



decent
ESPRESSO

EASY BLOOMING

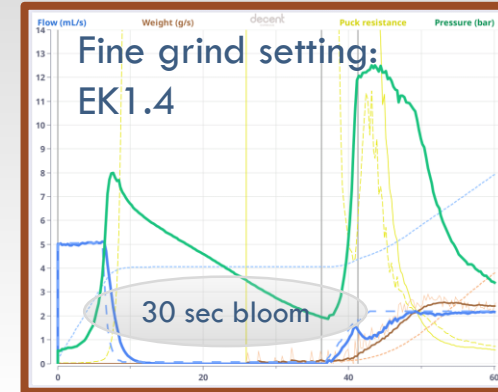
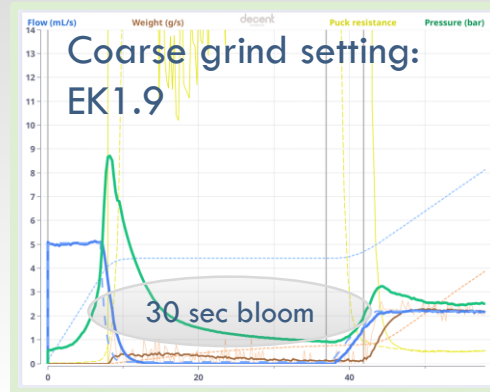
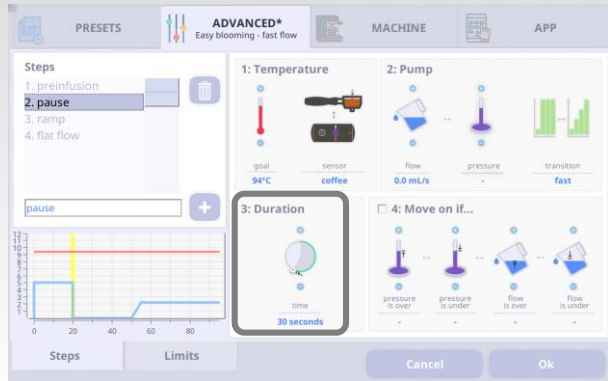
DECENT ESPRESSO DE1 PRO V1.1

STÉPHANE RIBES – SEPTEMBER 2020

EASY BLOOMING – SUMMARY (1 / 2)

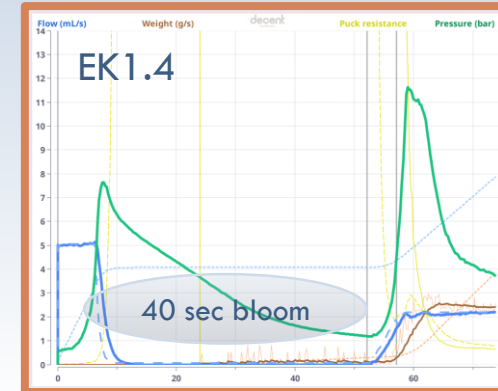
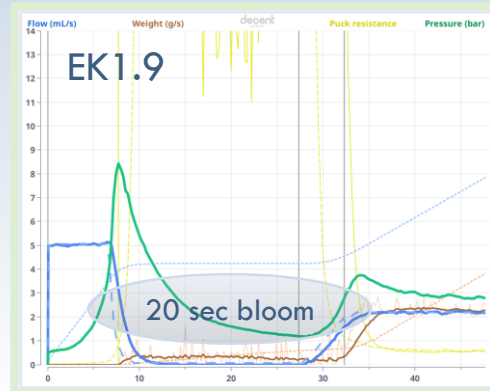
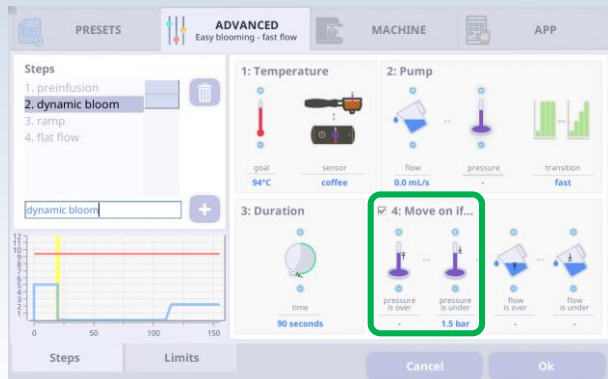
FLOW PRIORITY EXTRACTION

Normal blooming profile: fixed duration of the bloom step



- When different grind settings are used, **ending the bloom stage when a pressure value is reached** changes the actual duration of the bloom (shorter with a coarser grind)

