HarvestEye™

Powered by B-hive

Perunan talvipäivät Tampere 13th Jan 2025

U2 Online Oy, Antti Hintikka

Harvesteye + DSS…

Määrä- ja kokojakaumatieto nostohetkellä.

Askel kohti paikkatietopohjaista laadun ja määrän optimointia kasvulohkon sisällä.

HarvestEye

1. Yleisesittely
2. Käyttötapaukset (Handheld, Harvester)
3. Kalibrointi Suomessa
4. Osana HZPC Agritask viljelyn optimointia (DSS)
5. Tulevaisuuden kehitystoimet

Tarina…

2019

Inception

Established in 2019 after two years of R&D by B-hive Innovations and Branston Potatoes.

B-hive

2020

Launch

Launched HarvestEye to 43 UK potato growers, securing patents in the UK, EU, and USA.

2022

Diversify

HarvestEye extends its technology to onions in collaboration with the UK's largest onion producer.

2023

Development

Accelerated hardware and software development to launch HarvestEye 2.0, enhancing data accuracy, installation ease, and hardware robustness.

TeamViewer

2024

Augment

Launched the HarvestEye Handheld, empowering growers with portable technology to support yield digs.

2024

Growth

Successfully entered the North American market, driving global system expansion from 43 to 170 units.

2025

Expansion

Advanced Quality, Sweet Potato, and Apple developments for global launch in 2025.

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200+ Järjestelmää toimitettu globaalisti

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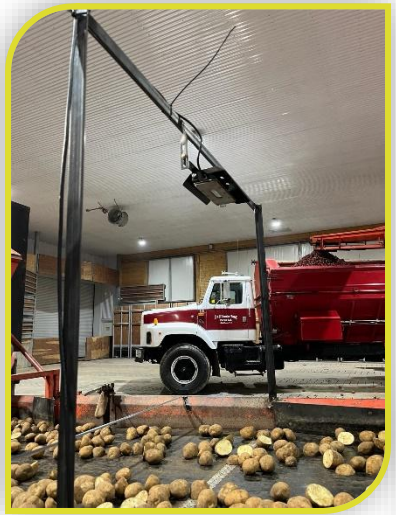
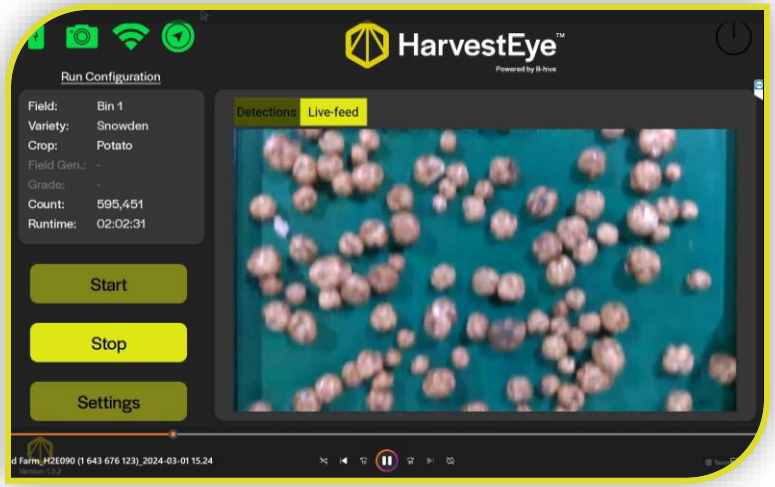
Tuotteet…

HE2.0		HANDHELD
On-Harvester	**In-Line**	
		

..in action



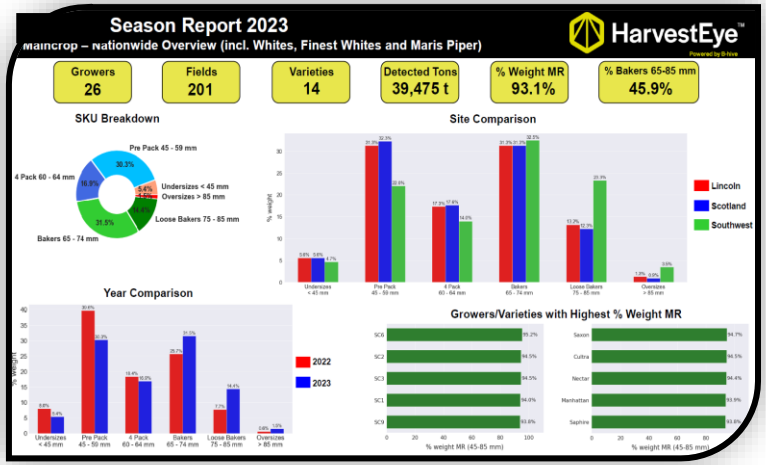
3.5bn Potatoes
100m Onions

…näkymä tuloksiin

Päivittäinen raportti

Asiakas-portaali

Yritys-kohtaiset yhteenvedot



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Enterprise Season Report 2023

Maincrop – Nationwide Overview (incl. Whites and Finest Whites)

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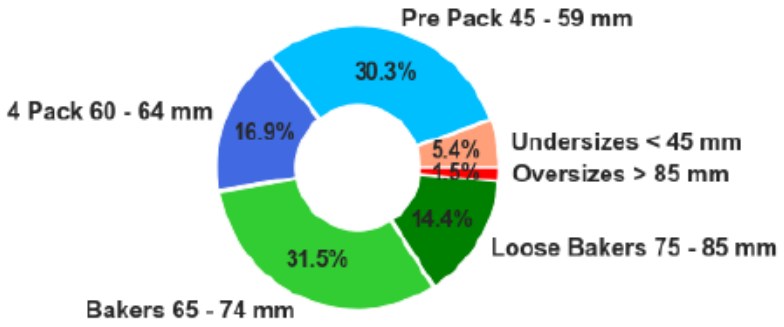
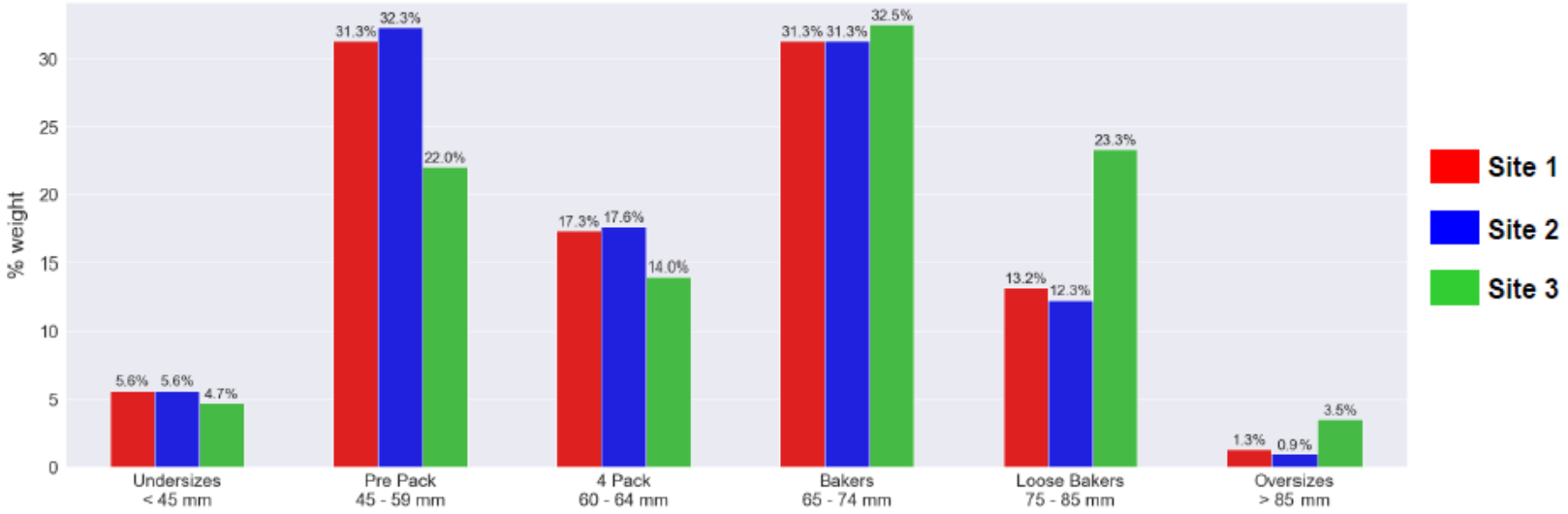
Growers	Fields	Varieties	Detected Tons	% Weight MR	% Bakers 65-85 mm
26	201	14	39,475 t	93.1%	45.9%

