

# LIVING WITH IPM AN INDEPENDENT AGRONOMISTS PERSPECTIVE

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PATRICK STEPHENSON AICC



# WHY DOES IT MATTER?



Elcena Jeffers  
**INDEPENDENT**

**Pesticide-Free  
BRENT**

**Pesticide-Free  
BRENT**



Caroline Kim  
**CONSERVATIVE**  
@CarolinePK

**I'VE PLEDGED**

**Pesticide-Free  
KINGSTON UPON  
THAMES**



Chris Lloyd  
**LABOUR PARTY**  
@Chris\_C\_Lloyd

**I'VE PLEDGED**

**Pesticide-Free  
GREENWICH**



Maureen Martin  
**CHRISTIAN  
PEOPLES  
ALLIANCE**

**Pesticide-Free  
LEWISHAM**

**Pesticide-Free  
LEWISHAM**

# CURRENT SITUATION

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- Every recommendation I currently make carries no economic benefit to me personally
- A distributor agronomist has a financial gain from every product he recommends
- Both scenarios do not reflect the level of advice or the use of IPM
- The French Government of proposed only the first option should be used in food production
- The first discussions have started in the UK for this scenario

# EACH SPRAY RECOMMENDATION MADE IS A PARTIAL BUDGET

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- $C$  = cost of control
- $V$  = value of the commodity
- $I$  = injury (e.g. defoliation or damaged fruit) based on a given density of insects/disease
- $D$  = economic damage (e.g. kilos lost or quality discount) caused by a given level of injury
- $K$  = proportion of reduction in injury resulting from a control measure (usually the proportion of the insect population that is killed, or “percent control”)
- Economic Injury Level =  $C / (V D I K)$







# WHAT IPM DO I CURRENTLY USE TO HELP MY DECISION MAKING PROCESS?

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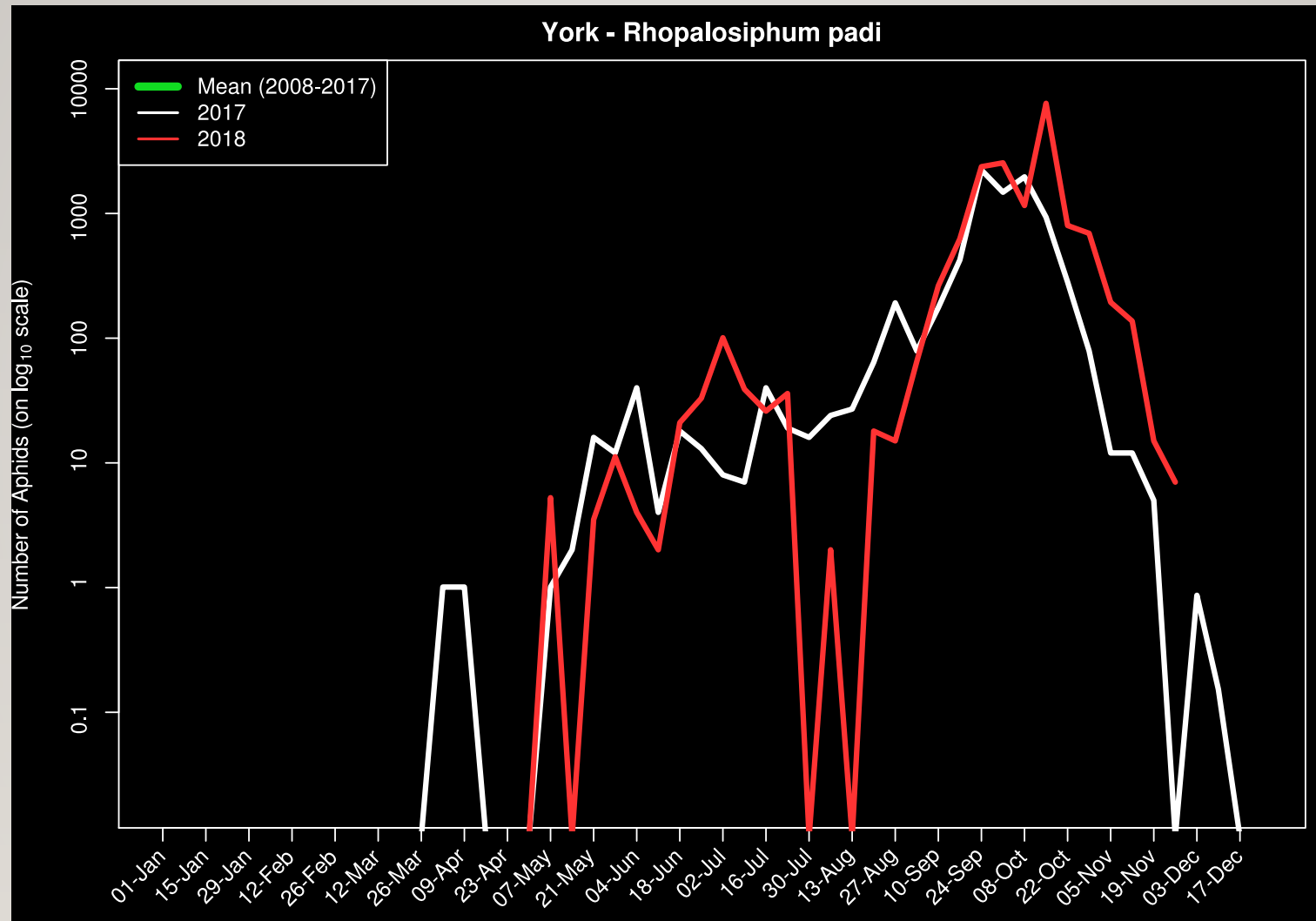
**Be decisive.**