Dynamic bloom stage, that ends when the measured pressure reaches a predefined value

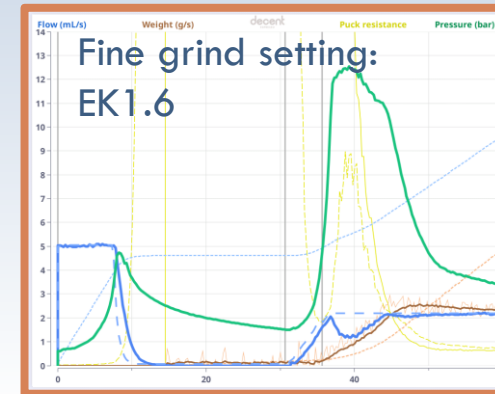
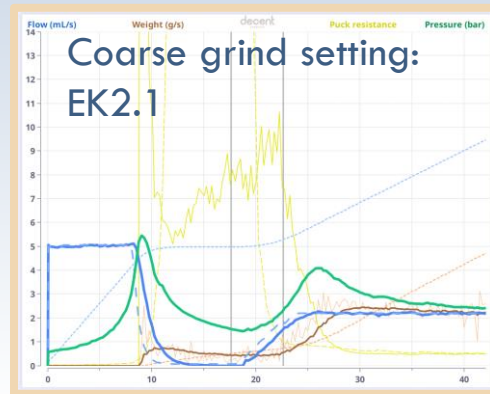
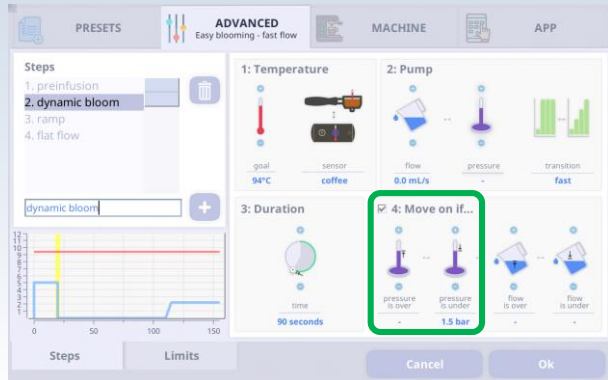


- As a result, the **extraction pressure is less influenced by variations in the grind**
- Espresso shots from the most extreme grind settings were **more tasty with the dynamic bloom**

EASY BLOOMING – SUMMARY (2/2)

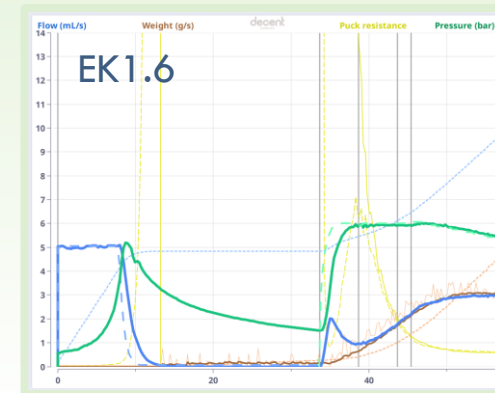
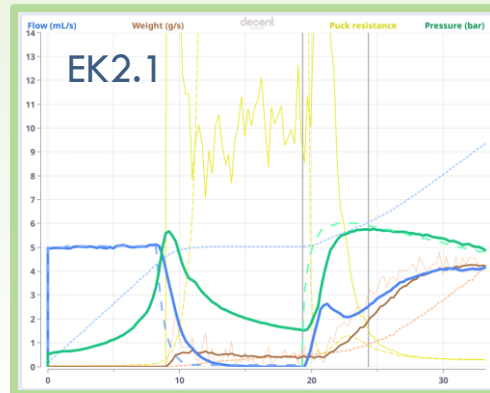
PRESSURE PRIORITY EXTRACTION WITH DYNAMIC PRESSURE DECLINE

Dynamic bloom stage, **flow** priority extraction



- Profiles with dynamic bloom followed by a pressure priority extraction have **further widened the range of grind settings that produced enjoyable espresso shots**

Dynamic bloom stage, **pressure** priority extraction with dynamic pressure decline

