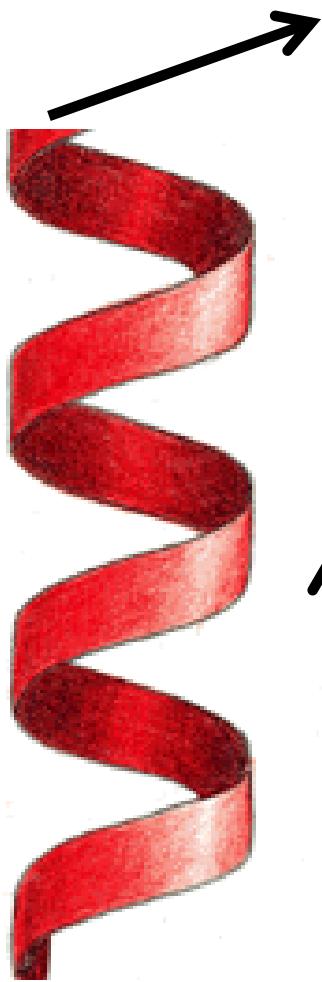
Images can make things more intuitive

α Helix

- Normally right-handed helix
- 3.6 residues per turn
- Translation per residue 1.5 Å
- 100° rotation per residue

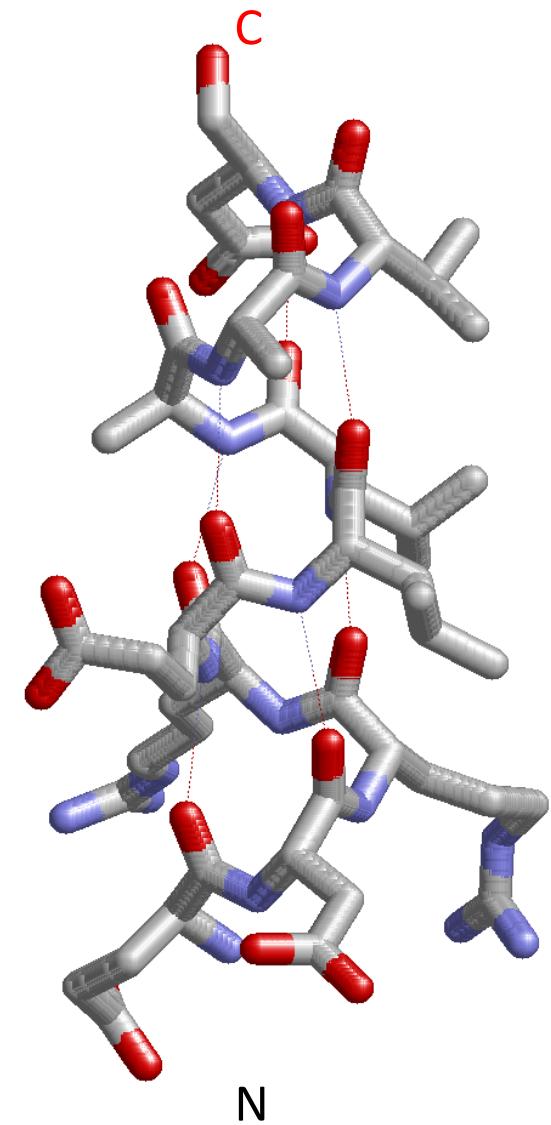


α Helix

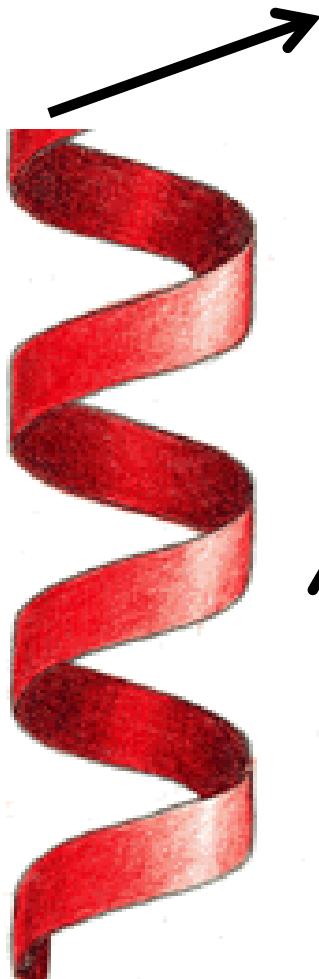


Right handed

↑
3.6 residues per turn
1.5 Å per residue



α Helix



Right handed

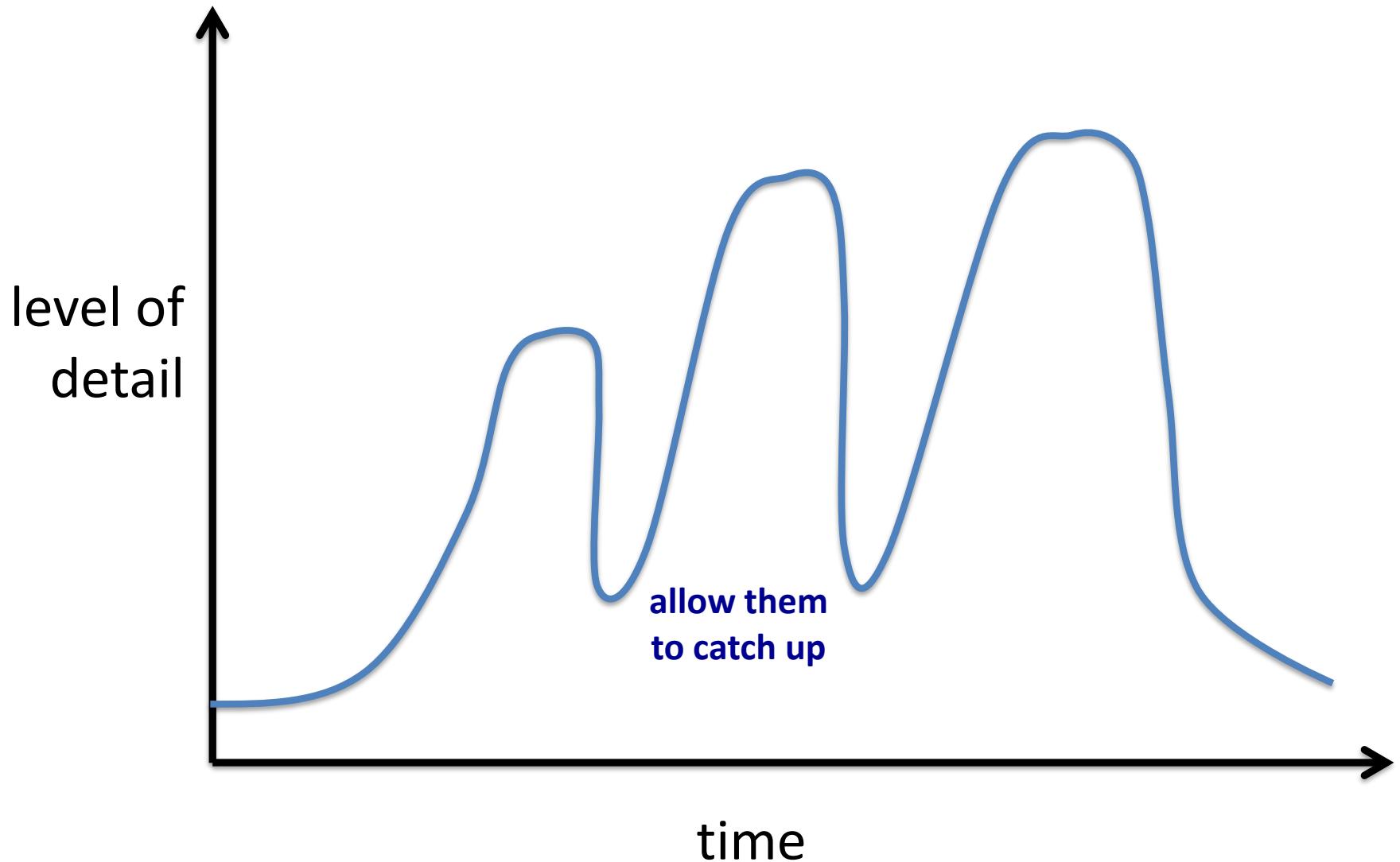
↑
3.6 residues per turn
1.5 Å per residue





