PACKHOUSE ACTION GROUP

Packhouse Action Group
Water Benchmark Results – Phase 3

20 May 2021

BLUE NORTH
THINKING. FUTURE

Phase 3 data collection

- Data collection tool changes from phase 2:
  - Addition of a **data quality** indicator in the Data Collection Tool
  - Restructuring of Pack Line Processes section
  - Split out of Pack Line Processes into a separate data collection tab
  - Collect more detailed data for the tonnage of fruit handled, pre-sorted and packed

- 21 Packhouses responded to the request for data:
  - 10 participated (including four from phase 1 and phase 2)
  - 3 are interested and committed to providing data in 2021
  - 7 declined to participate
  - 1 did not respond

- All phase 3 datasets run from Jan to Dec 2019.

- Results are calculated for:
  - Packing line
  - Cold storage
  - Ablutions/office/canteen

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Benchmark process

- Data collection tool training.
- Packhouse capture data (support provided where required).
- Data is sense checked with the packhouse.
- All results were displayed:
  - Blue columns on the graphs indicate that the data was complete and within the sense check “range”;
  - Yellow columns on the graphs indicate that data quality issues was identified during the sense check phase.
  - Notes below the graphs provide more information.

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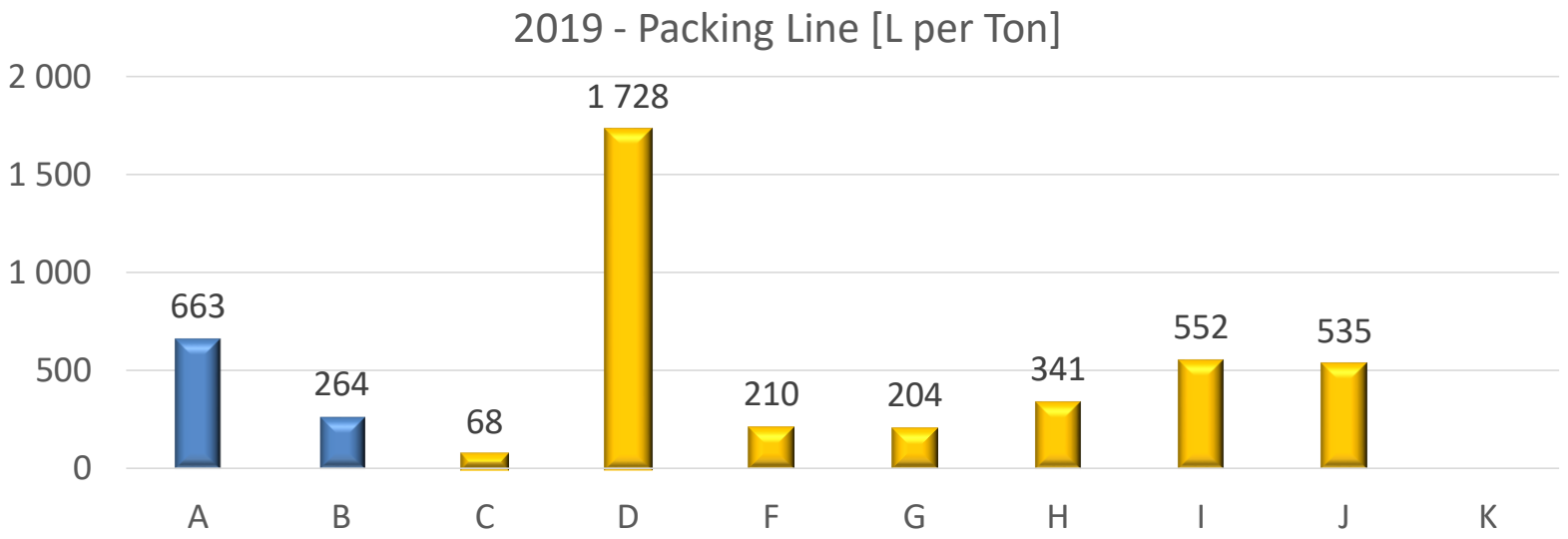
Results – Packing Line

- Includes all packing line water consumption of which flume water use make up the majority.