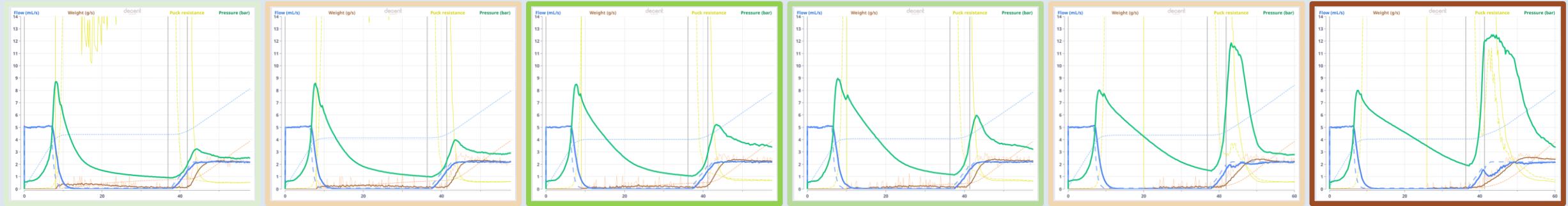


- Dynamic pressure decline** (steeper decline when the water flow rate increases more quickly) allows for a **more consistent flow rate** during the last part of the extractions

12/09/2020 – EASY BLOOMING FAST FLOW RISE

30 sec bloom – Flow ramp to 2.2 mL/s: 5 sec

Beans from Guatemala, natural process
18 grams dose in a 18g VST basket, 45g output
Decent mesh shower screen, no hog tool