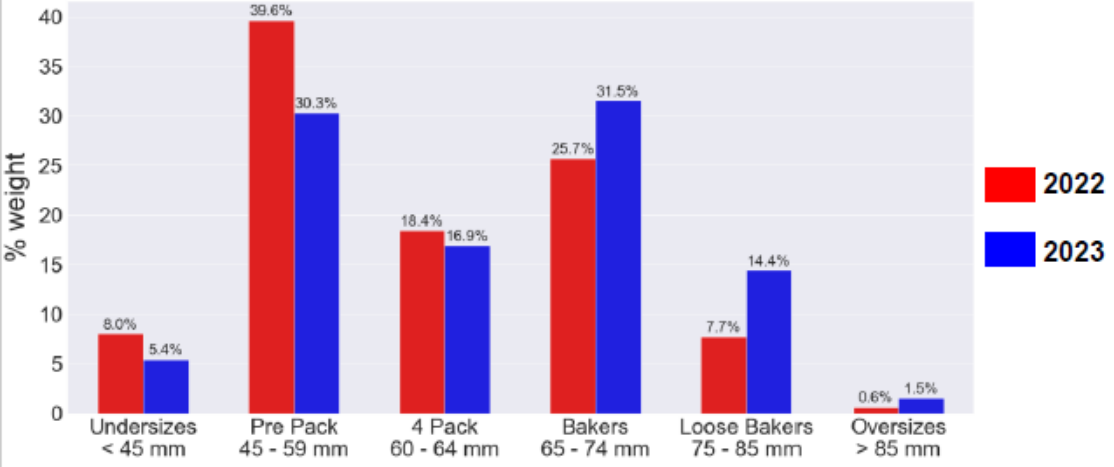
SKU Breakdown



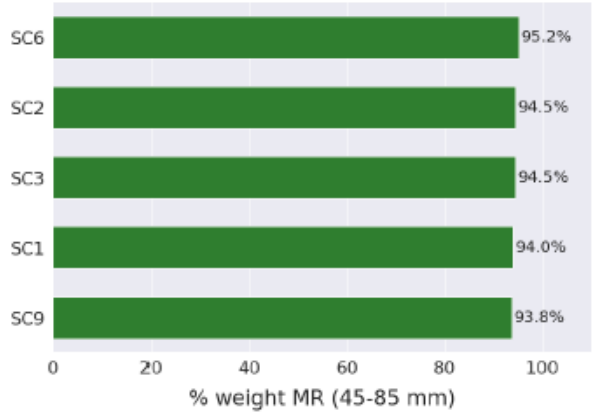
Site Comparison

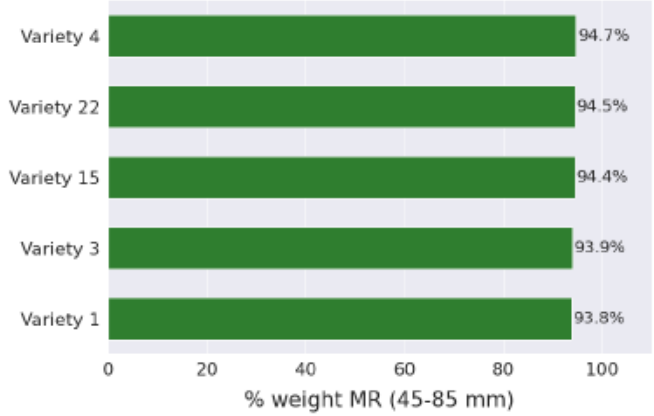


Year Comparison



Growers/Varieties with Highest % Weight MR





Enterprise Season Report 2023

Whites – Crop Performance

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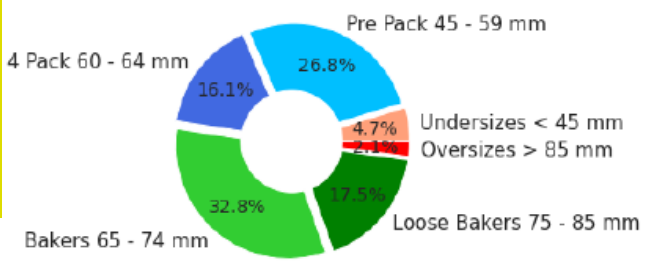
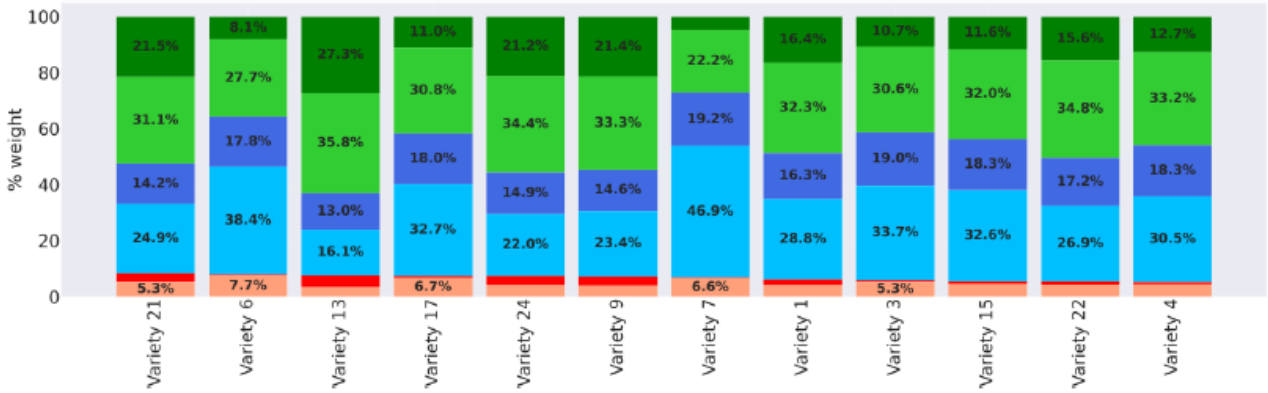
Sites	Growers	Fields	Varieties	Detected Tons	% Weight MR	% Bakers 65-85 mm
3	24	129	12	23,100 t	93.2%	50.3%

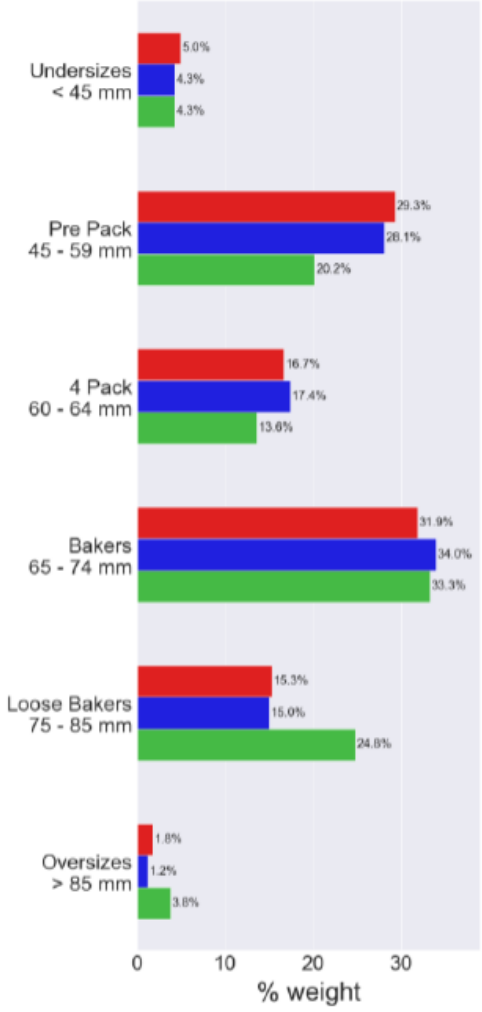
SKU Breakdown



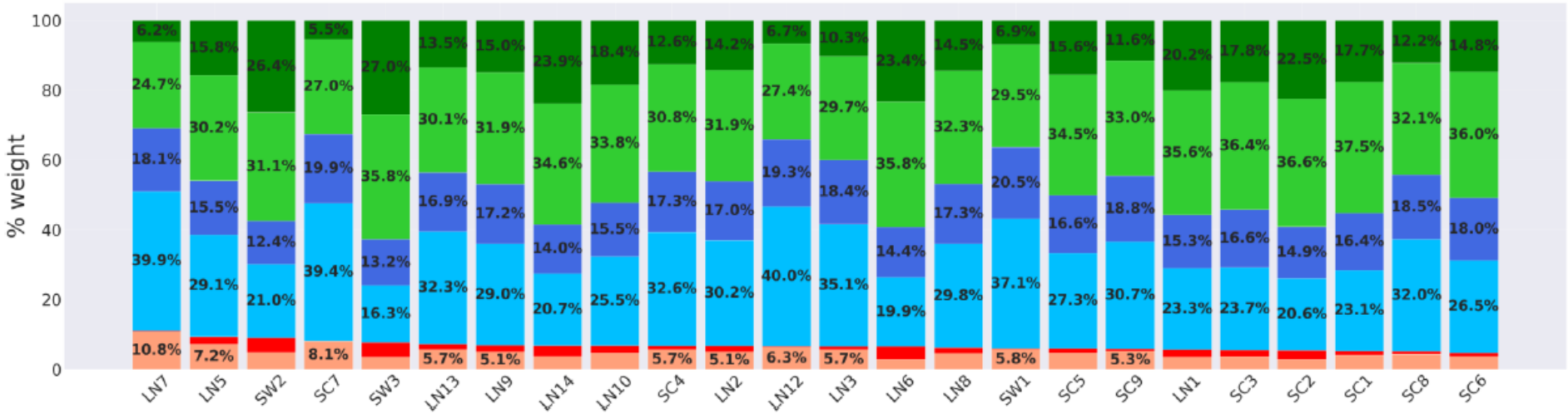
SKU Breakdown per Variety



Site comparison



SKU Breakdown per Grower

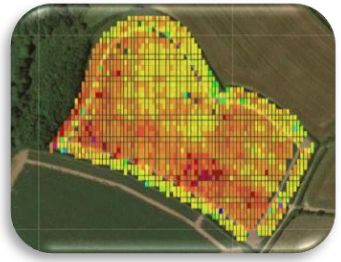


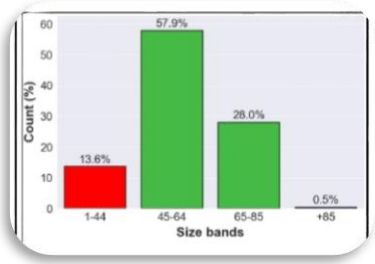
Lisäarvoa prosessin eri vaiheissa

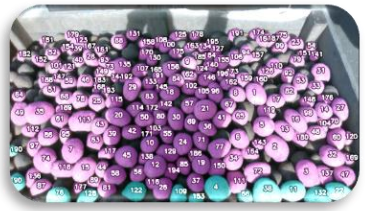
- Kädessä pidettävä Hand held -versio
- Nostokoneen tai linjaston päälle asennettava Harvester -versio