- Packhouse C –The pack line benchmark is very low. This packhouse drains their flumes once every two weeks, which may be the reason for the low pack line benchmark.
- Packhouse D – The pack line water benchmark is very high. Water could not be allocated clearly between the packing line and the ablutions, canteen and offices.
- Packhouse J – This packhouse used outgoing (not incoming) flow meters to measure water consumption for the packing line.
- Packhouses F, G, H and I - The pack line water consumption was estimated due to insufficient metering.

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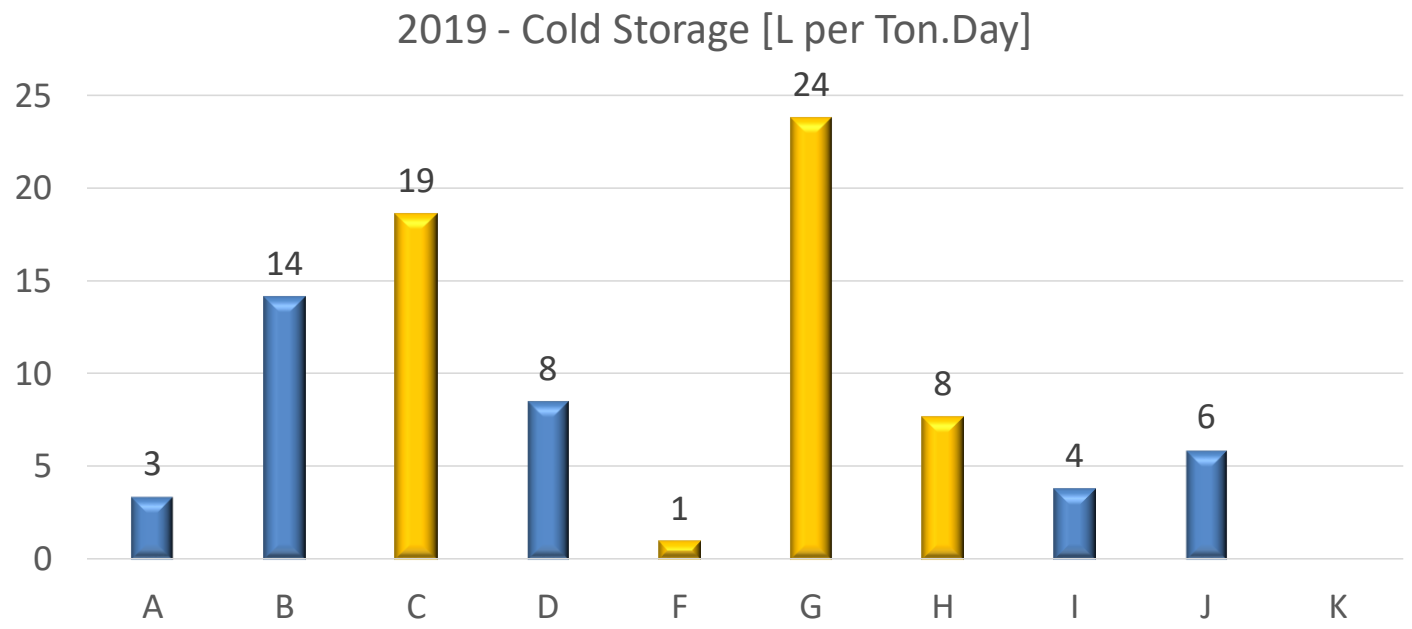
Results – Cold Storage

- Includes all cold storage water consumption of which cooling towers make up the majority.



- Packhouse C, F, G, H, K – Cold storage water consumption were estimated due to insufficient metering.

- Packhouse G - The high cold storage benchmark value could also be attributed to the 'bleeding process' used to extend the equipment's lifespan.