G_s EK1.9

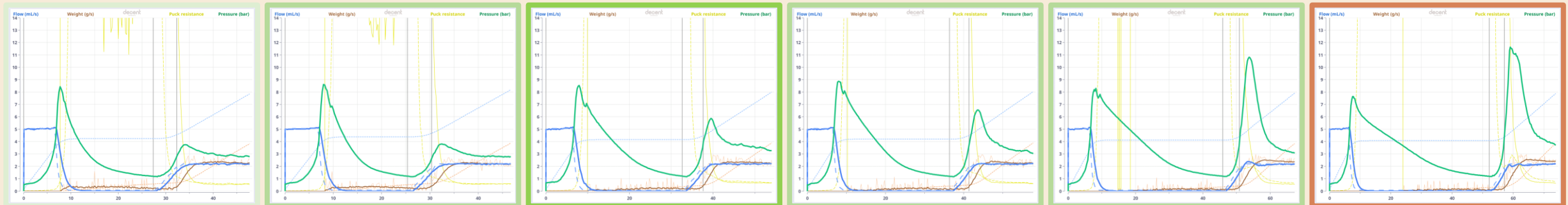
EK1.8

EK1.7

EK1.6

EK1.5

EK1.4



Bloom ends when Pressure reaches 1.2 bar – Flow ramp to 2.2 mL/s: 5 sec

12/09/2020 – EASY BLOOMING FAST FLOW RISE

30 sec bloom – Flow ramp to 2.2 mL/s: 5 sec



G_s EK1.9



EK1.8



EK1.7



EK1.6



EK1.5



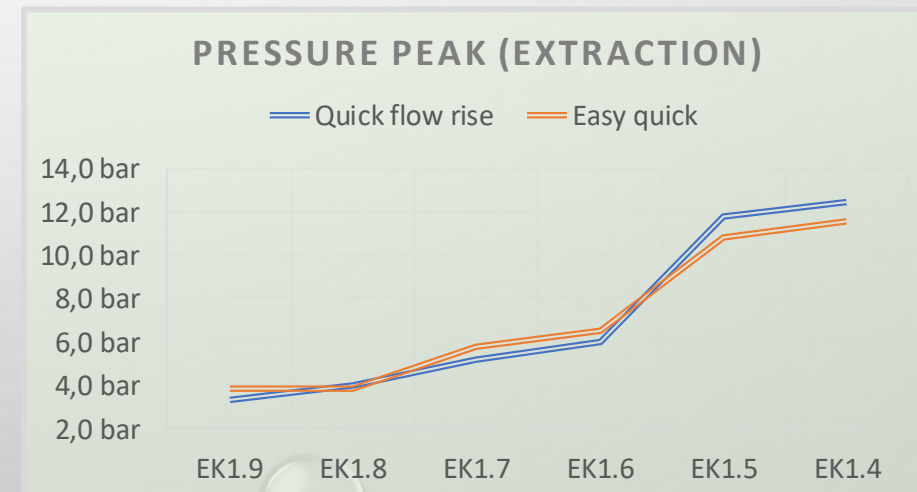
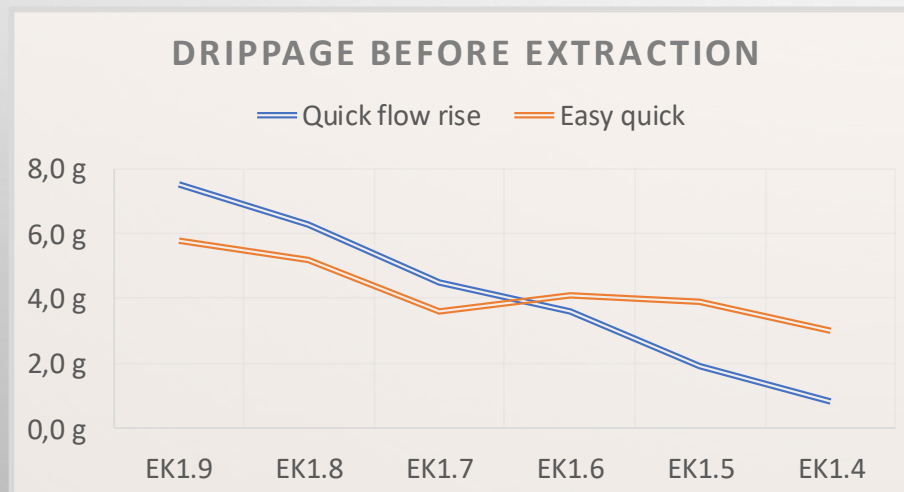
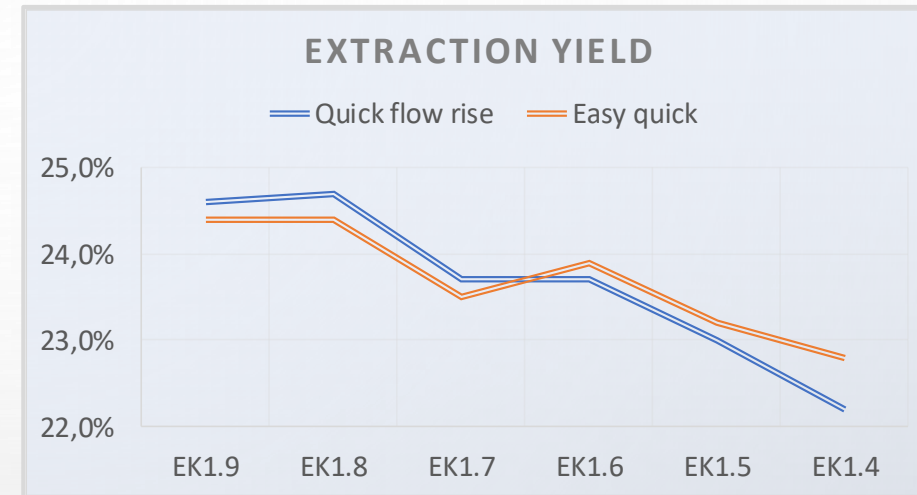
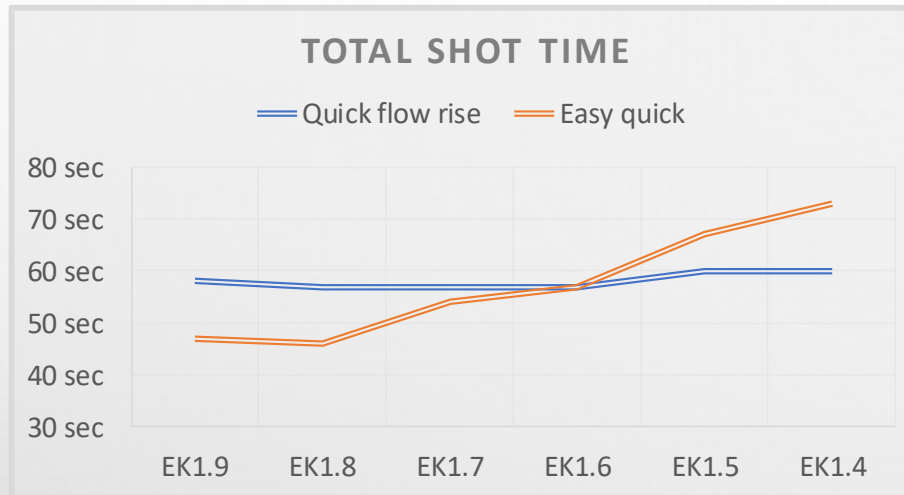
EK1.4