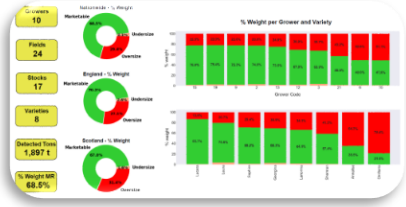
…näkyvyyttä satoennusteeseen ja toteutumaan

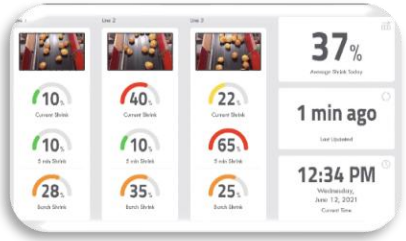
Viljely → Varasto → Osto → Kuljetus → Tehdas → Kauppa











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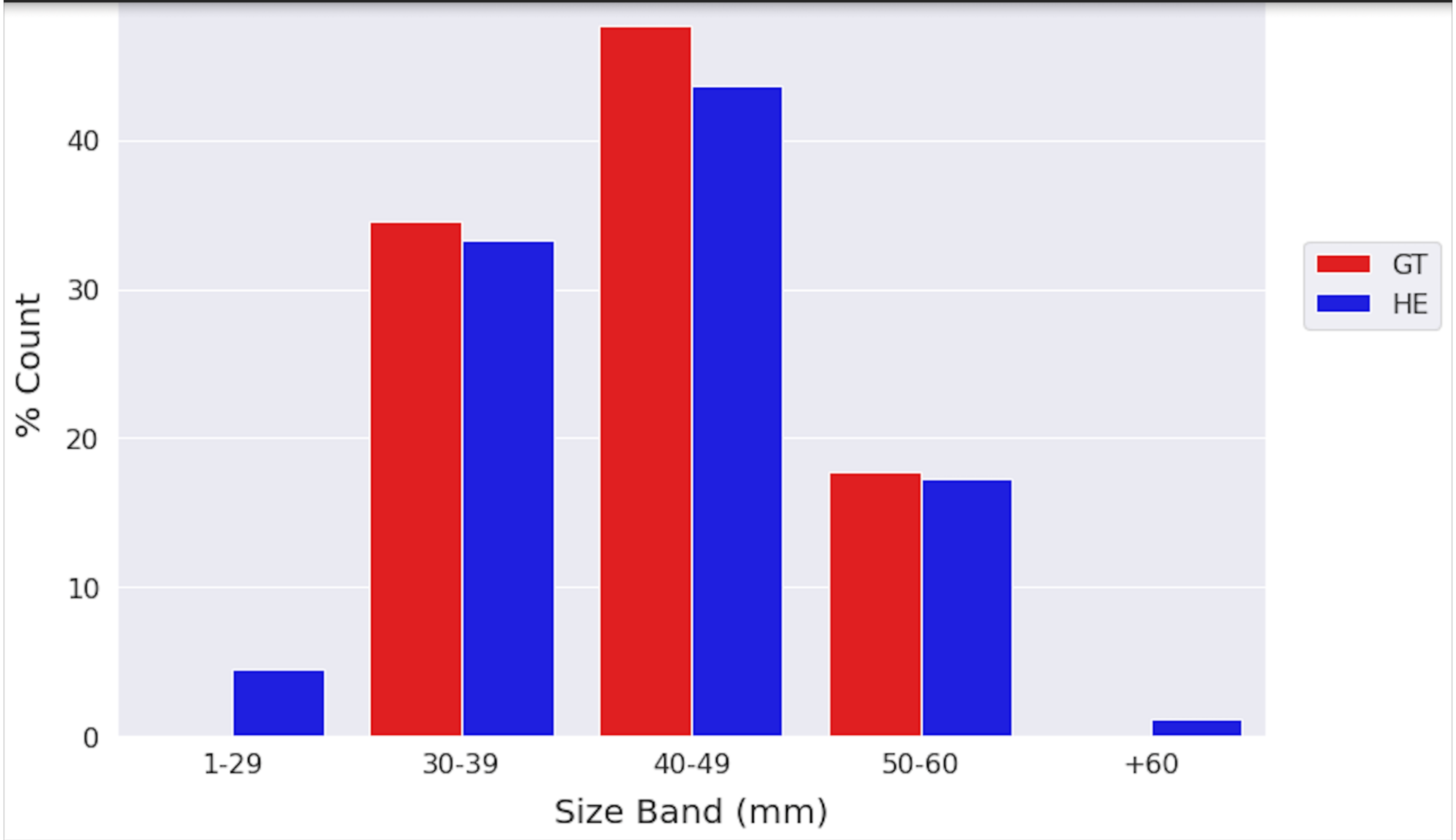
Calibrointi Suomessa syksyllä 2024

- Colomba
- Afra
- Annabelle
- Asterix
- Innovator

Preview File Edit View Go Tools Window Help Wed 12. Feb 14.53

Colomba_count.png



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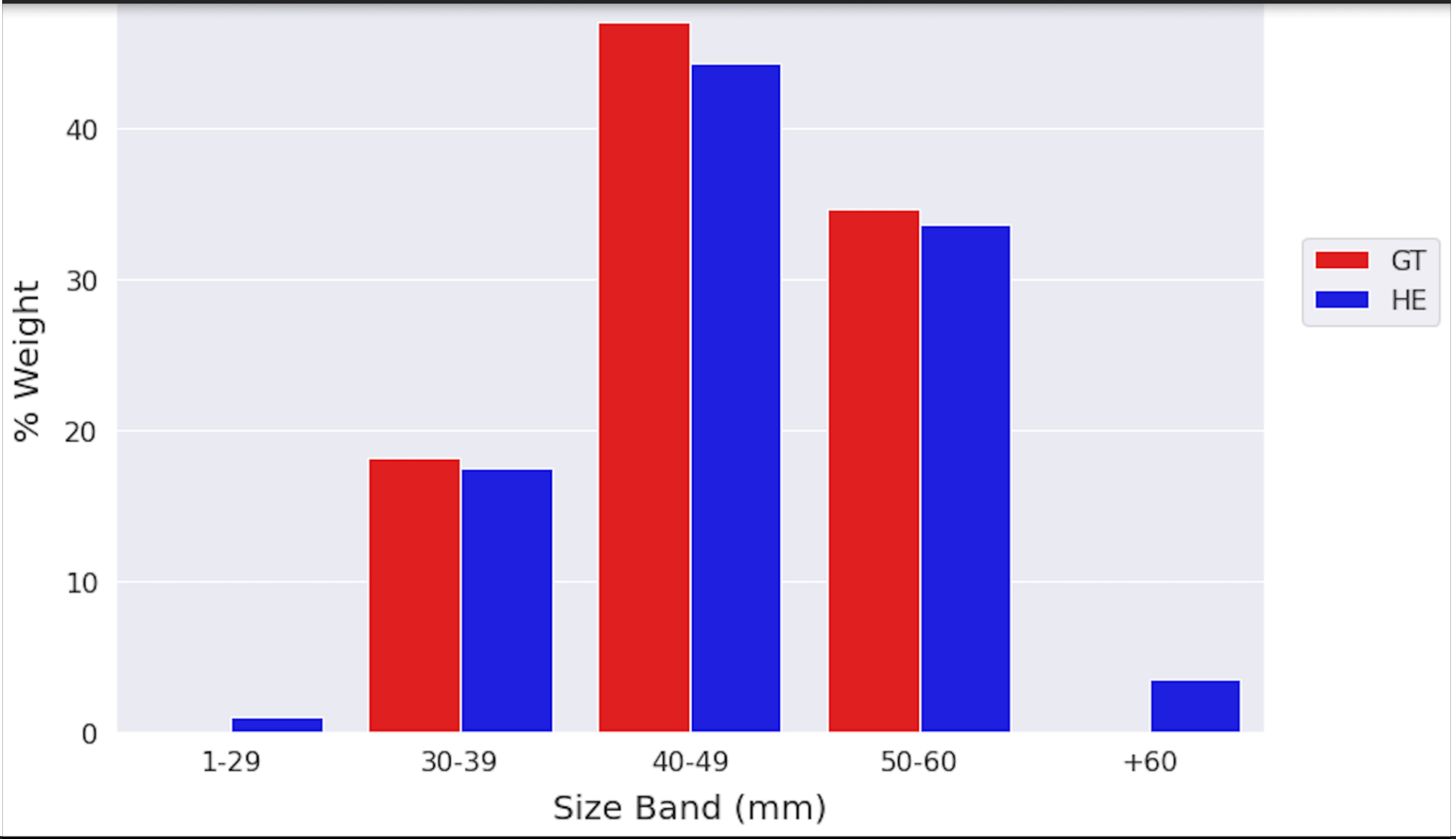
Colomba_weight.png