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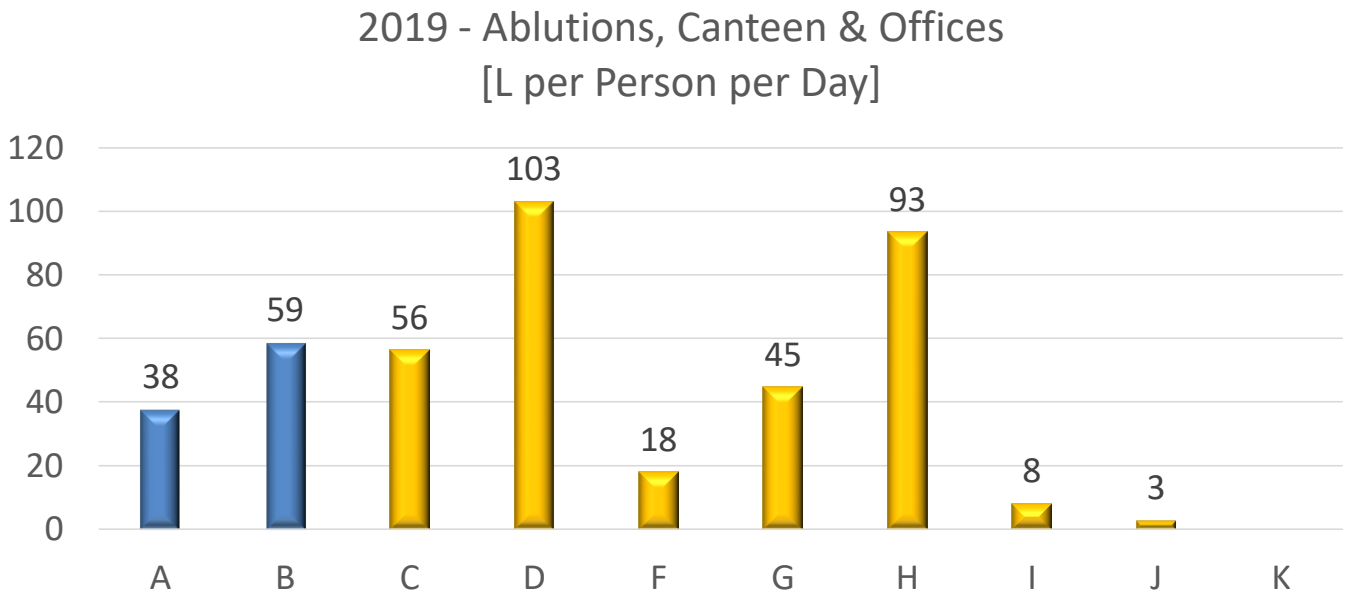
Results – Ablutions, Canteen & Offices

- Includes the water consumption from Ablutions, Canteen & Offices.



- Packhouse J – This packhouse used outgoing (not incoming) flow meters to measure water consumption for the ablutions, canteens and offices.

- Packhouse C, D, F, G, H and I - Water consumption of Ablutions, Canteen & Offices were estimated due to insufficient metering.