**Right or wrong,  
make a decision.**

**The road of life  
is paved with  
flat squirrels  
who couldn't  
make a decision.**

Simple But  
Savvy

# Rothamsted aphid trapping



# Bruchid cast





# SCLEROTINIA MONITORING

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		BASED ON RL unbal
		Yield response
Very High	Myriad	3.85
	Leeds	3.45
	KWS Barrel	3.26
	JB Diego	3.19
	KWS Lili	3.16
High	Zulu	2.92
	KWS Jackal	2.87
	KWS Basset	2.86
	RGT Gravity	2.73
	Viscount	2.69
	LG Detroit	2.63
	Elation	2.62
	Crusoe	2.54
	KWS Kerrin	2.51
	LG Skyscraper	2.49
Medium	KWS Trinity	2.39
	Shabras	2.39
	LG Spotlight	2.38
	Evolution	2.29
	Elicit	2.10
	Gleam	2.10
	Skyfall	2.04
	Costello	2.01
	Bennington	1.99
	Revelation	1.97
Low	KWS Crispin	1.97
	KWS Siskin	1.89
	KWS Firefly	1.82
	LG Motown	1.78
	LG Sundance	1.75
	Dunston	1.64
	KWS Zyatt	1.62
	Graham	1.61
	RGT Illustrious	1.61
	KWS Extase	0.69
Very low		

# NIAB/AHDB RECOMMENDED LISTS



# LIGHT LEAF SPOT





**Station:** Leeming

**Station ID:** 149

**Latitude:** 54.296

**Longitude:** -1.53

**Weather**

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**Wheat**

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**Oilseed rape**

- Growth stages
- Diseases
  - Alternaria
  - Light leaf spot**
  - Phoma
  - Sclerotinia
- Pests
  - Aphid vectors of TuYV
  - Cabbage seed weevil
  - Cabbage stem flea beetle
  - Mealy cabbage aphid
  - Pollen beetle
  - Slugs
  - Turnip sawfly

## Oilseed rape- Light leaf spot

### National summary report

Light leaf spot was first detected within the monitoring network during the week beginning 8 October 2018 at the following locations: ADAS Terrington, Blandford. Light leaf spot has now been detected at 24% of the sites. To date, during the current season, the overall highest mean severity of 0.66% leaf area affected was observed at growth stage 1.09 at Stokesley on cultivar Nikita with resistance rating 7. The current mean light leaf spot severities as observed within the monitoring network are 0% leaf area affected in the North, 0% leaf area affected in the East, 0% leaf area affected in the South and 0% leaf area affected in the West.