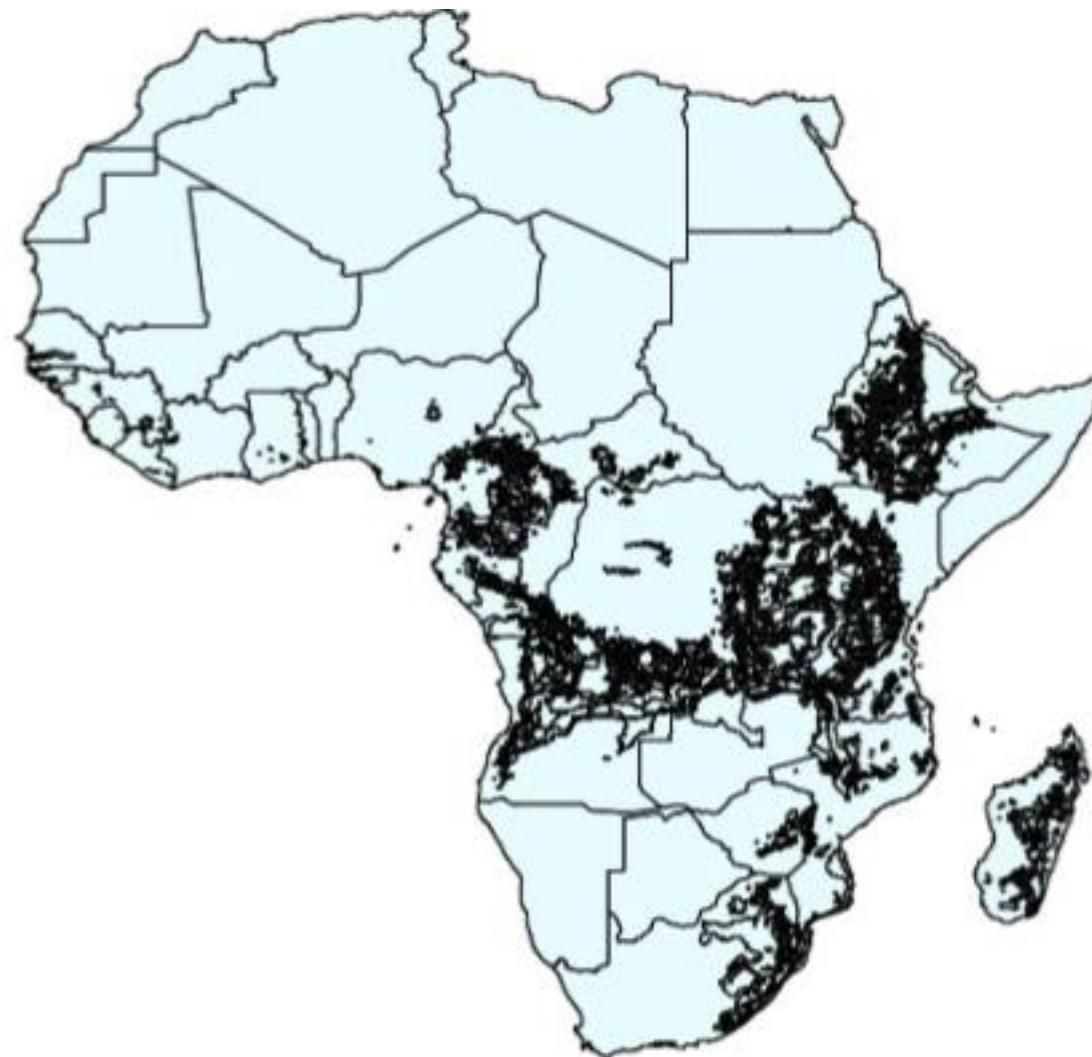


Slides can indicate levels of detail

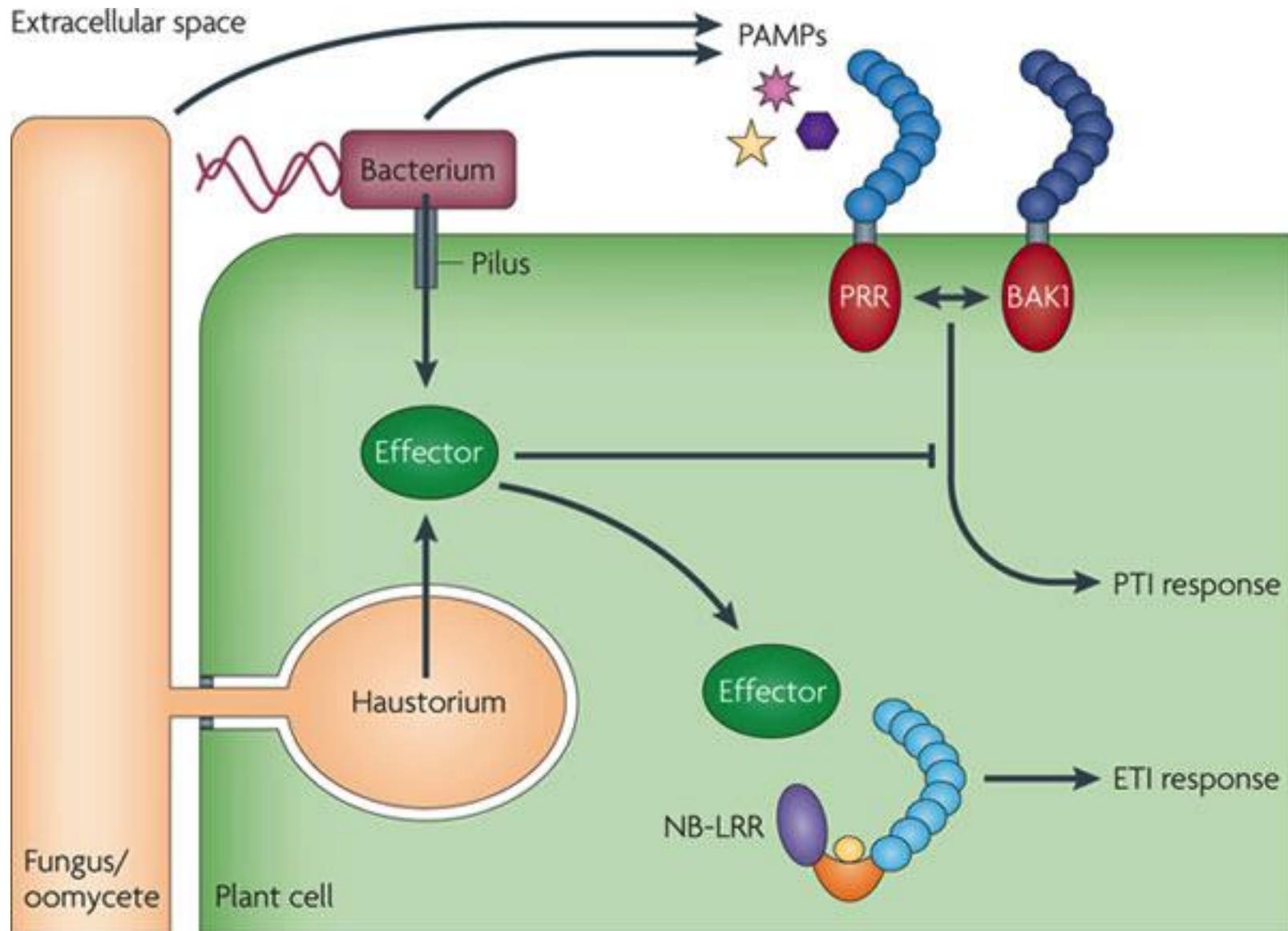




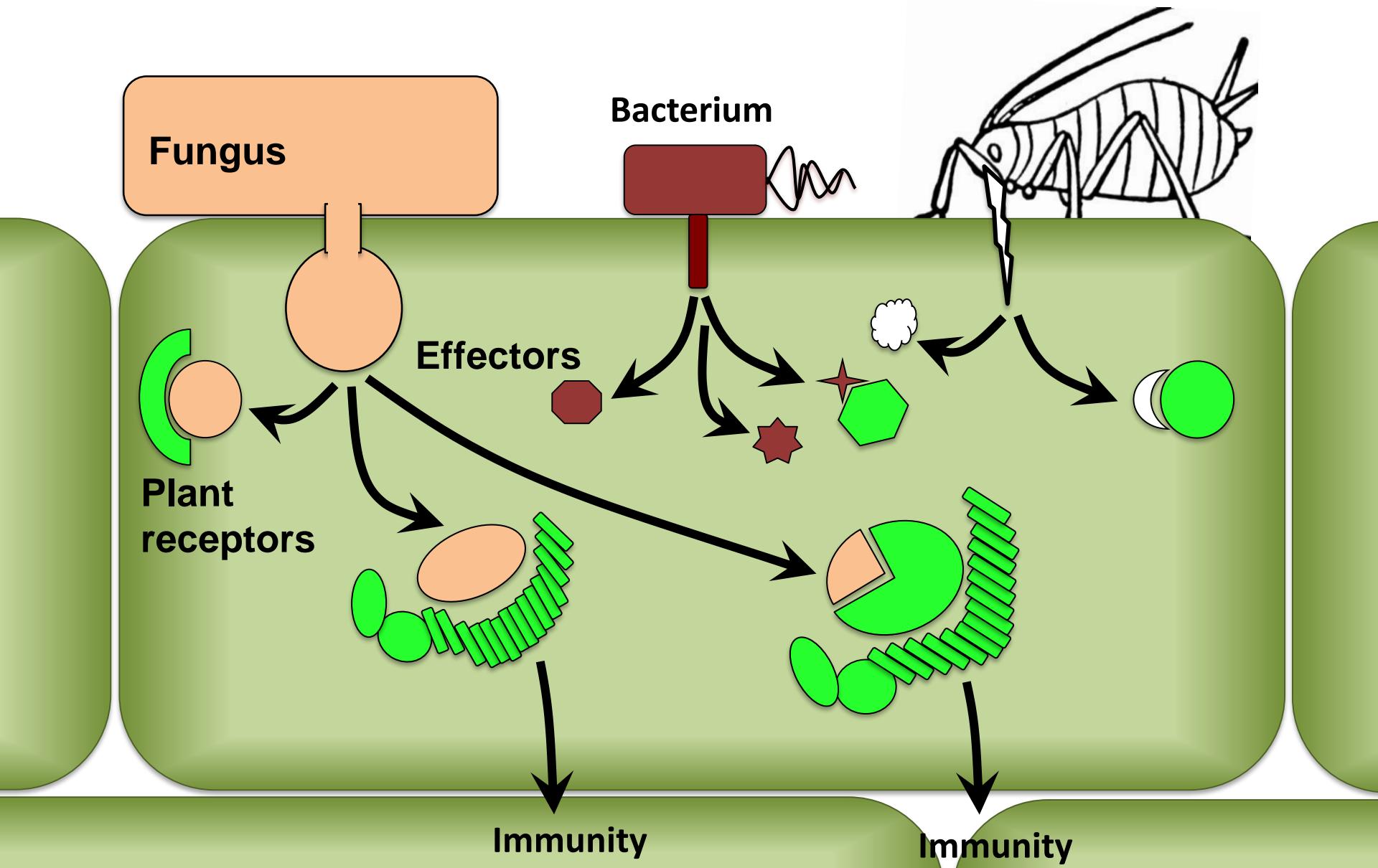
MLN is predicted to spread across Sub-Saharan Africa
(ASARECA, 2014)