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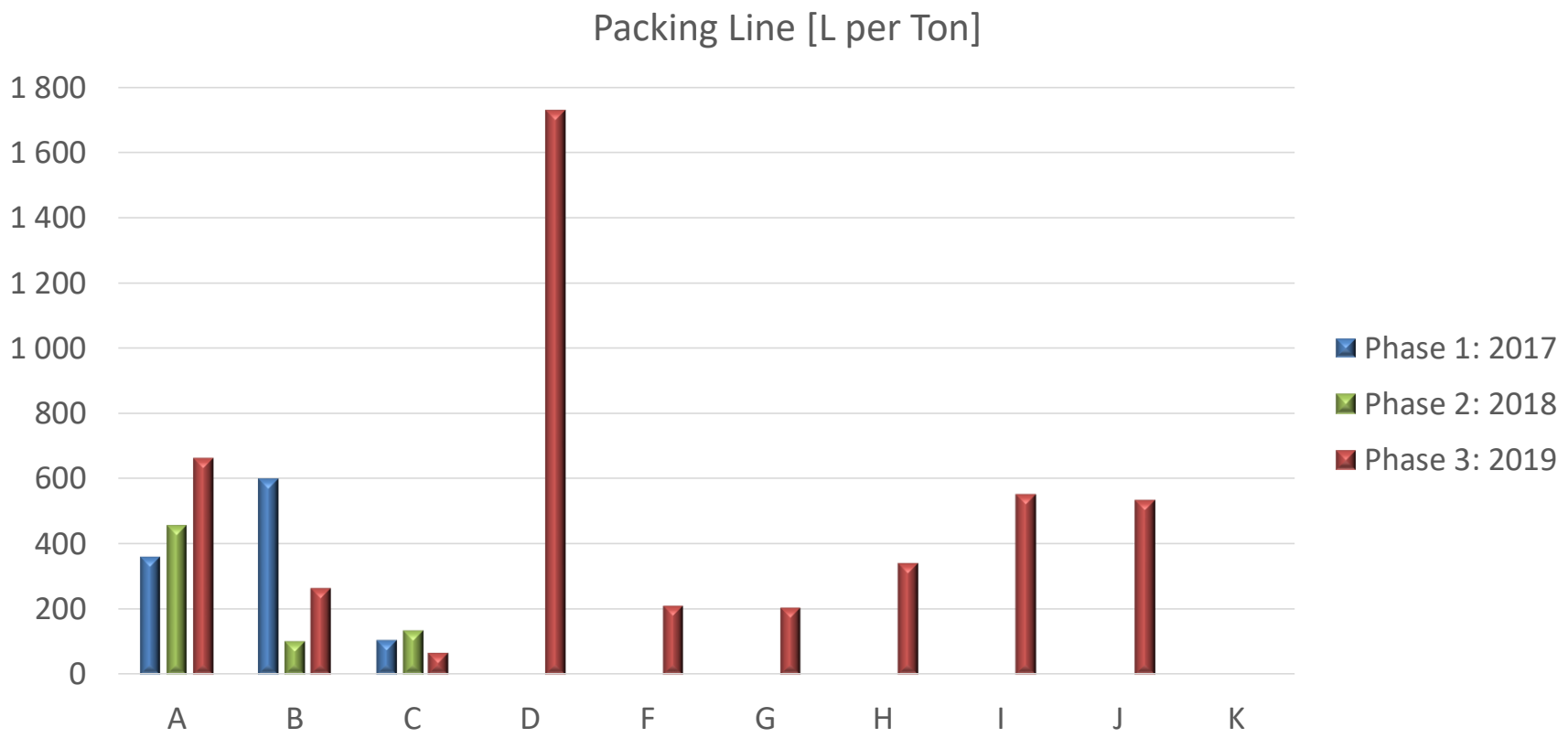
Results – Year on Year Comparison: Packing line



- For the pack line comparison it is best to use Packhouse A's data over all three years.

- The upward trend in water consumption could be attributed to the lifting of water restrictions subsequent to the Western Cape "day zero" drought being broken in 2017.

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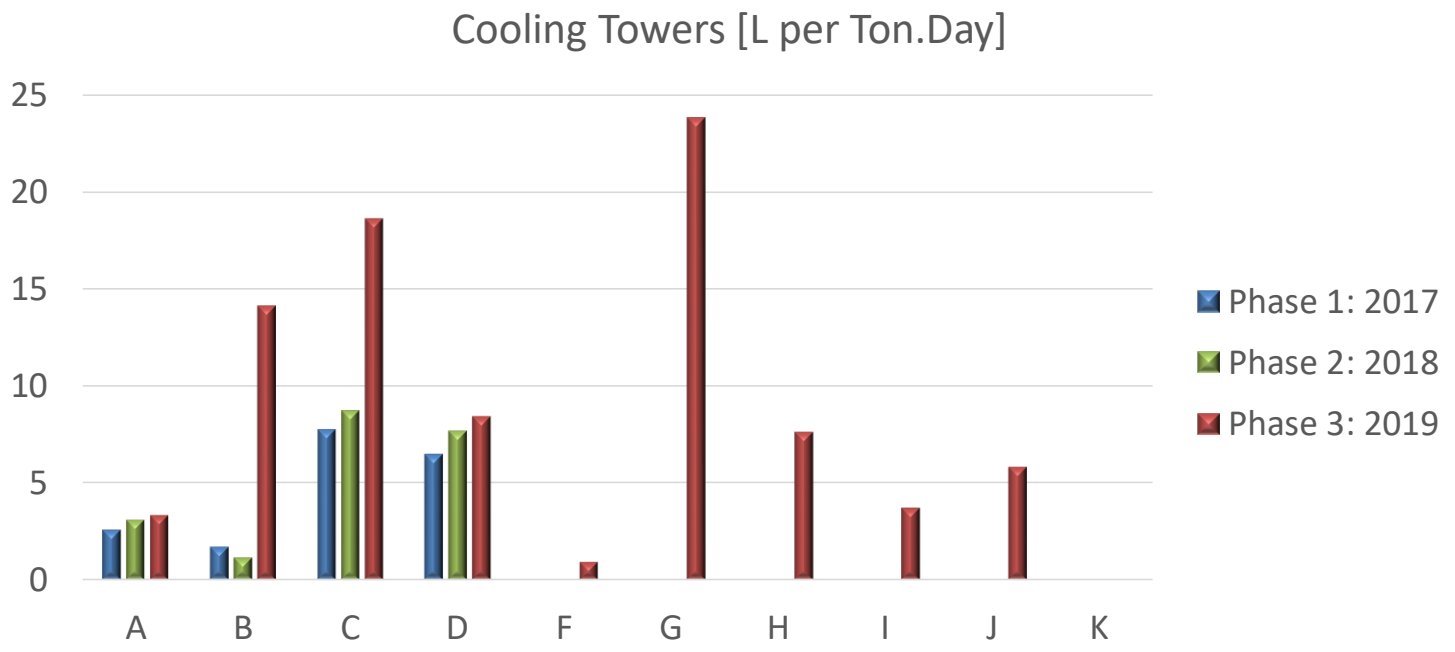
Results – Year on Year Comparison: Cold Store