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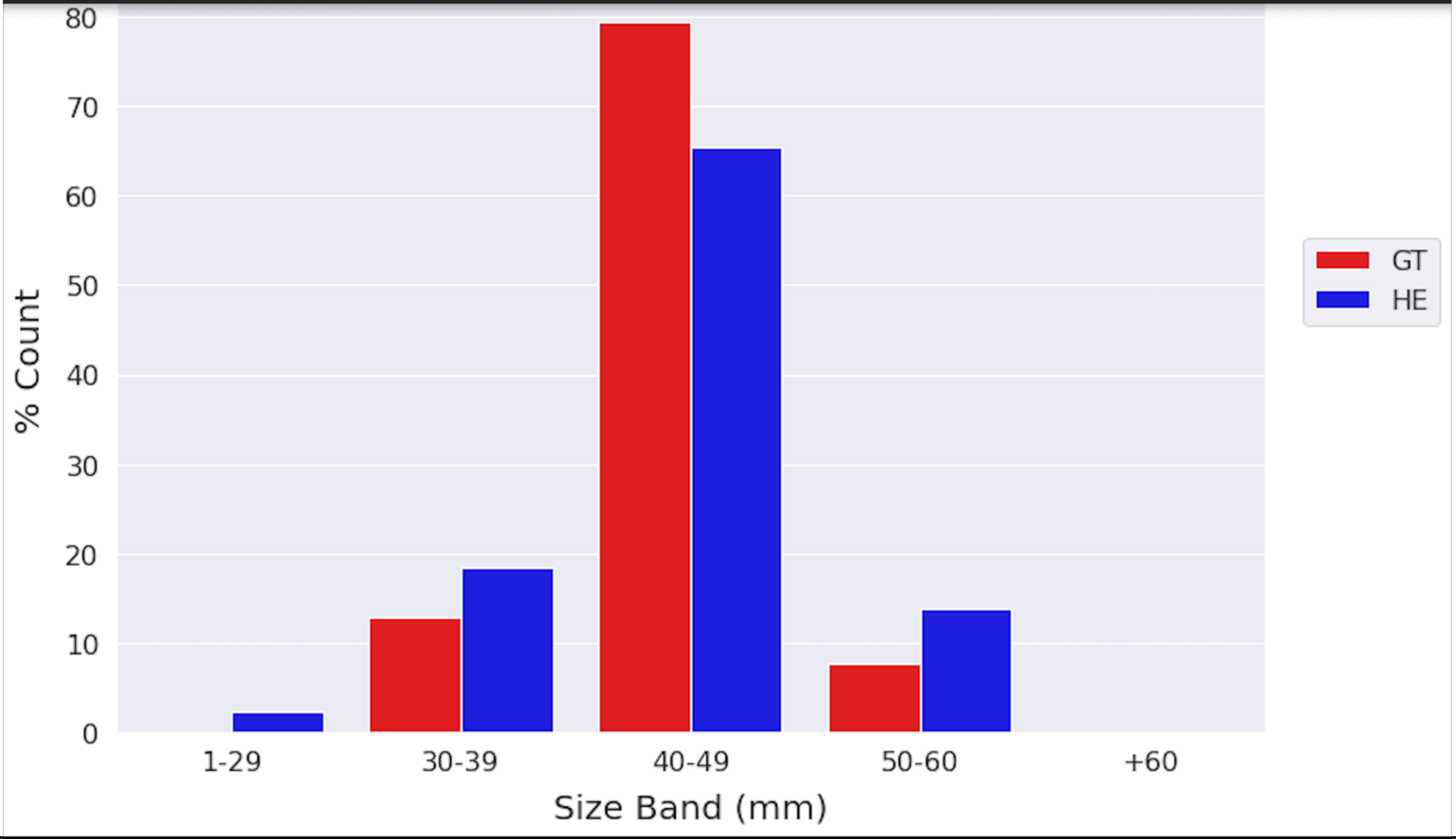
Afra_count.png



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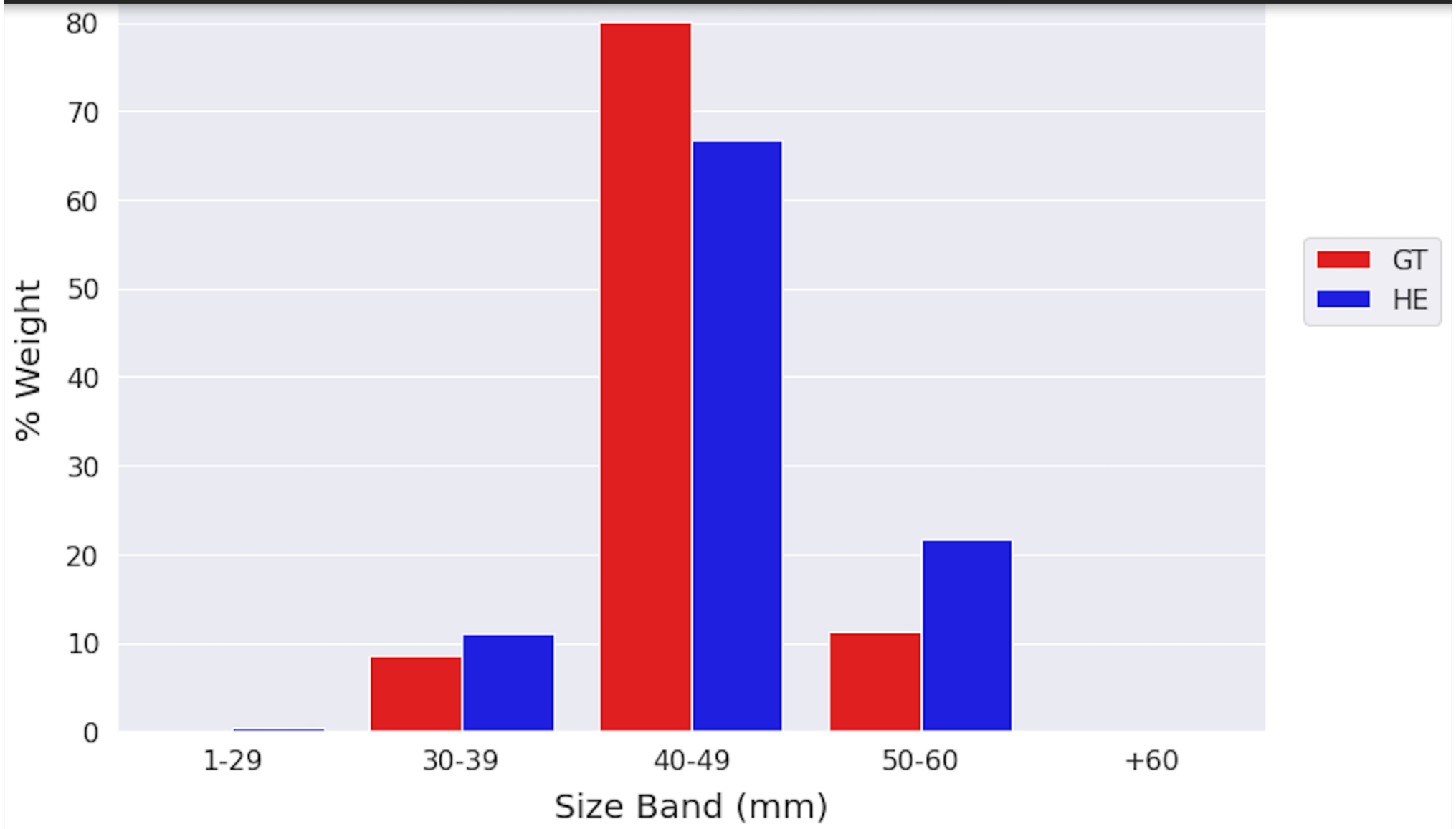