### Real time monitoring on CHAP network for Stokesley site

Distance between weather station and closest monitoring site: 32 Km

Cultivar resistance ratings for light leaf spot affecting oilseed rape

Cultivar	Resistance rating	Resistance rating group
Elevation	6	Moderately susceptible (RR 5-6)
V316OL	6	Moderately susceptible (RR 5-6)
Alizze	7	Resistant (RR 7-9)
Nikita	7	Resistant (RR 7-9)

Percentage of plants with leaves affected by light leaf spot

Week beginning	Alizze (%)	Elevation (%)	Nikita (%)	V316OL (%)
20/10/18	0	0	0	0
12/11/18	17	0	0	0
26/11/18	0	0	0	0
10/12/18	0	0	0	0
24/12/18	0	0	0	0
07/01/19	17	14	10	0

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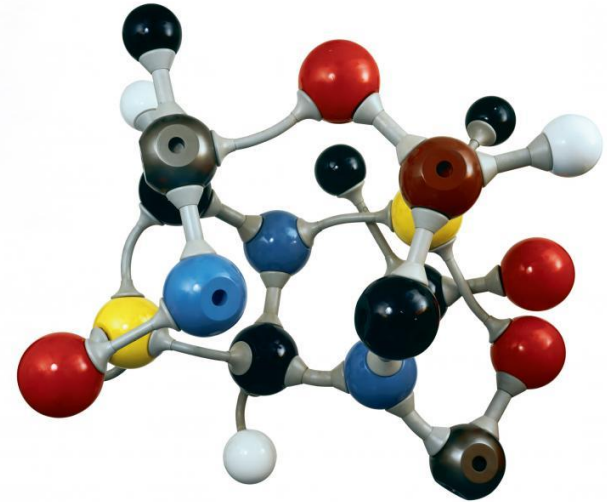
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# WE PRACTICE IPM WIDELY ALTHOUGH THIS HAS BEEN FROM A CHEMICAL BASE