- For the cold storage comparison it is best to use Packhouse A's data over all three years.
- The upward trend in water consumption could be attributed to the lifting of water restrictions subsequent to the Western Cape "day zero" drought being broken in 2017.

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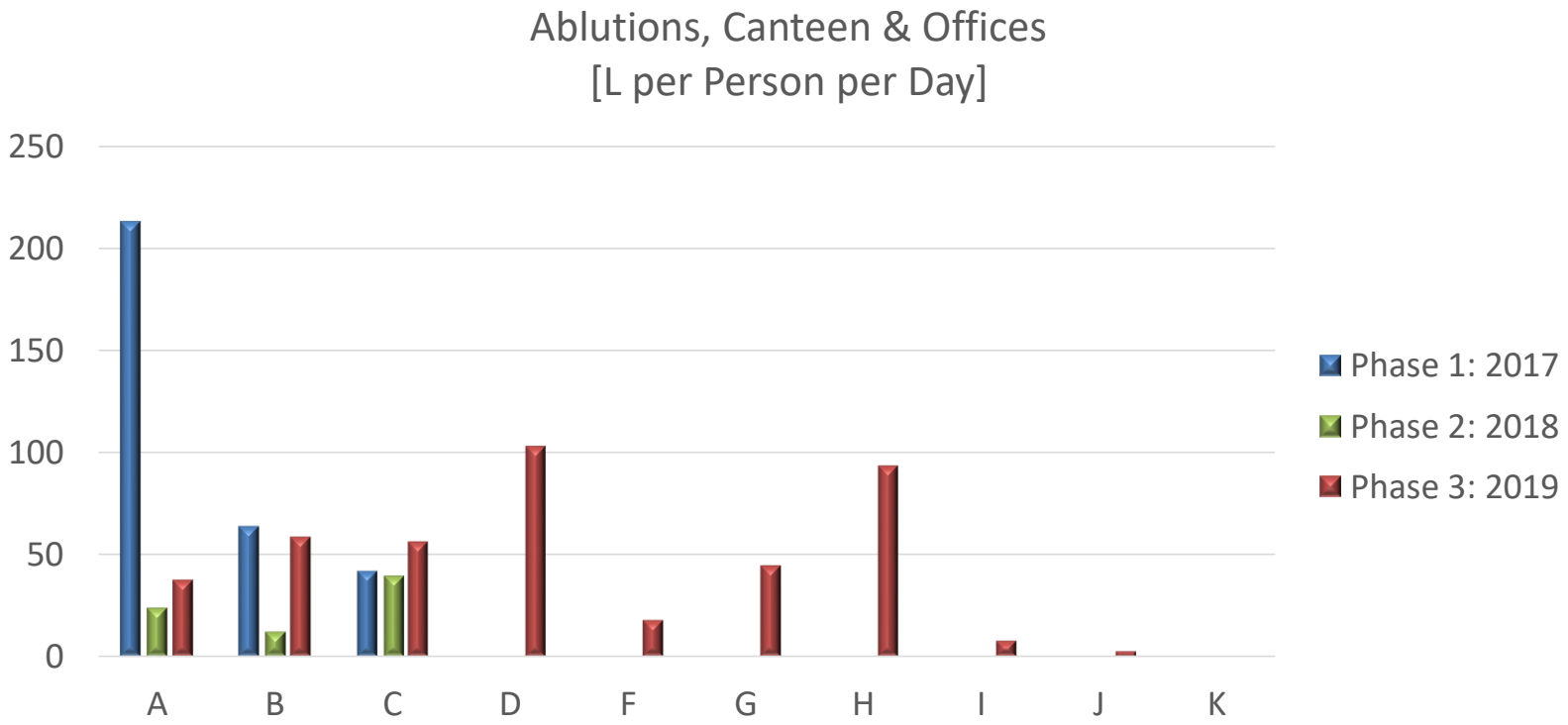
Results – Year on Year Comparison: Ablutions, Canteen & Offices