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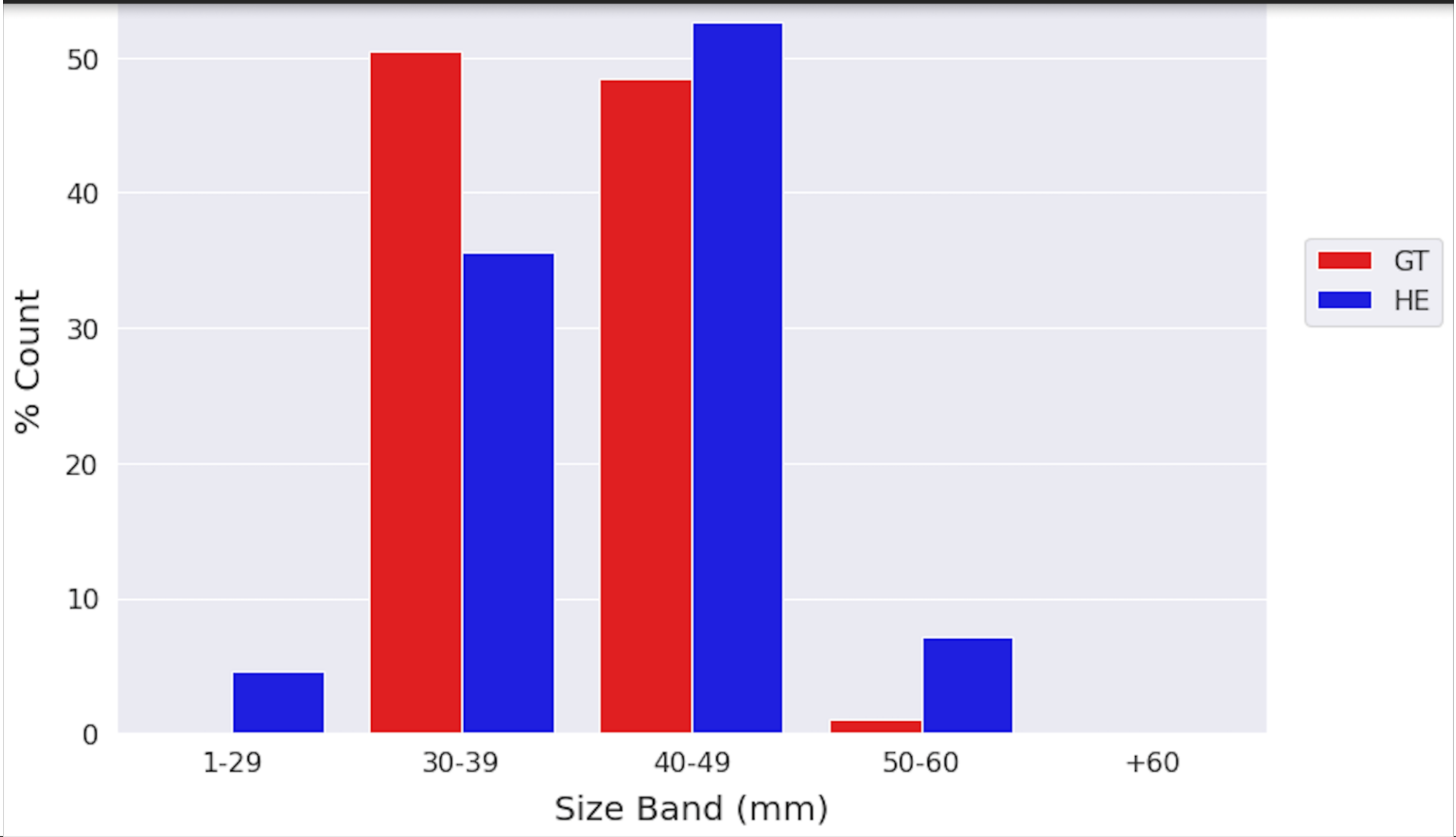
Annabelle_count.png



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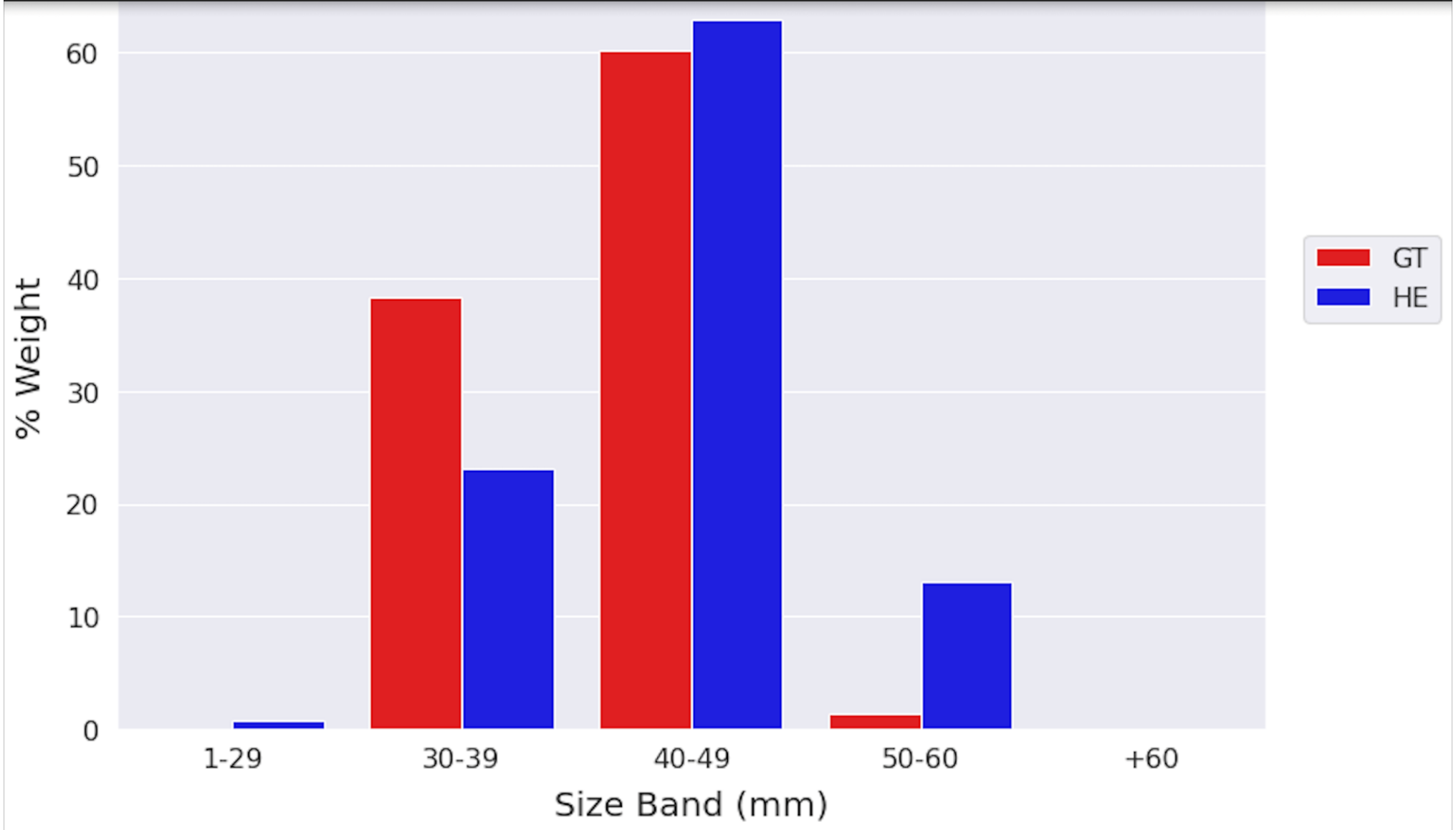
Annabelle_weight.png



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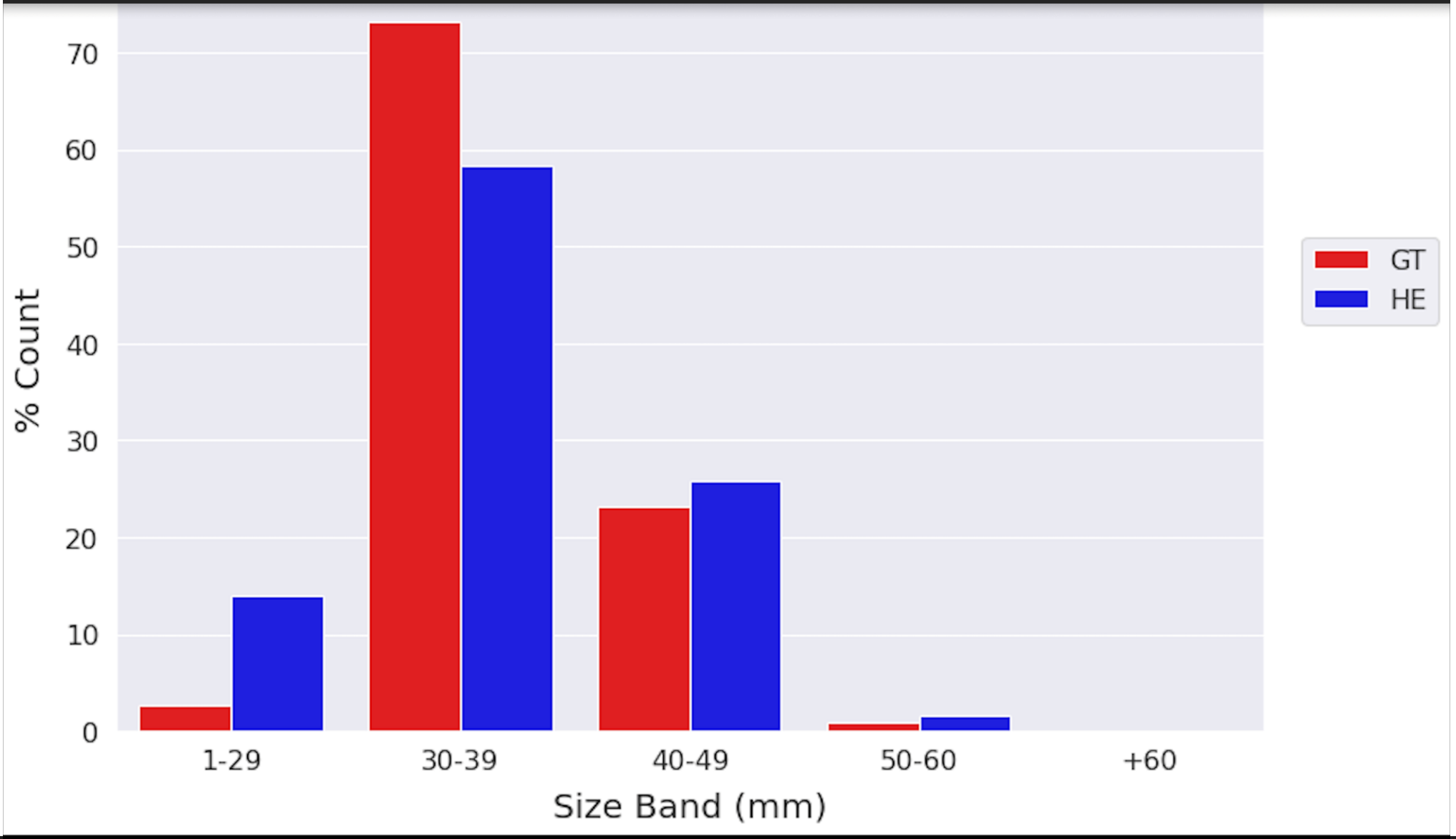
Asterix_count.png