**PESTICIDE  
APPLICATION**

**KEEP**  **OFF**  
**UNTIL DRY**



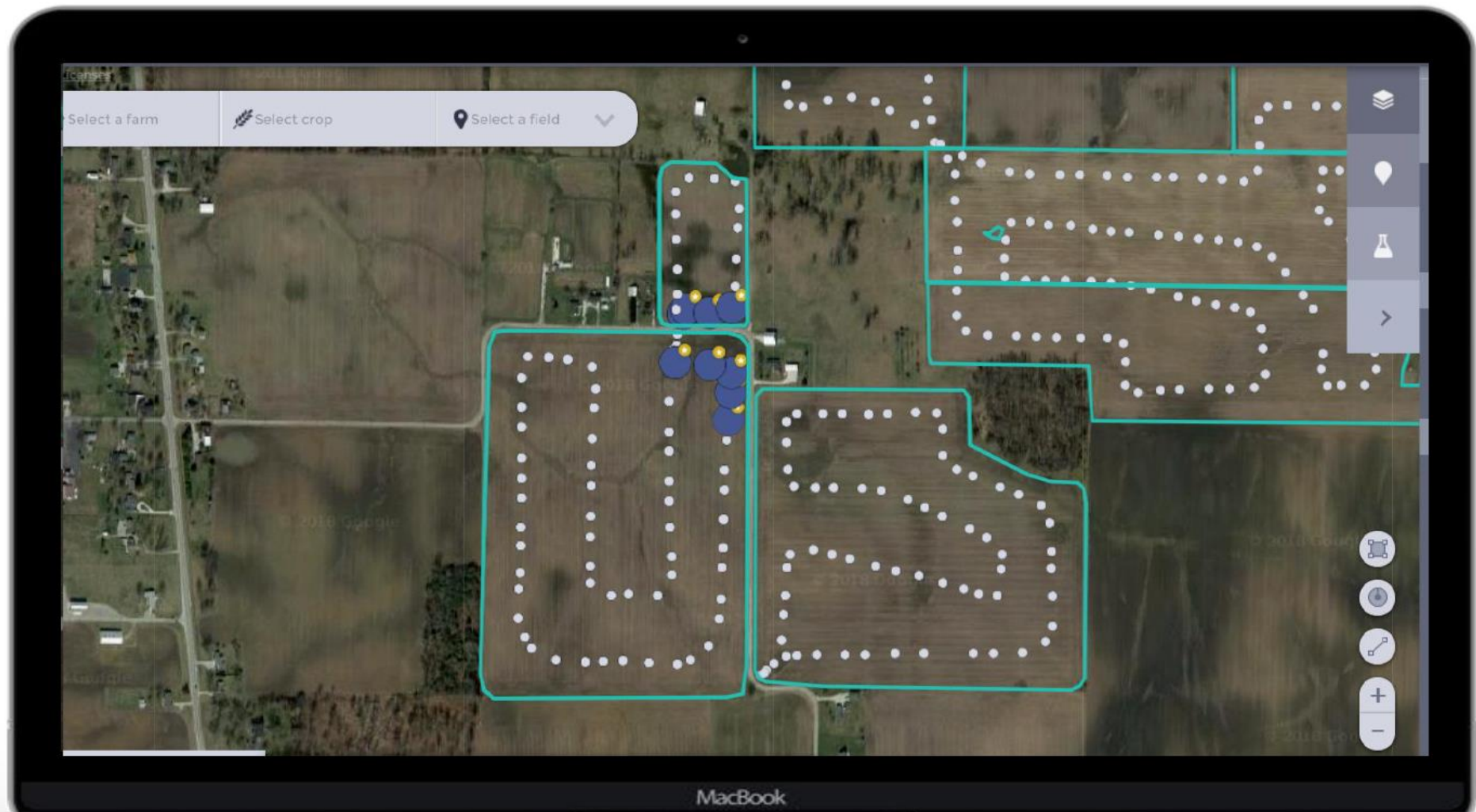
# THE FUTURE

Mavrx Imaging Network

**ULTRA-HIGH  
RESOLUTION**

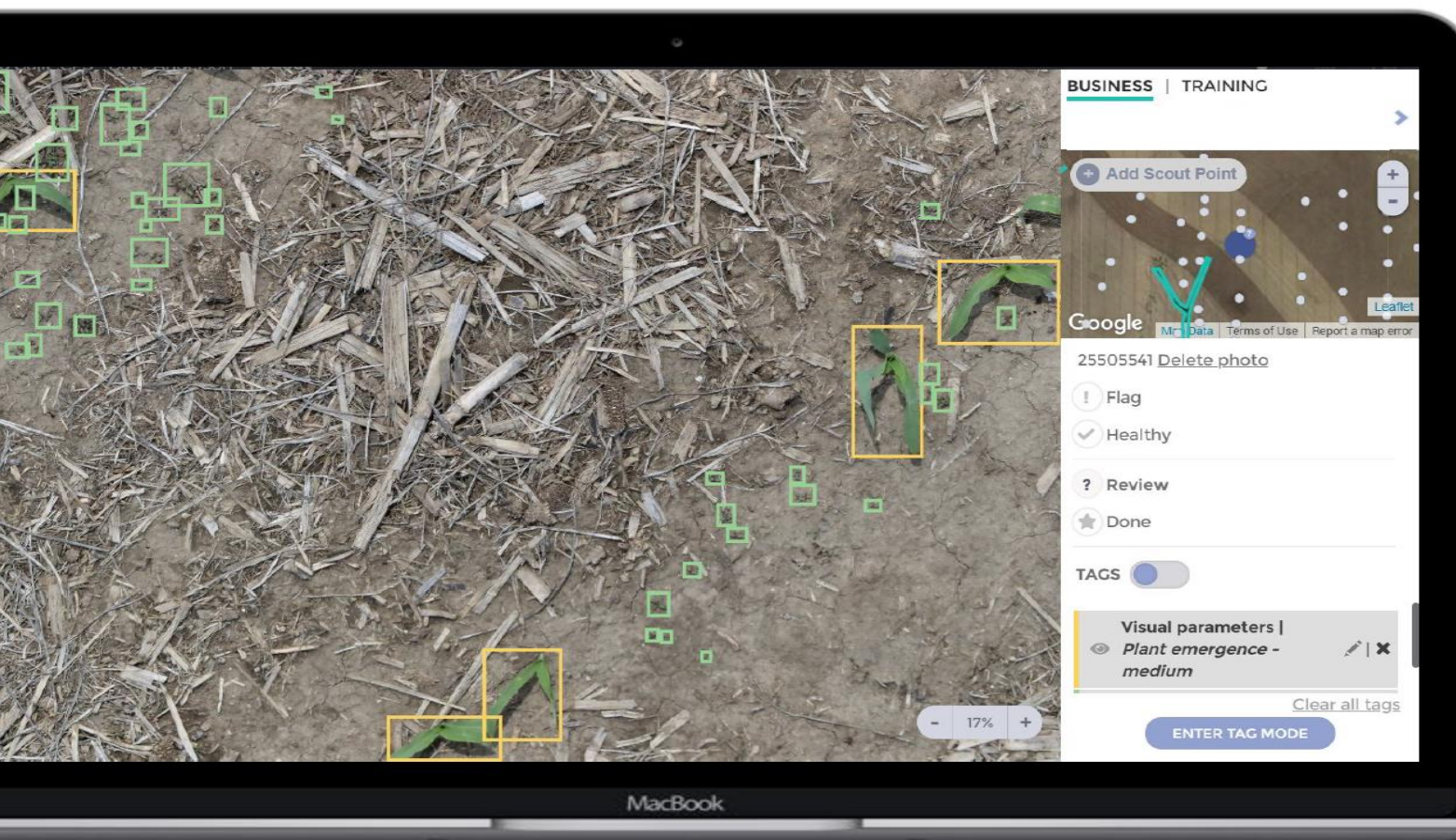
An aerial photograph showing a vast agricultural landscape. A dirt road runs diagonally from the top left towards the bottom center. The fields are a mix of green and brown, indicating different crops or stages of growth. In the bottom right corner, there is a small cluster of buildings, possibly a farm or a small village. The overall image is high-resolution, showing fine details of the terrain.