Resistance gene-mediated immunity

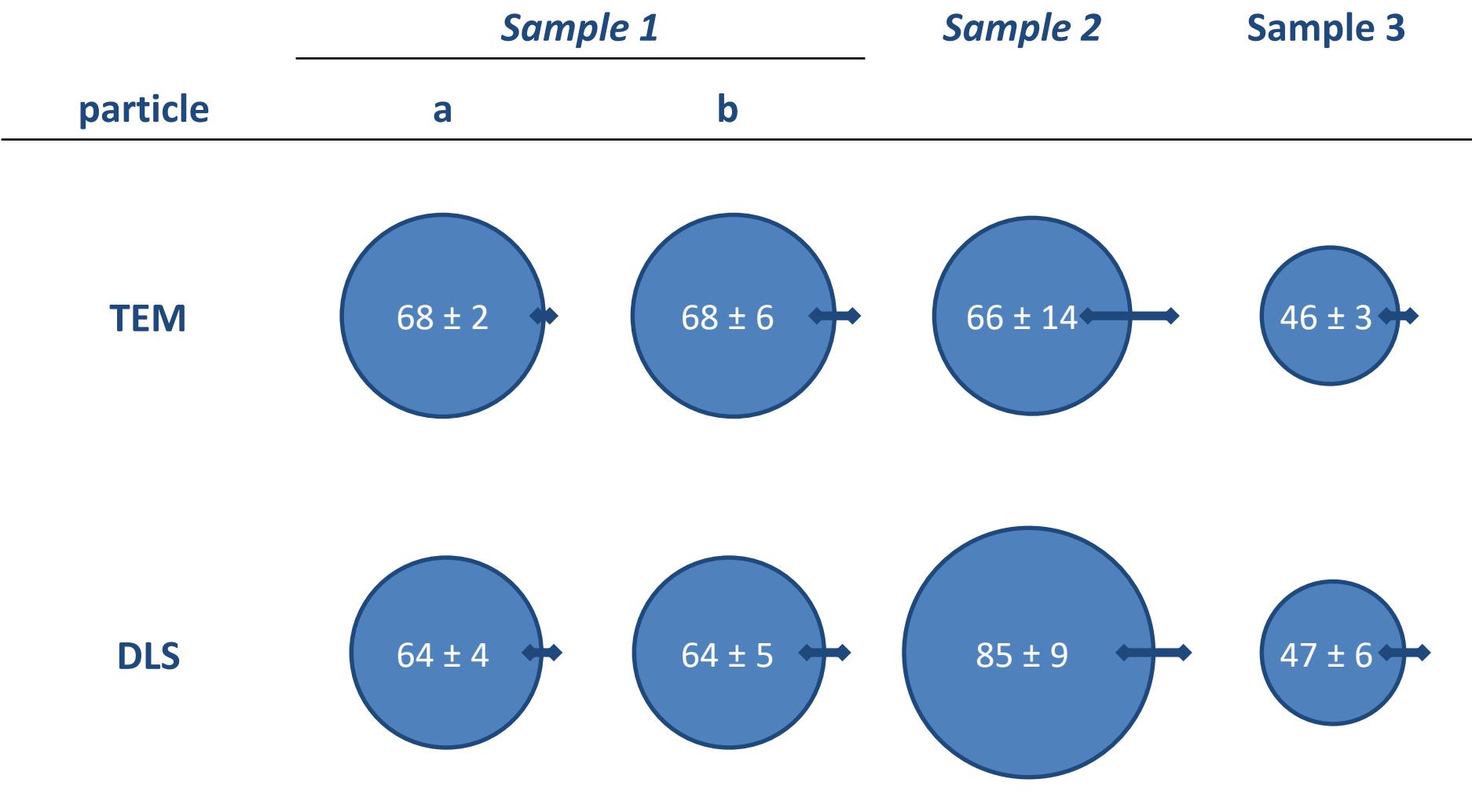


Resistance gene-mediated immunity



tables take time to interpret

	<i>Sample 1</i>		<i>Sample 2</i>	<i>Sample 3</i>
	a	b		
TEM β particle (nm)	68 ± 2	68 ± 6	66 ± 14	46 ± 3
DLS β particle (nm)	64 ± 4	64 ± 5	85 ± 9	47 ± 6



Graphics are more intuitive

A plot for illustration

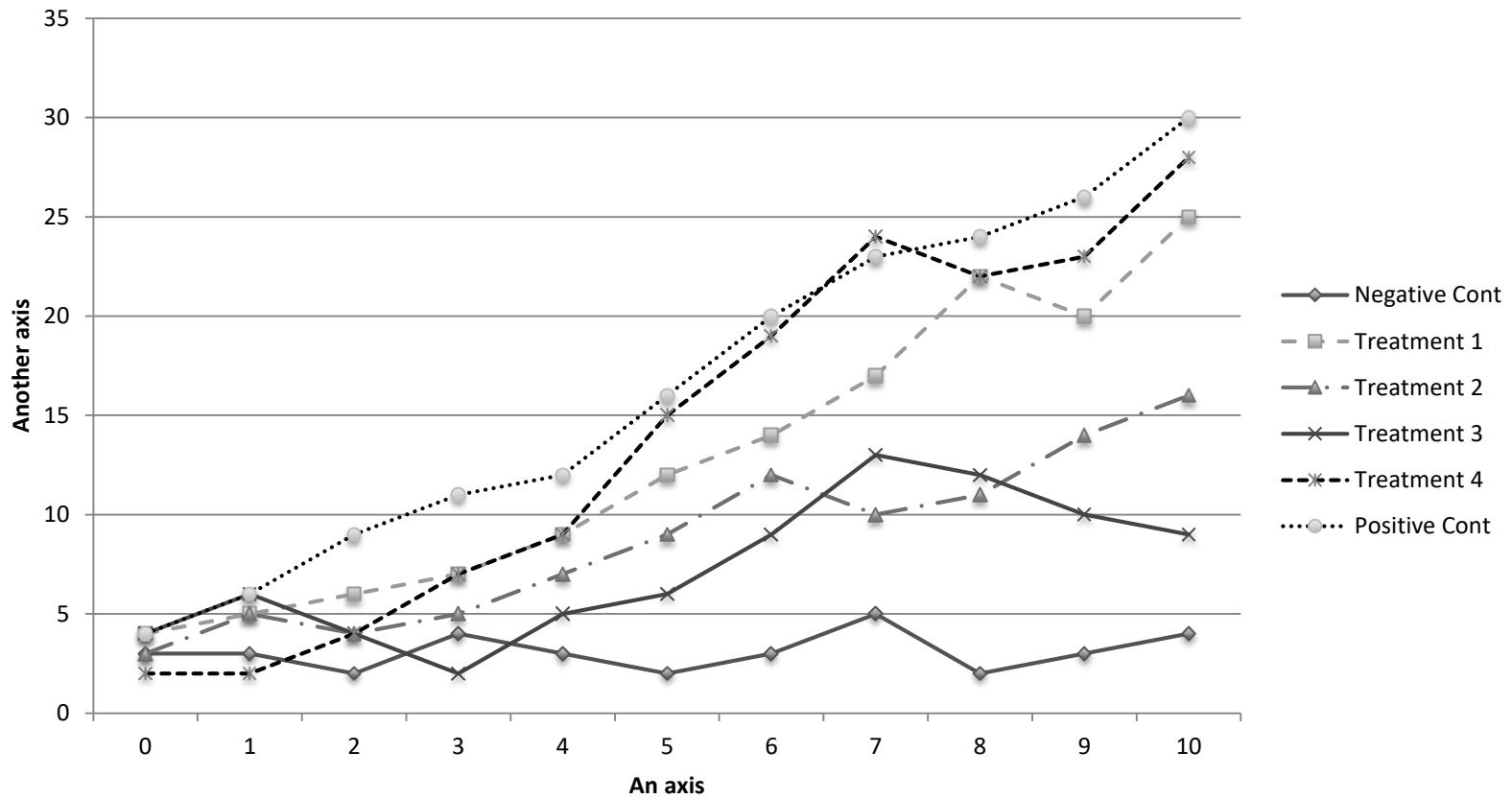
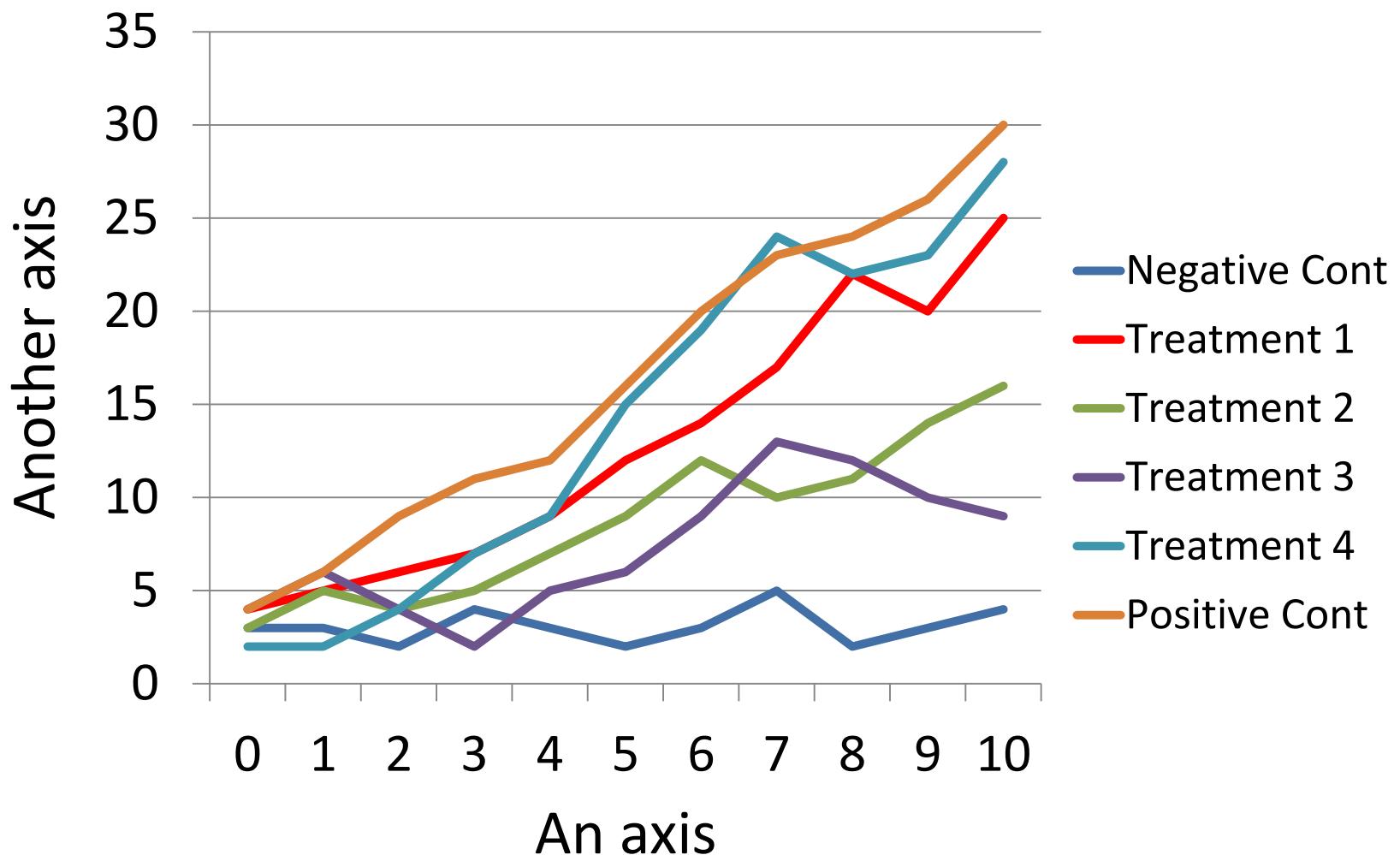