- For the ablution, offices and canteen comparison it is best to use Packhouse A's results for 2018 and 2019 (2017 data was not allocated correctly).

- The upward trend in water consumption could be attributed to the lifting of water restrictions subsequent to the Western Cape "day zero" drought being broken in 2017.

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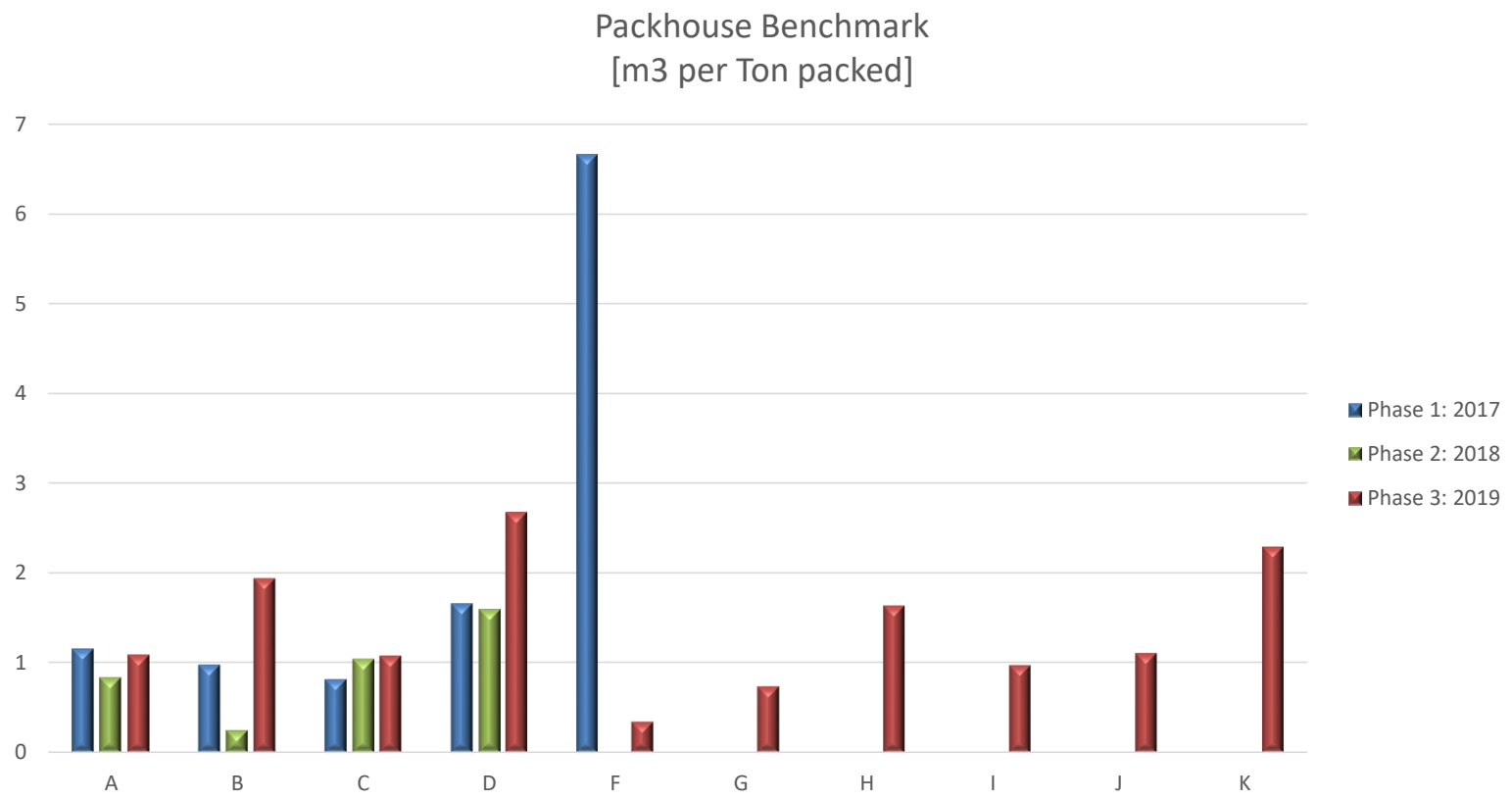
Results – Packhouse