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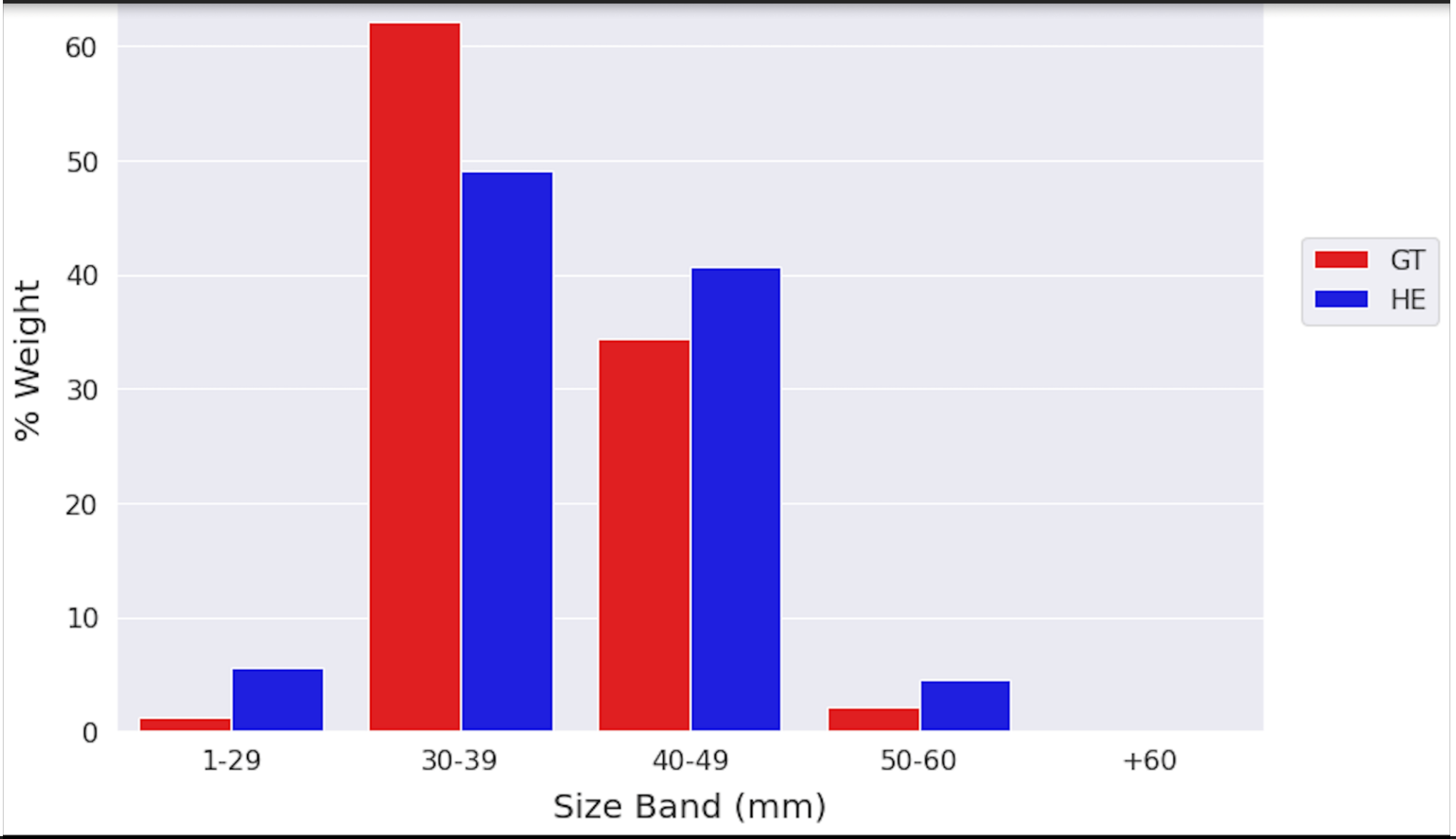
Asterix_weight.png



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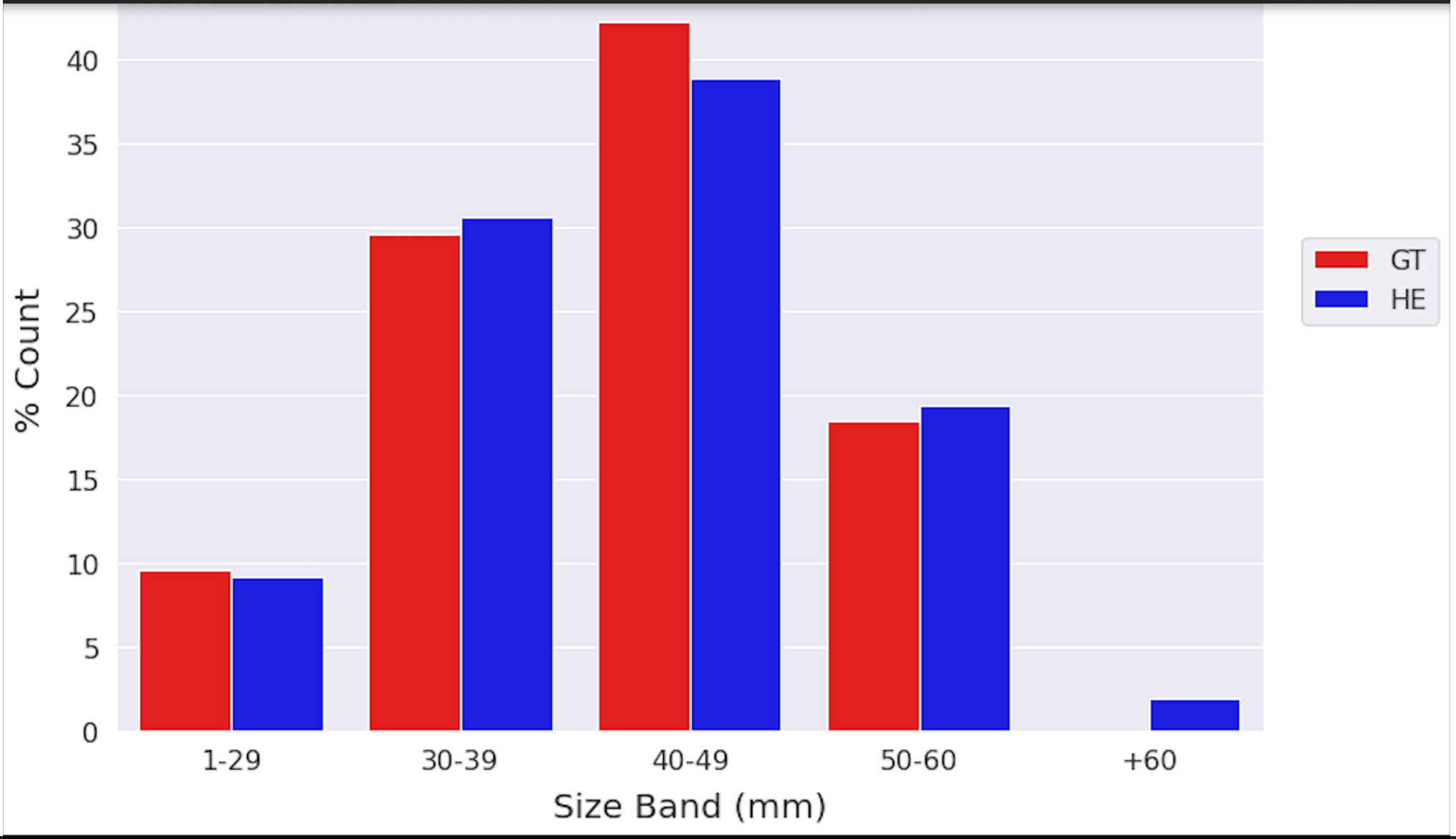
Innovator_count.png