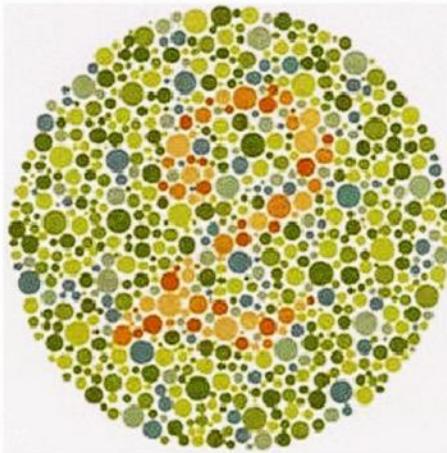
Figure 1: line graph of data that I just made up. This doesn't actually stand for anything, but is only here to help me illustrate a couple of points about designing plots for presentations, like the fact that a long figure caption like this is really distracting.

A plot for illustration

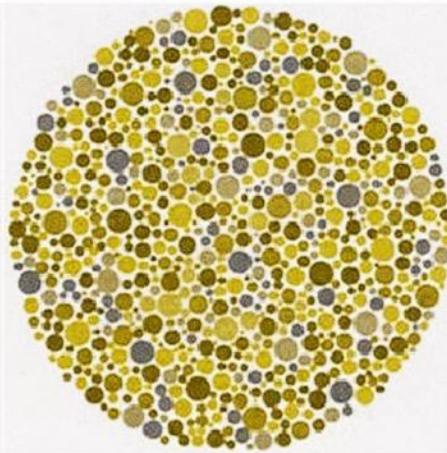


some viewers may have trouble
distinguishing red and green

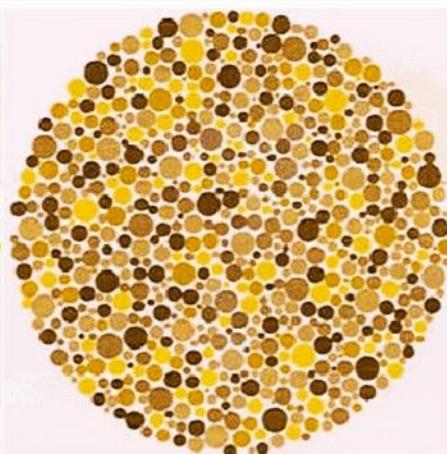
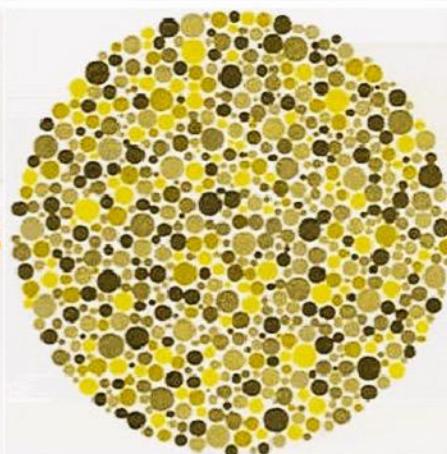
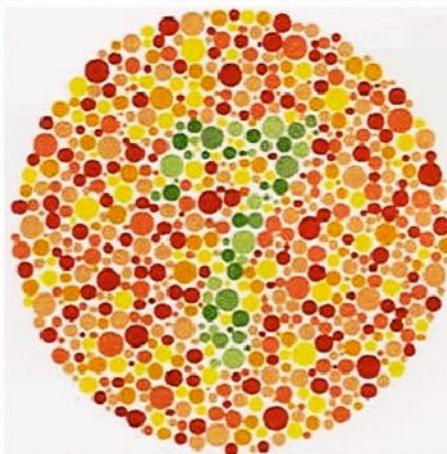
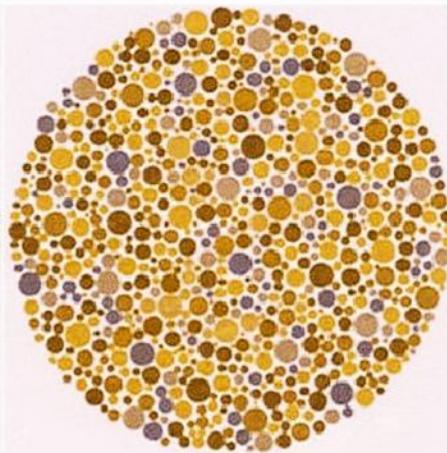
Normal

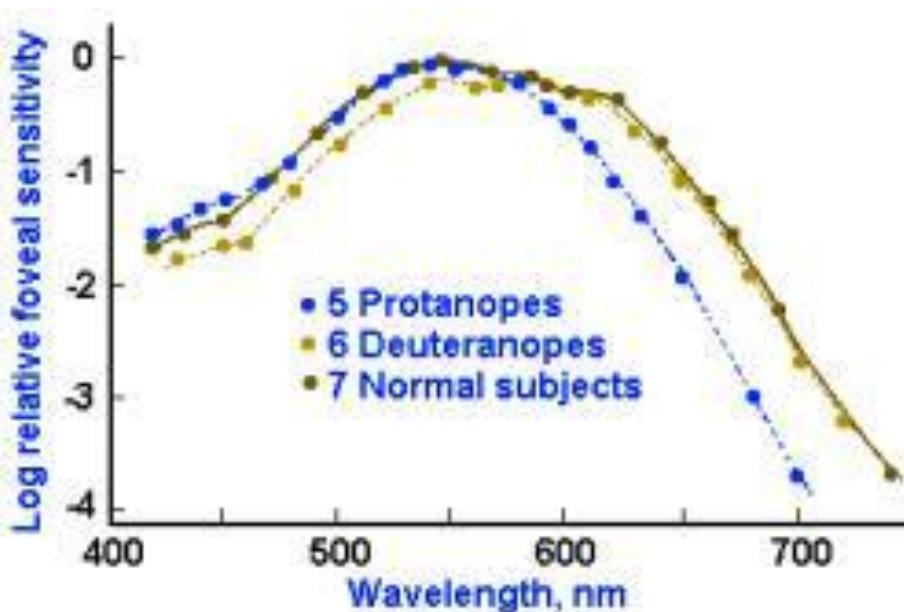
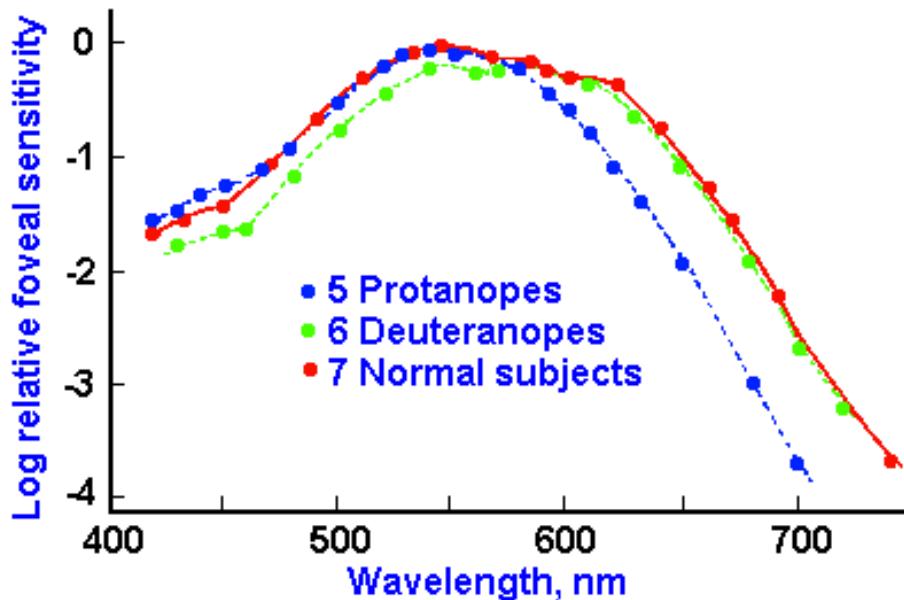