- Includes all water consumption except “Other”.



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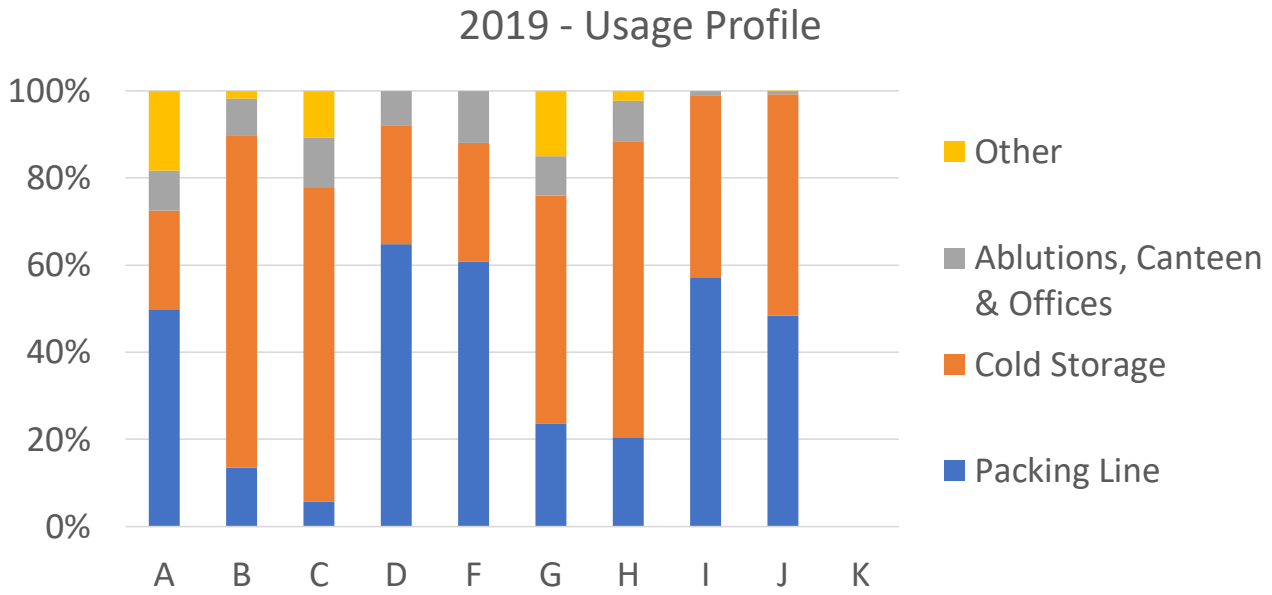
Results – Water Usage Profiles

- Displays the water use percentage profile per packhouse.



- Potential reasons for large variances in water use profile
  - A lack of metering (thus estimations).
  - Water consumption that is metered, but that cannot be allocated to the specific areas of the packhouse (crow's nest of piping distributing water throughout the packhouse).
  - Outbound metering instead of metering incoming water.
  - Lack of water consumption records.
  - Errors in water consumption records.
  - Different types of flume technology used.

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Conclusions

- Phase 3 positives:
  - Number of packhouses participating **doubled**.
  - Request from participants to connect with other packhouses in the study. Request to publish participant names, but not identify them in the output.
  - Year-on-year comparisons – trends starting to emerge.
  - Increased awareness of metering blind spots and data quality issue for each specific packhouse.
  - Increased awareness of the project – Posted on Hortgro website, article in Farmer's Weekly

- Phase 3 challenges:
  - Data quality.

- Next steps:
  - Close out meetings with participating packhouses (completed in March).

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Thank You

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