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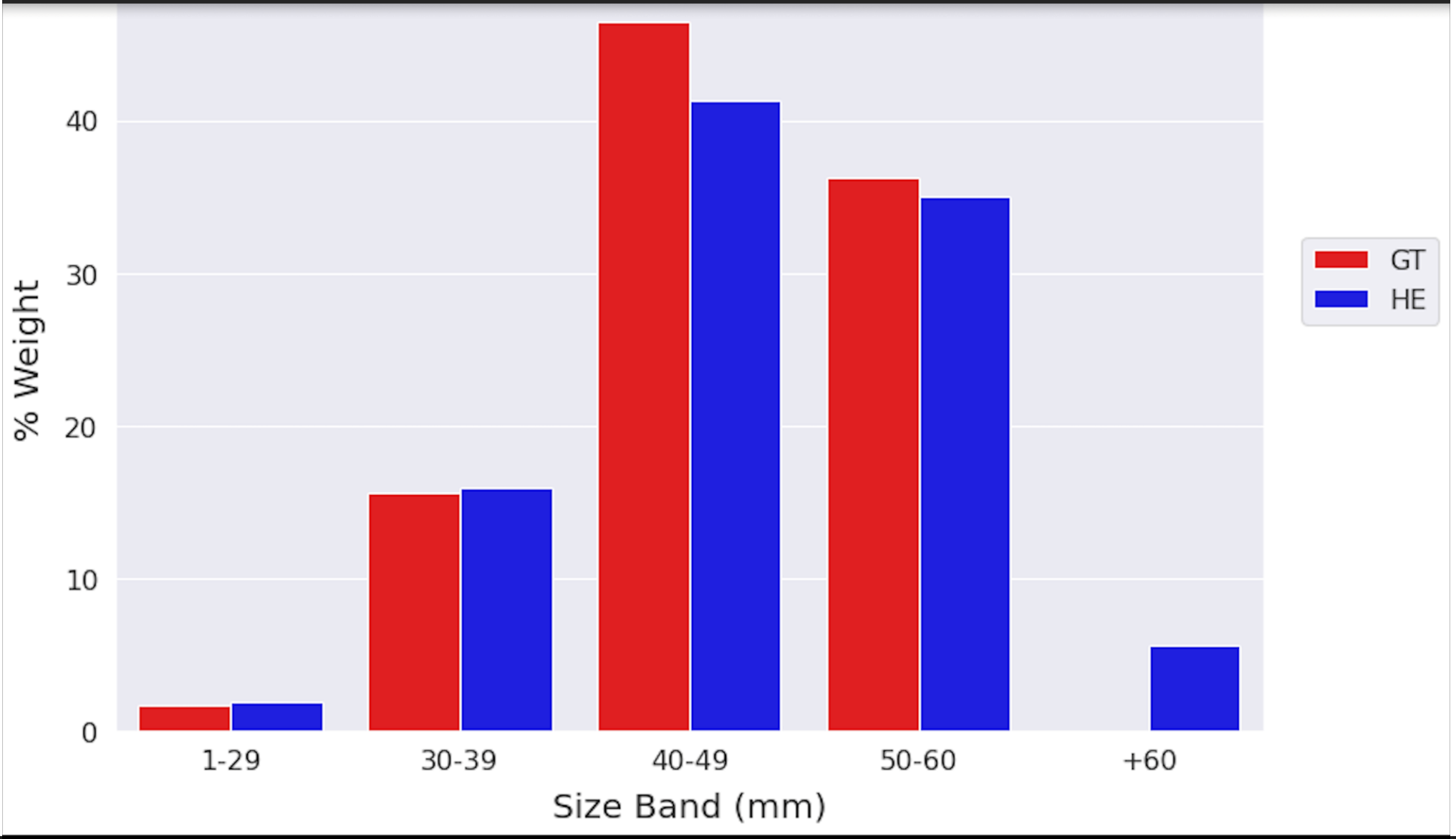
Innovator_weight.png



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Integraatio HZPC / Agritask
DSS –viljelyn optimointimallin kanssa

- DSS viljelyn optimointimallissa mukana kaikki eniten merkittävät parametrit
  - Multatyyppi
  - Ravinneanalyysi
  - Lannoitetiedot
  - Säätiedot ja esimerkiksi mullan kosteus ja lämpötila
  - Viljelytoimien ajoitus
  - Satelliittiseuranta kasvuston laatuun
- Nostohetken Harvestey mittaus antaa takaisinkytkennän optimointiin

14.1 Yhteenveto

touko 01, 2023 - helmi 28, 2024

Satelliittikuvat

Piilota

Viljelijä

Tunniste

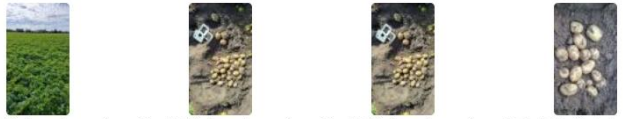
Uniformity map - Sentinel-2

Kuvan päivämäärä

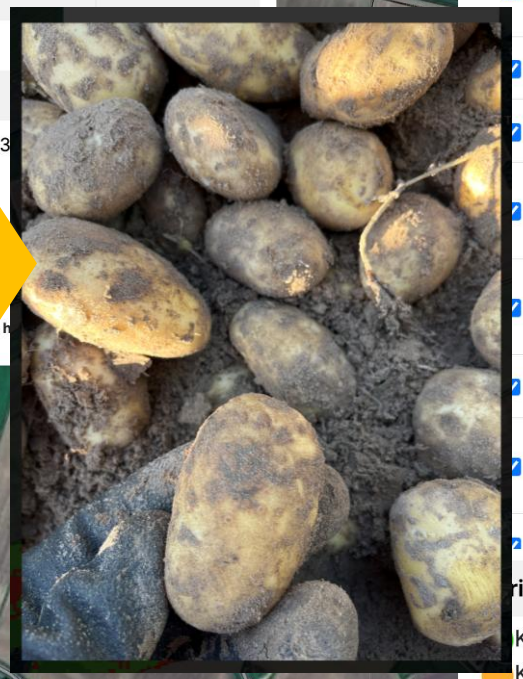
19. lokak. 2023

Sijainti	Viljelijä	Kasvi	Lajike
		Peruna	Siemenperuna

Mittaus	Jul 31, 2023	Aug 11, 2023	Aug 14, 2023
Kasvin elinvoimaisuus varsien hävittämisessä		Tuleentumas...	Tuleentumas...
Kasvuvaihe Suomi	Kukinta		
Satoarvio varsien tuhoamisessa (Suhteellinen)		30	35
Varrenhävitys		Yes	Yes
Varrenhävitys - Suunniteltu		yes	yes
Mukulan muodostus - Keskiarvo	8		
Mukulan muodostus - Kokonaispaino (kg)	0		
Mukulan muodostus - Näyte	8		
Mukulan muodostus - Summa	24		
Mukulan muodostus - tärkkelys%	0		
Satoarvio tonneina varsien tuhoamisessa (Absoluttinen)		13	



11. elok.Satoarvio varsi... | 11. elok.Satoarvio varsi... | 11. elok.Satoarvio varsi... | 31. heinäk.Mukulan mu...



Aggregated data enables better study of root-cause of qualiyty deviations and so right corrective actions.

Legenda

Mittaukset

Alternaria - keskivaiheen

hävittämisessä

Kasvuvaihe Suomi

Kasvuvaihe Suomi Pro

Kauden kasteluta yhteensä millimetreissä

Kauden kastelutapahtumat yhteensä

Mukulan muodostus - Keskiarvo

Mukulan muodostus - Kokonaispaino (kg)

Mukulan muodostus - Näyte

rin Merkit

Korkea | Korkea | Korkea | Keskikokoinen | Keskikokoinen | Matala | Matala | Ei mitään | Ei mitään | Ei arvosteltu

Uniformity map - Sentinel-2

High

Average

Low

Jokisilta

Torma 2 A

Matila prk B

Partaantie

Tyrnävänjoki

8240

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it.agritask.com/i/main/wicket/bookmarkable/com.scantask.tms.ui.qlik.QlikPage?custom_view_id=72168900148002818

HZPC keeps you growing
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AGRONOMY
- Field data
- Reports

SUSTAINABILITY
- Certifications

MANAGEMENT
- Accounts
- Farms
- Subscriptions
- Advanced

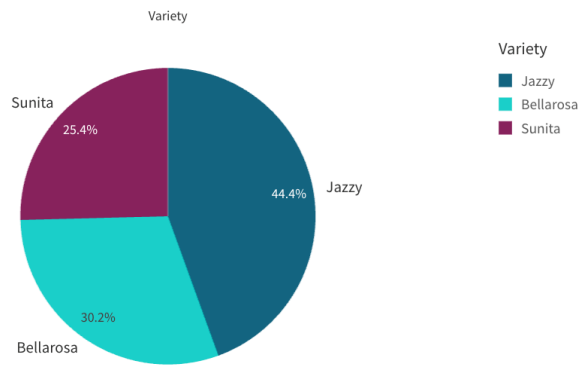
Notifications 166

BI - Plot Comparison

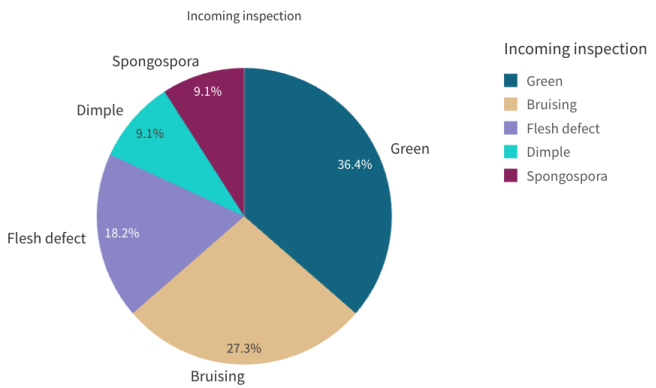
#LANGUAGE en | CROP_NAME 23 of 37 | SEASON_YEAR 2 of 5 | PLOT_NAME 4 of 262 | Selections

Records 63 4 Plots | Select date range | Variety | Grower | Growth Plot ID | Plot | Measurement