Protanope

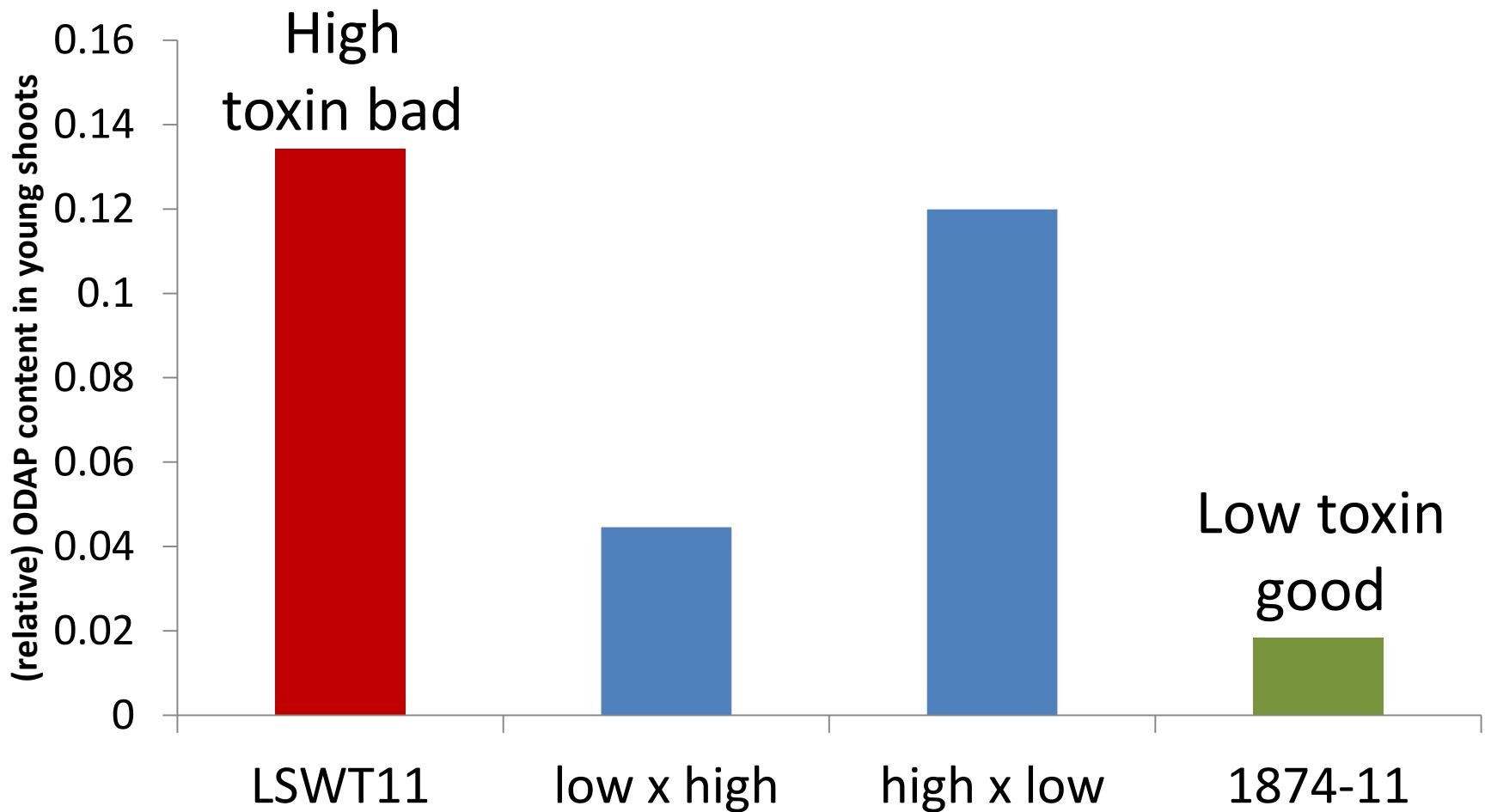


Deutanope





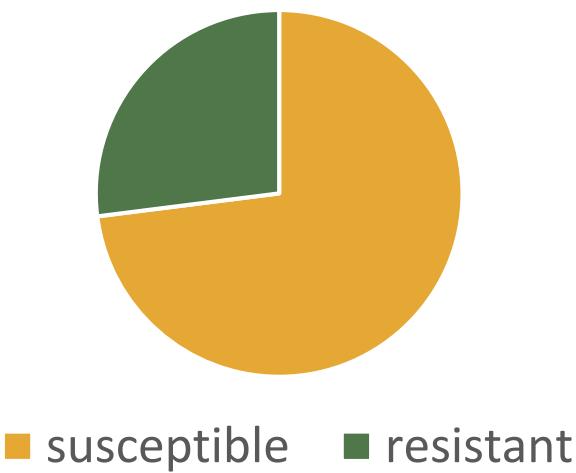
Colours carry associations



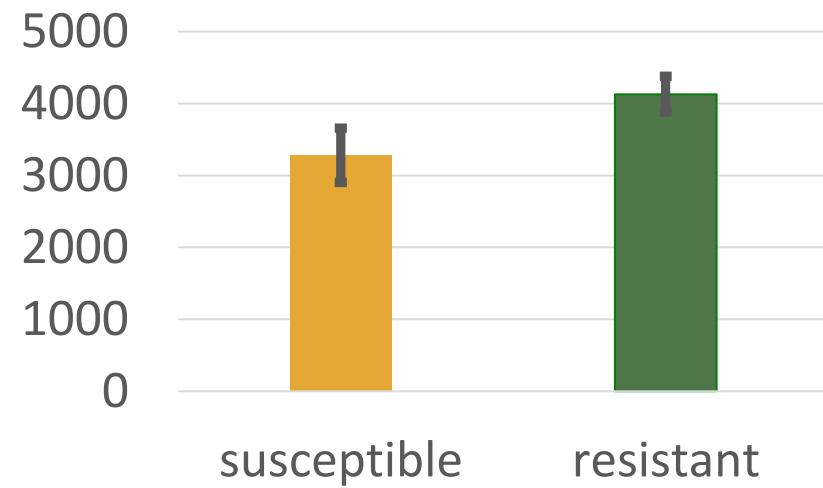
Resistant Susceptible



% of varieties



average yield in kg/ha



Don't use technology that distracts

A photograph of a cornfield. In the foreground, several corn plants stand tall, their leaves and ears a mix of vibrant green and golden yellow. Interspersed among them are patches of green weeds. The middle ground is filled with a dense sea of similar corn plants. In the far distance, a range of green hills or mountains stretches across the horizon under a clear blue sky.

Photo backgrounds can be distracting

Too many little bits

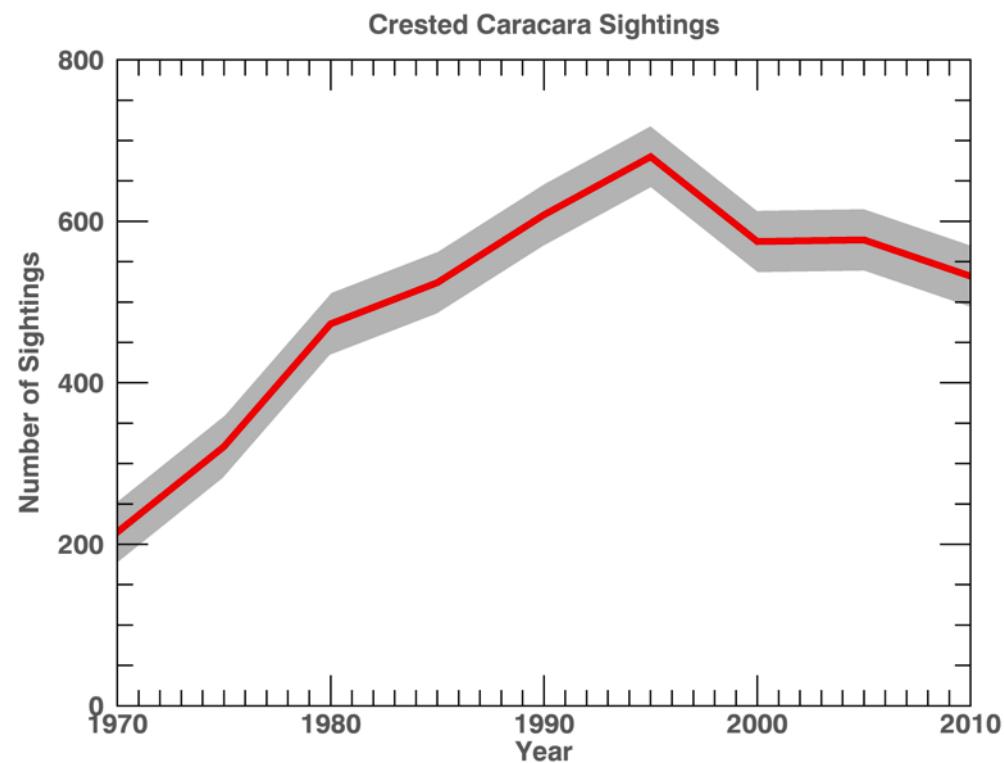


☒ ← And weird bulletpoints

SOMETIMES THEY USE WEIRD FONTS

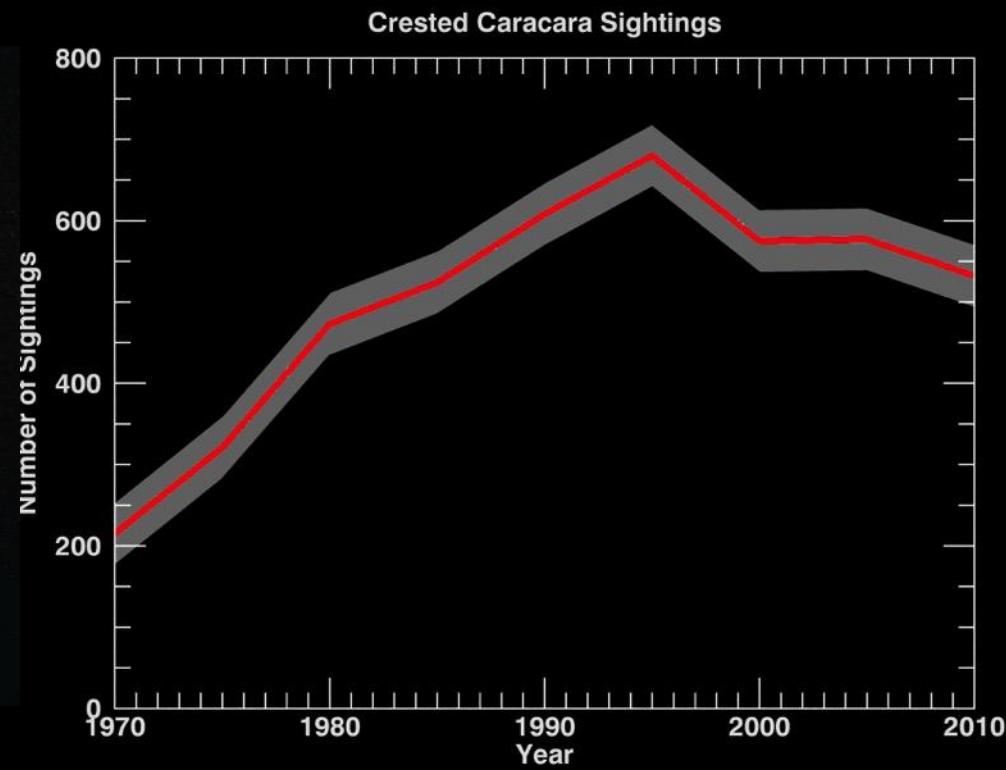
What even is this?