## m & Weeds



# IS THIS IPM?







Drone flight with a high resolution image every acre.



Plant populations, early weed detection, insect and disease detection.

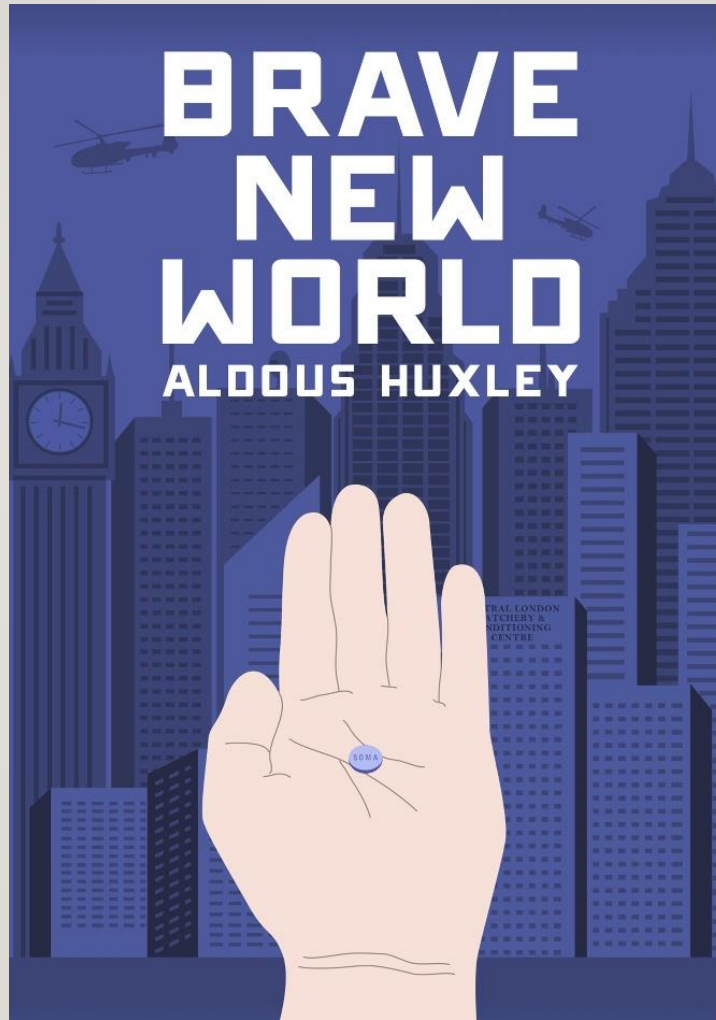


AT A PRICE

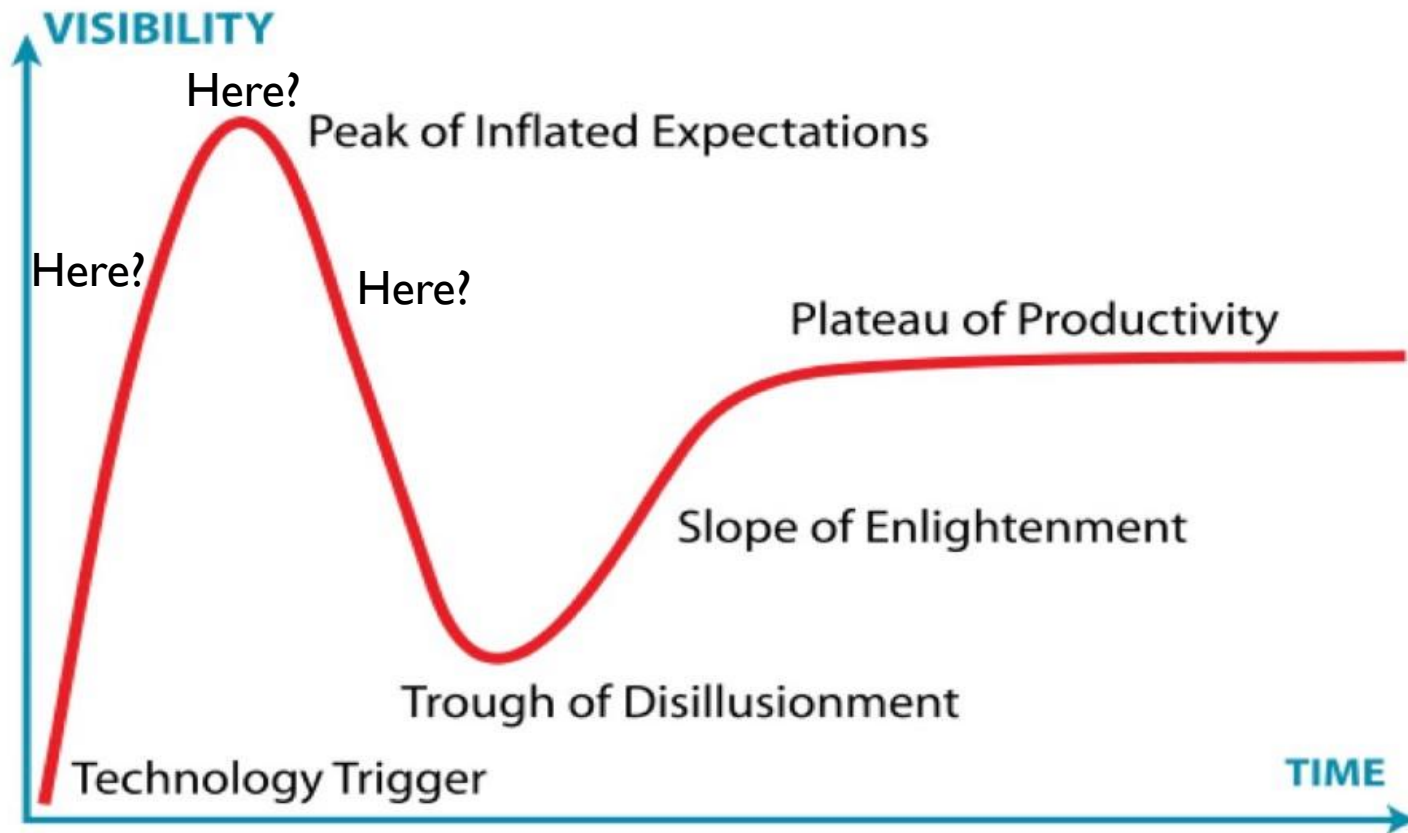
# On- Demand Grid Imagery



# IN REALITY WHERE ARE WE?



# Gartner Hype Cycle





# WHAT DO I THINK WILL SURVIVE THE PEAK OF INFLATED EXPECTATIONS?

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- Disease prediction platforms
- Bio stimulants
- Agro-chemicals
- High Input farming
- Bi-Cropping




# THERE IS NO TOMORROW WITHOUT IPM

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- Diminishing portfolio of products
- Increasing resistance
- Public acceptability
- Government accountability





**If you can dream  
it, you can do it.  
Best wishes for  
your bright  
future.**

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