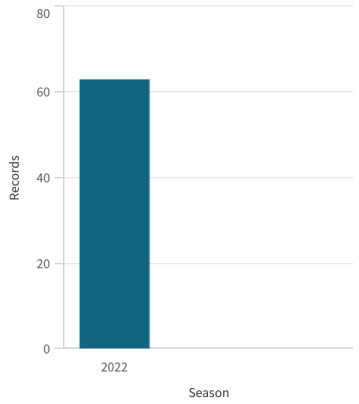
Records per Variety



Records per Incoming inspection



Records per Season



Fertilizer Application

Plot | Values

	Variety	Total fertilizer	Fertilizer application (kg/Ha)	K2O	K2O (kg/Ha)	N	N (kg/Ha)	P2O5	P2O5 (kg/Ha)
Hautala 1 - A	Jazzy	547.76	1,336.00	72.20	175.80	32.56	79.40	15.60	36.80
Hautala 1 - B	Sunita	4,546.50	1,299.00	596.93	169.00	213.26	61.00	99.47	29.50
Hillanmaa - A	Bellarosa	7,654.38	1,322.00	986.39	168.80	357.88	61.90	193.62	34.50
Honkela 1 - B	Jazzy	1,044.80	1,306.00	140.88	175.80	60.64	75.80	24.92	29.90

Incoming inspection

Plot | Values

	Variety	40-60	40-60%	40	40%	60	60%	Total amount
Hautala 1 - A	Jazzy	2,735.00	73.32	995.00	26.68	-	0.00	14,920.00
Hautala 1 - B	Sunita	6,726.67	95.65	153.33	1.81	153.33	2.53	21,100.00
Hillanmaa - A	Bellarosa	3,740.00	78.65	45.00	0.95	970.00	20.40	14,265.00
Honkela 1 - B	Jazzy	6,200.00	62.00	3,800.00	38.00	-	0.00	10,000.00

AH Antti Hintikka
Logout

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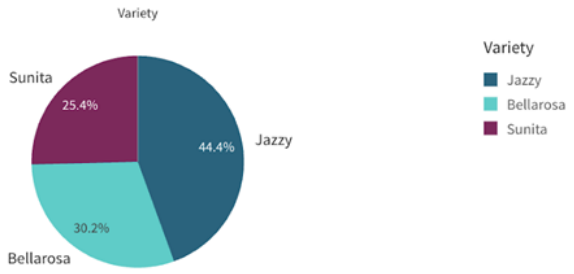
Nostetun raaka-aineen laatuanalyysi

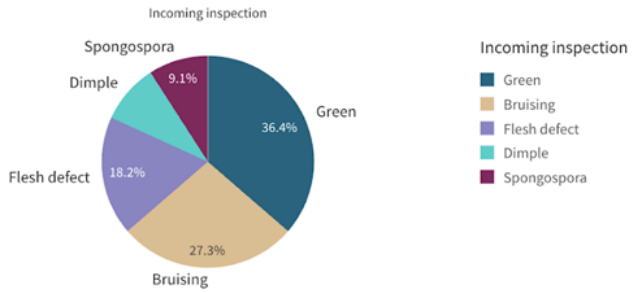
BI - Plot Comparison

#LANGUAGE en | PLOT_NAME 4 of 445 | Selections

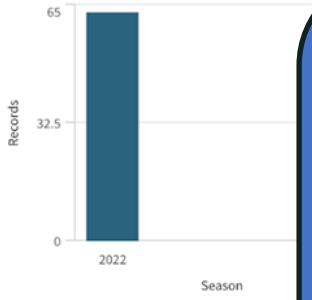
Records per Variety



Records per Incoming inspection



Records per Season



Fertilizer Application

Plot | Values

	Variety	Total fertilizer	Fertilizer application (kg/Ha)	K2O	K2O (kg/Ha)	N	N (kg/Ha)	P2O5	P2O5 (
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Hautala 1 - B	Sunita	4,546.50	1,299.00	596.93	169.00	213.26	61.00	99.47	
Hillanmaa - A	Bellarosa	7,654.38	1,322.00	986.39	168.80	357.88	61.90	193.62	
Honkela 1 - B	Jazzy	1,044.80	1,306.00	140.88	175.80	60.64	75.80	24.92	

Incoming inspection

Plot | Values

	Variety	40-60	40-60%	40	40%	60	60%	Total amount
Hautala 1 - A	Jazzy	2,735.00	73.32	995.00	26.68	-	0.00	14,920.00
Hautala 1 - B	Sunita	6,726.67	95.65	153.33	1.81	153.33	2.53	21,100.00
Hillanmaa - A	Bellarosa	3,740.00	78.65	45.00	0.95	970.00	20.40	14,265.00
Honkela 1 - B	Jazzy	6,200.00	62.00	3,800.00	38.00	-	0.00	10,000.00

Sunita and Bellarosa variaties recieved less N (Kg/Ha) compared to ref Variety but yielded more potatoes in the target size

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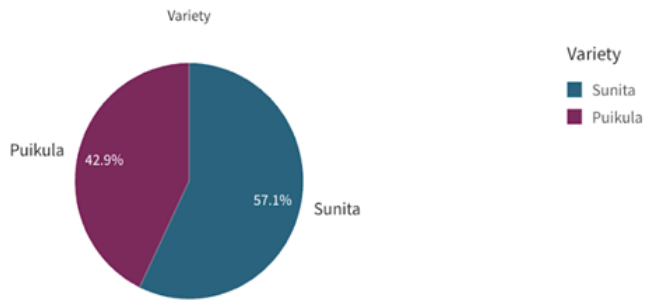
Raaka-aineen laatuanalyysi – Less Nitrogen = Better DM%

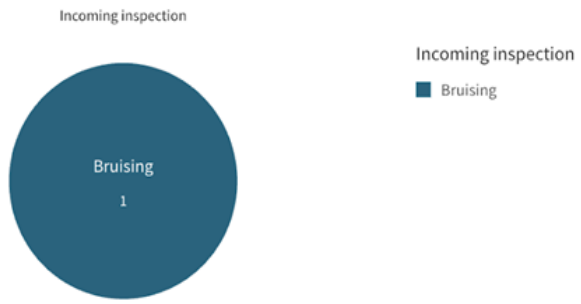
BI - Plot Comparison

#LANGUAGE en | PLOT_NAME 2 of 445 | Selections

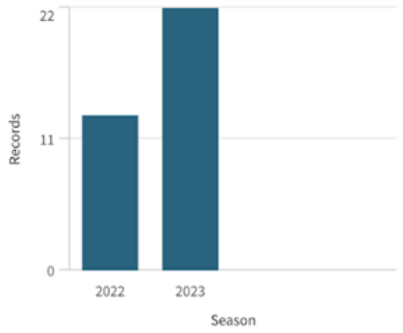
Records per Variety



Records per Incoming inspection



Records per Season



Fertilizer Application

Plot | Values

	Variety	Total fertilizer	Fertilizer application (kg/Ha)	K2O	K2O (kg/Ha)	N	N (kg/Ha)	P2O5	P2O5 (kg/Ha)
Alasaari - A	Sunita	5,809.38	1,787.50	1,064.70	327.60	397.80	122.40	206.06	63.40
Antti 3 - A	Puikula	1,527.28	1,123.00	255.95	188.20	128.11	94.20	70.45	51.80

Cooking quality

Plot | Values

	Variety	Total amount	Total income	Weighted average	DM%	Small		Taste	Sweet
Alasaari - A	Sunita	10.00	64.00	7.13	11.83	Okay		Okay	3
Antti 3 - A	Puikula	10.00	56.00	5.17	16.97	Okay		Okay	-

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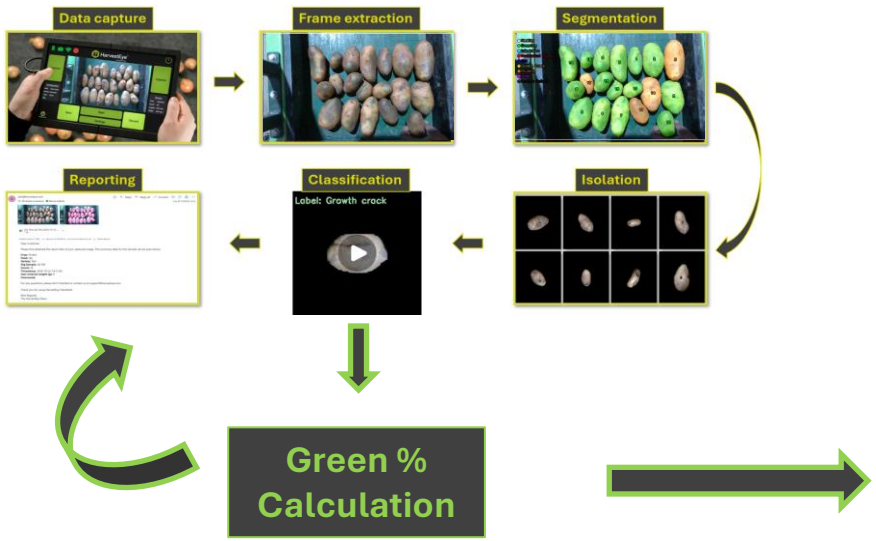
Defect Detection

Defect Detection

Greening Estimation (%)



Greening % for potatoes classified as "Greening"

If a sample is classified as "Greening"

- We can provide an estimate of the percentage of the visible surface that has greening.