Dark-on-light keeps people awake



good for graphs!

Light-on-dark makes text stand out



Great for micrographs!

Easy to read

Hard to read

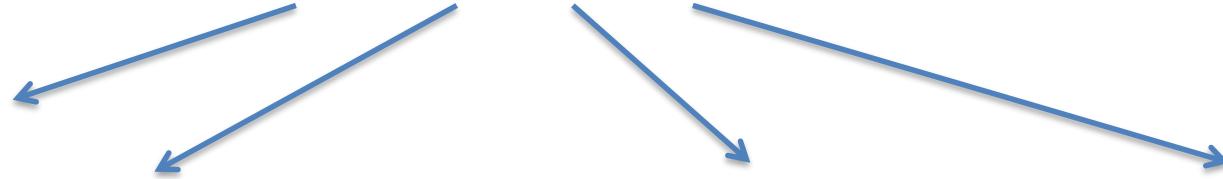
Hurts to read

Elements you can do without

All of these



John Innes Centre



05/07/2019

slides design seminar – Kilifi

71

Animations are often not useful

Always check your animations!



conventional breeding?



genetic engineering?



reverse genetics?

There are some silly transitions



And again, you don't need them



I only use “Fade”



PowerPoint Datei Bearbeiten Ansicht Einfügen Format Anordnen Extras Bildschirmpräsentation Fenster Hilfe 32% Thu 20 Aug 11:31 In der Präsentation suchen

Start Designs Tabellen Diagramme SmartArt Übergänge Animationen Bildschirmpräsentation Überprüfen

Bildschirmpräsentation wiedergeben Referenten tools Einrichten

Von Anfang an Ab der aktuellen Folie Referentenansicht Durchlaufprobe Präsentation aufzeichnen Aktionseinstellungen Folie ausblenden Präsentation einrichten

Einstellung für zwei Anzeige Referentenansicht Präsentation

Folien Glieder.

68 There are some silly transistors

69 And again, you don't need them

70 I only use "Fade"

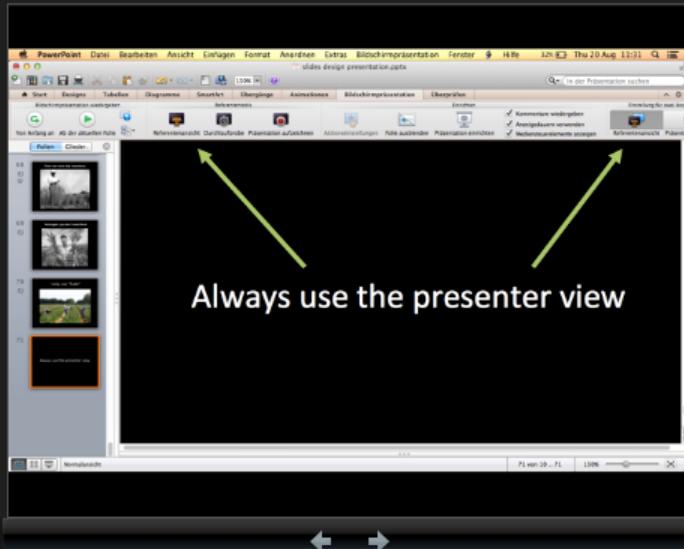
71 Always use the presenter view

Always use the presenter view

Normalansicht 71 von 10 .. 71 150%

11:36

Anzeigen tauschen ? Präsentation beenden



II Verstrichen
↻ 0:00:48

If you need notes to remind you what to say
– use the notes section, not the slide
Try out beforehand that the notes are big
enough for you to read and fit on the screen

Here you can make discussion notes

Wireless presenters
give you freedom on
the stage



A laser pointer won't help much here

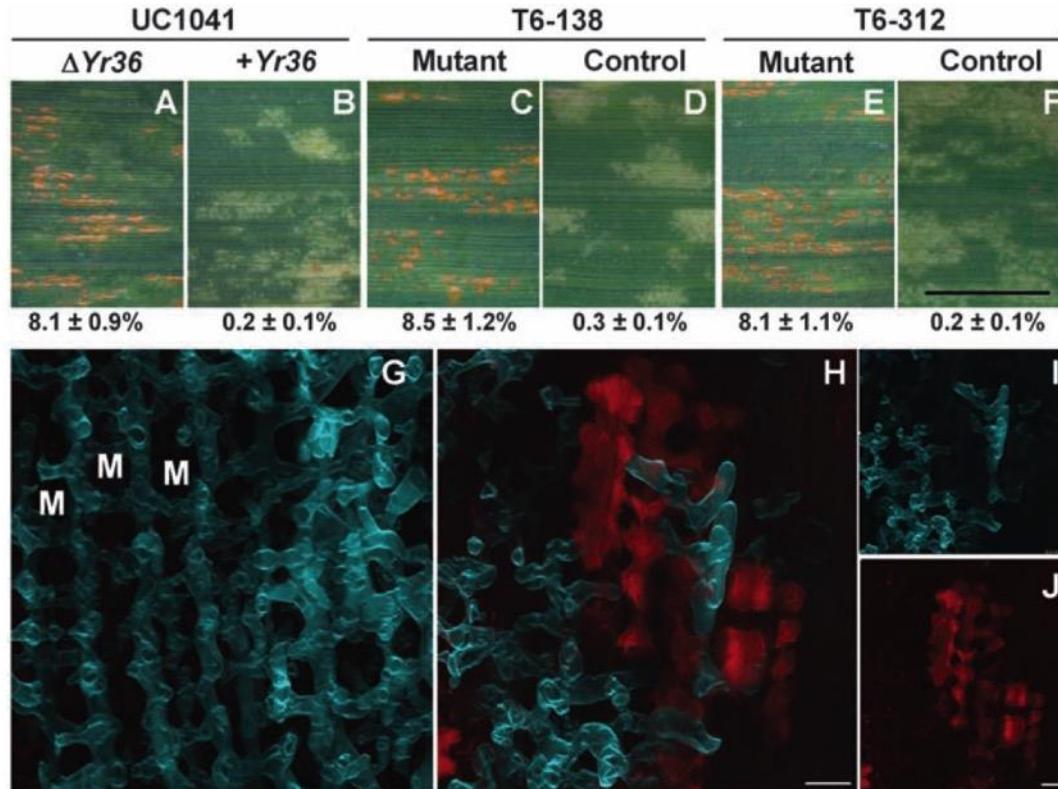
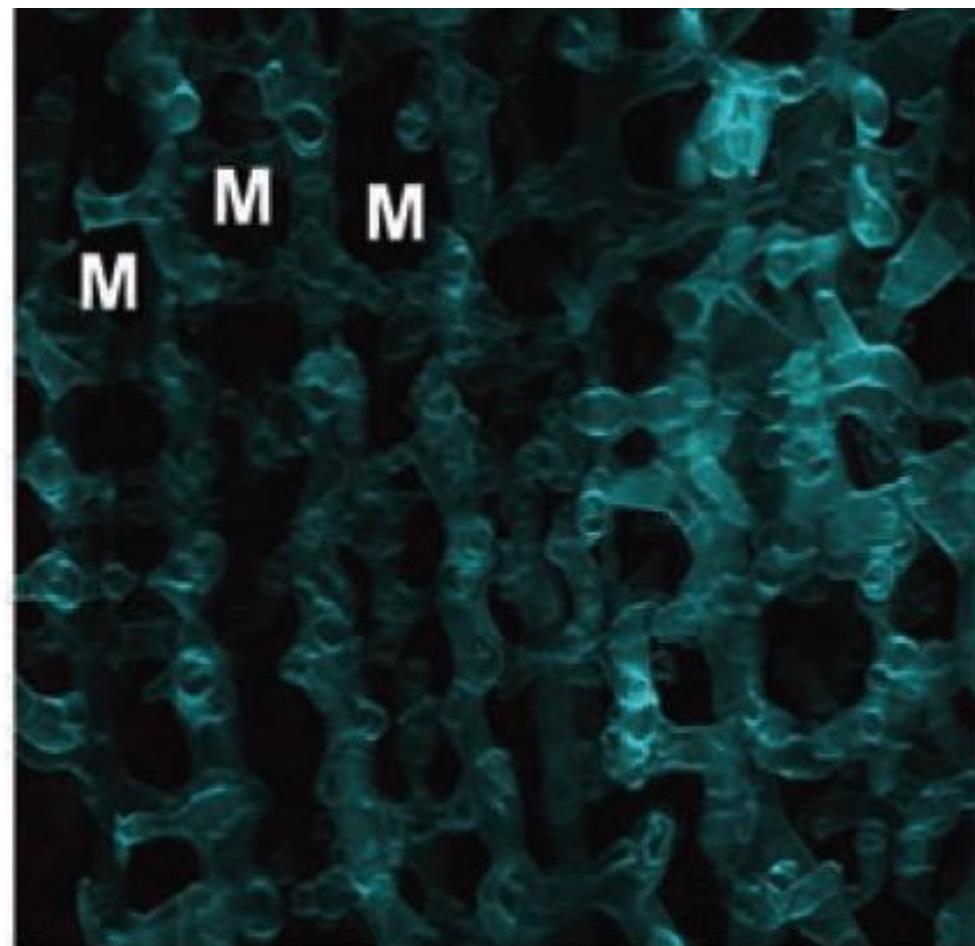


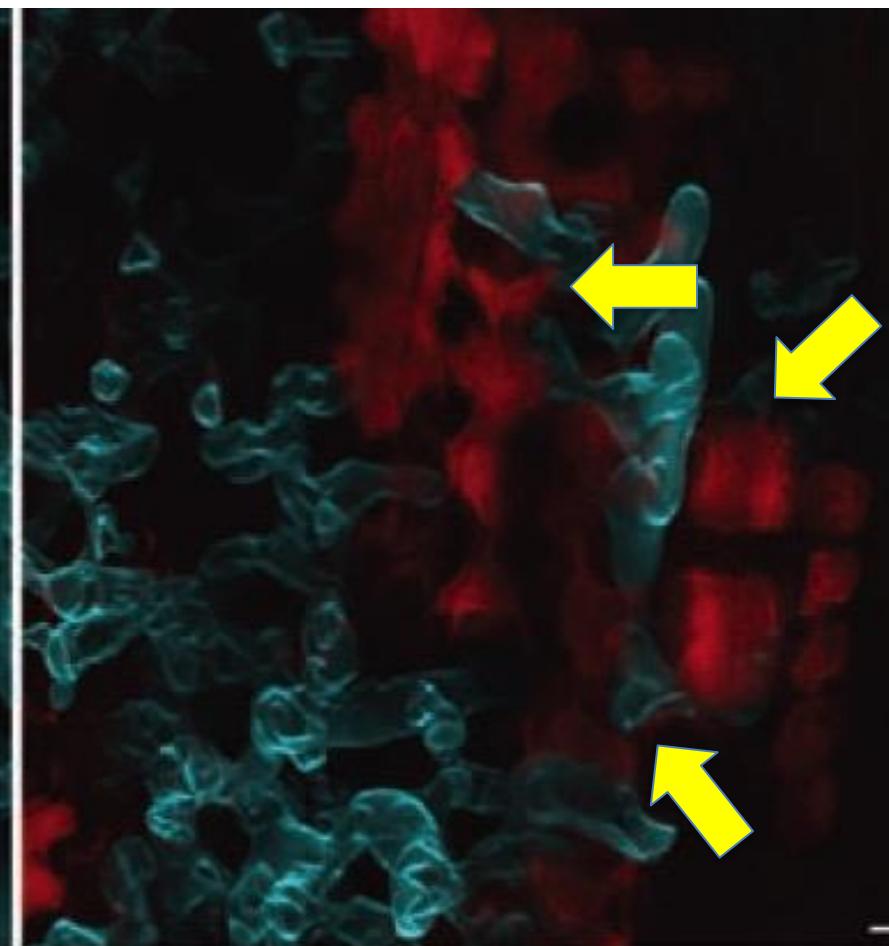
Fig. 2. Functional validation of *Yr36* by mutational analysis. (A to F) Leaf surfaces 11 days after PST inoculation. Scale bar, 5 mm. Numbers below leaves are average percent leaf area with pustules ± SEM ($N = 8$, fig. S2). An analysis of variance (ANOVA) of the log-transformed data showed significant differences ($P < 0.01$) between mutant and control lines. (A) UC1041 without *Yr36*. (B) UC1041+*Yr36* isogenic line used for mutagenesis. (C and E) Lines T6-138 and T6-312 with homozygous mutations in the *WKS1* kinase domain. (D and F) Sister lines without the mutations. These and additional mutant lines are described in table S7 and figs. S6 to S9. (G and H) A dual-channel, confocal microscopic z-series inside a wheat leaf 13 days after PST inoculation. Scale bar, 20 μm . The fungus stained with Uvitex 2B (Polysciences Inc., Warrington, PA; false-color blue) and autofluorescing wheat leaf cells (false-color red) are visible. (G) The susceptible T6-312 mutant has an extensive mycelial network in which each (invisible) plant mesophyll cell (selected cells shown as M) is encircled by a hypha. (H) The T6-312 control line has a poorly developed fungal network surrounded by autofluorescent mesophyll cells that presumably were involved in the resistance response. (I and J) Separate channels of (H). Scale bar, 20 μm .

On a slide like this, you don't need it

Mutant



Control



Fungal hyphae

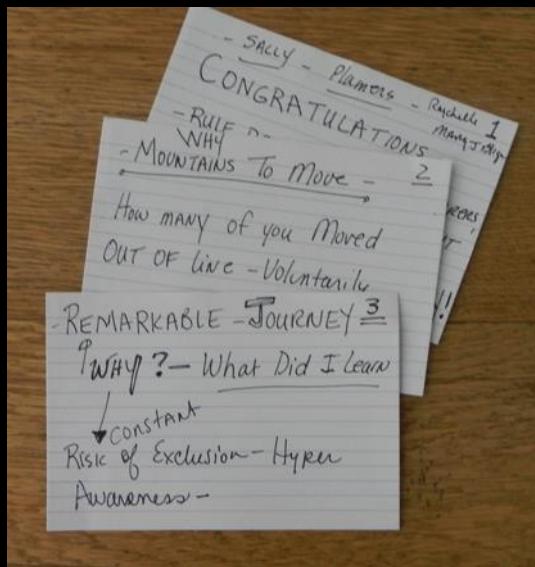
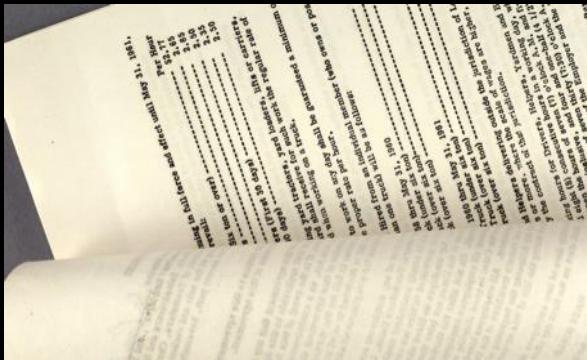
Auto-fluorescing wheat cells

Moving things will attract a lot of attention

Sometimes things will go wrong

use notes to get back to the plot

printed notes



Notecards

Presenter view

If you need notes to remind you what to say
— use the notes section, not the slide
Try out beforehand that the notes are big
enough for you to read and fit on the screen

Always use the presenter view

0:00:48

Here you can make discussion notes

Keep an eye on the time

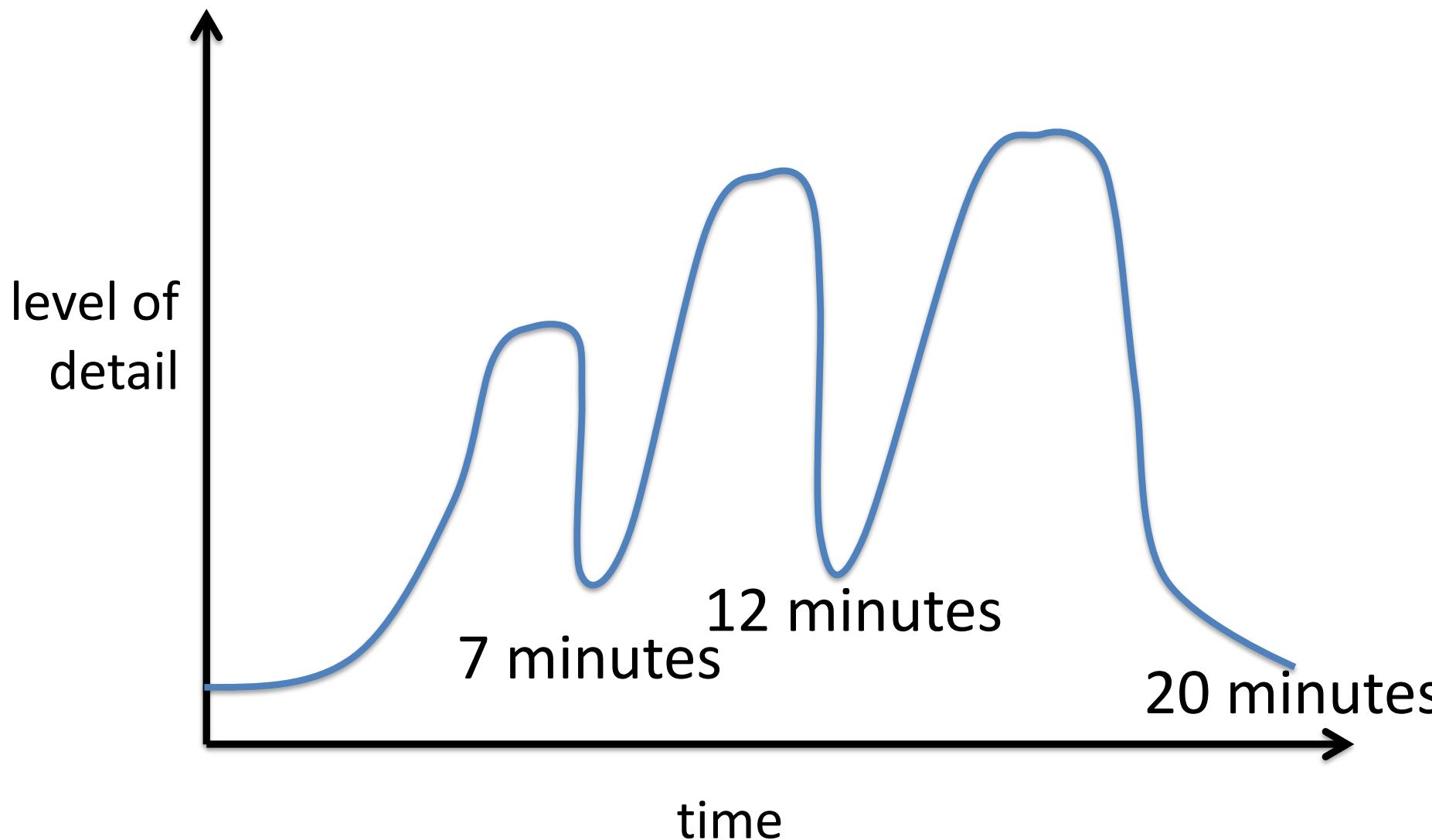


During practice

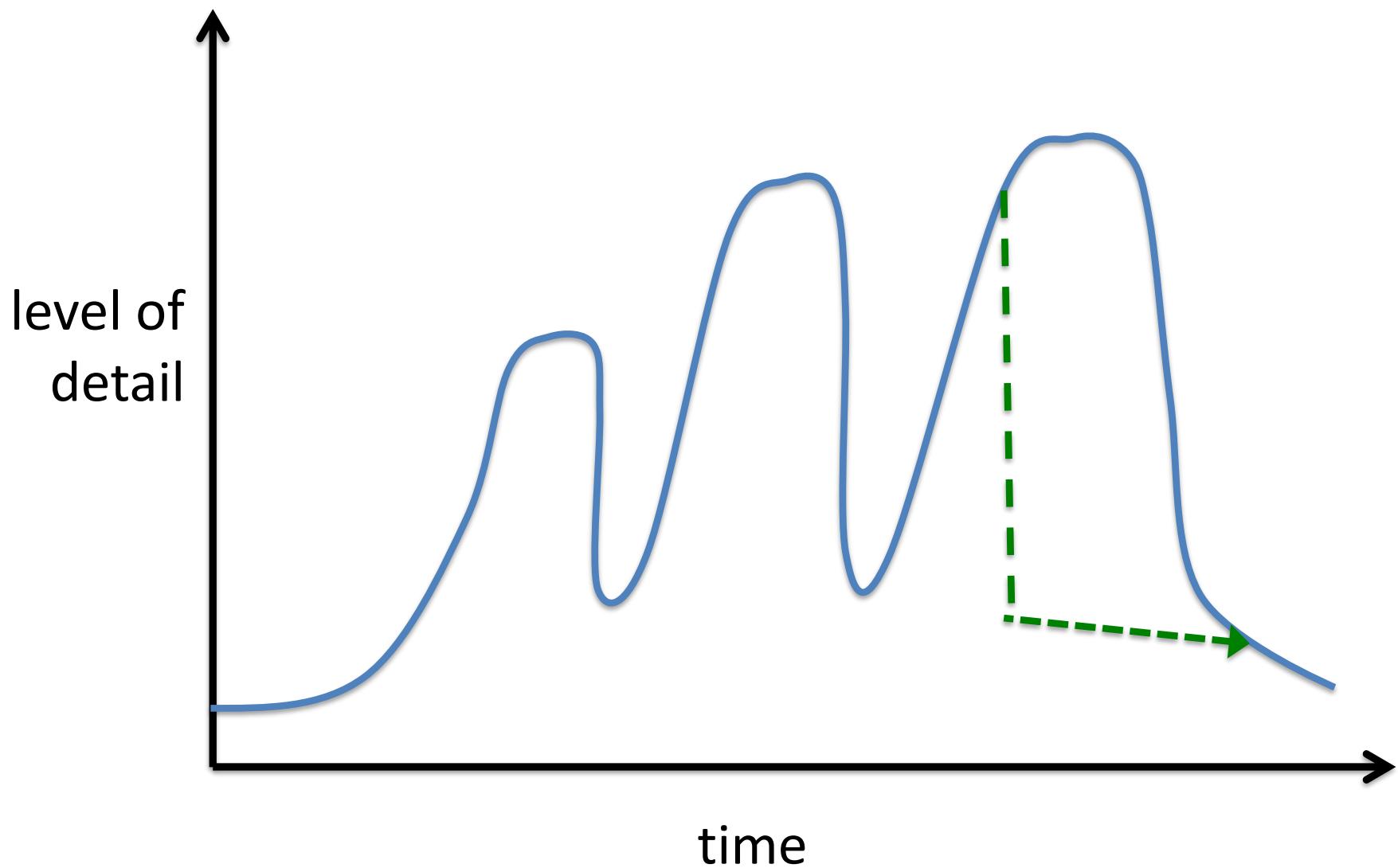


And during your talks

make time checkpoints



if you have to: skip to summary



test your technology



If the technology fails

—

it's not your fault

Acknowledgements

Speaking training

- John Bates
- Stephen Bornemann
- Jens Maintz

Example slides

- Cristobal Uauy
- Brande Wulff
- Wellington Ekaya

Supervision

- Jagger Harvey
- Trevor Wang
- Cathie Martin

Structure & handouts

- Hannah Emmrich
- Tilly Eldridge



John Innes Centre



biosciences
eastern and central africa

John Innes Foundation

in summary

Slides are there to support your talk

Keep your slides simple

Don't overload them

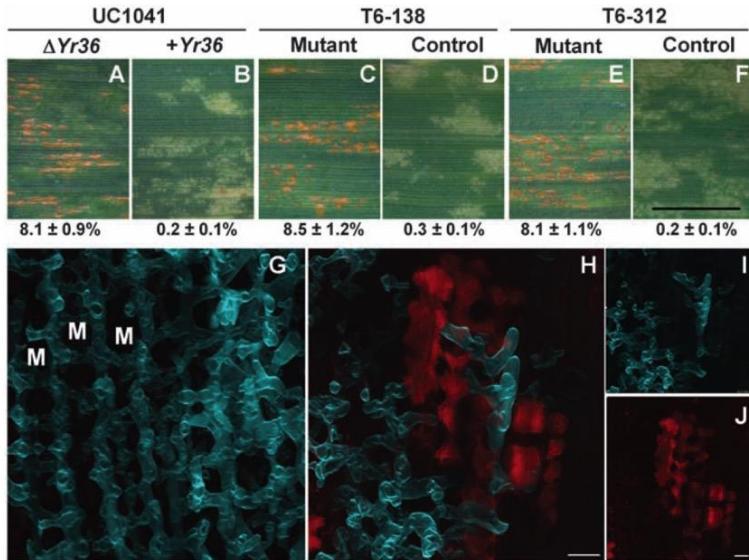
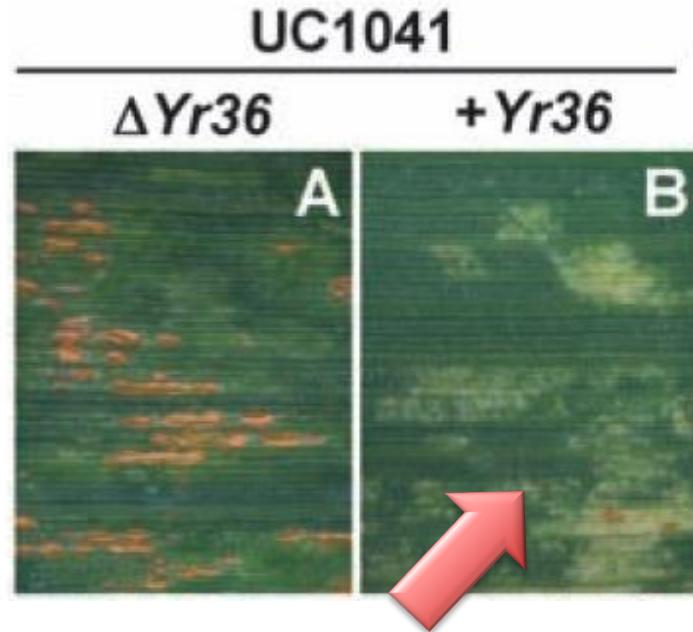
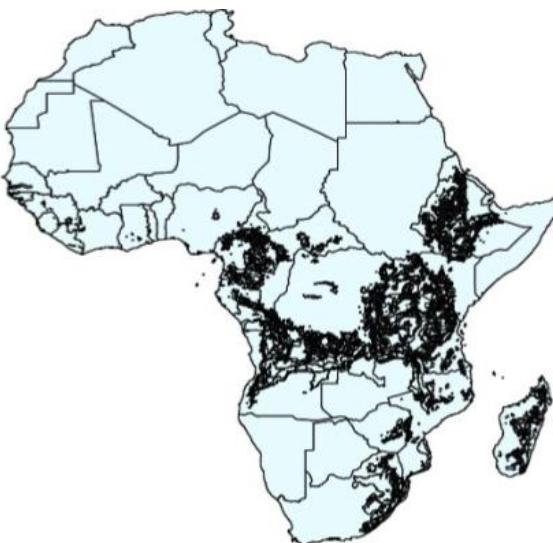
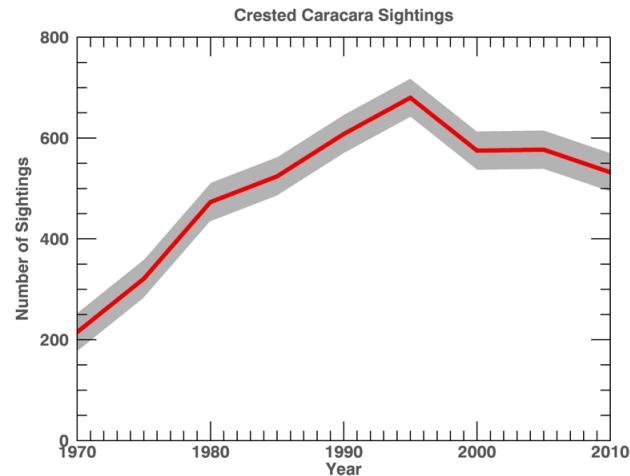


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Keep your slides simple

Indicate details, statistics or overall story



Keep your slides simple

Keep technology simple and reliable



Thank You!