Bloom ends when Pressure reaches 1.2 bar – Flow ramp to 2.2 mL/s: 5 sec

12/09/2020 – EASY BLOOMING

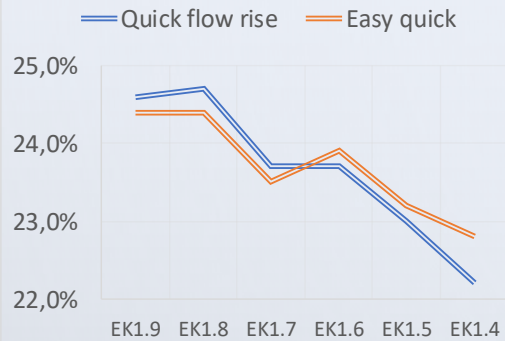
FAST FLOW RISE



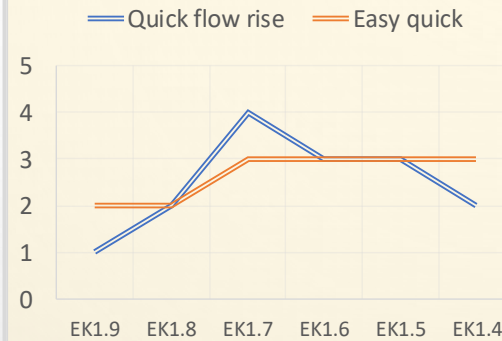
12/09/2020 – EASY BLOOMING

FAST FLOW RISE

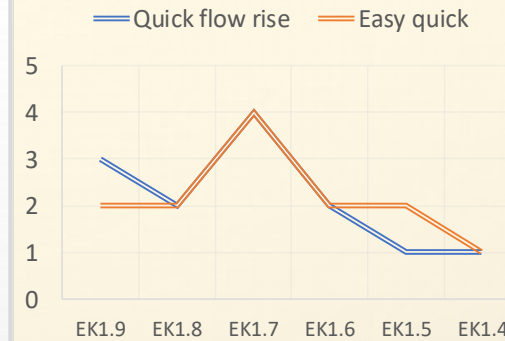
EXTRACTION YIELD



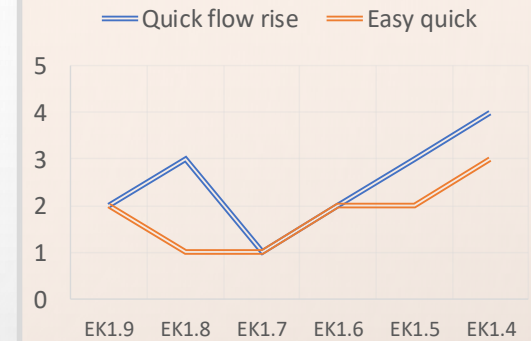
MOUTHFEEL



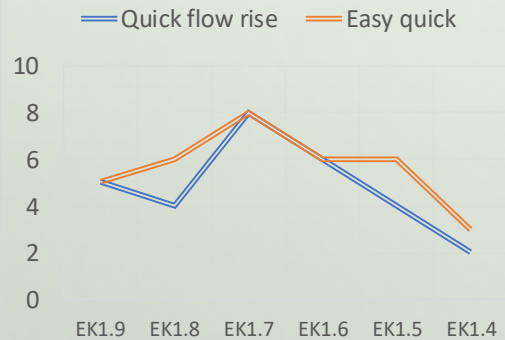
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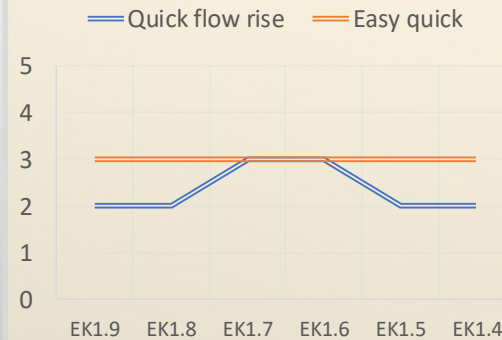
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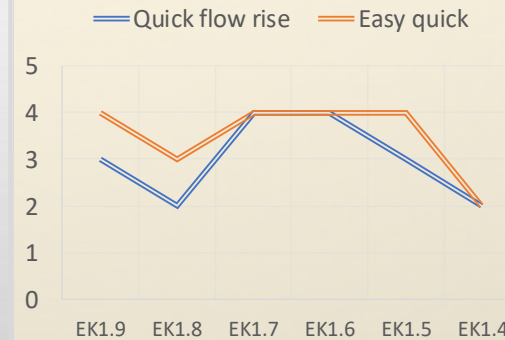
TASTE SCORE



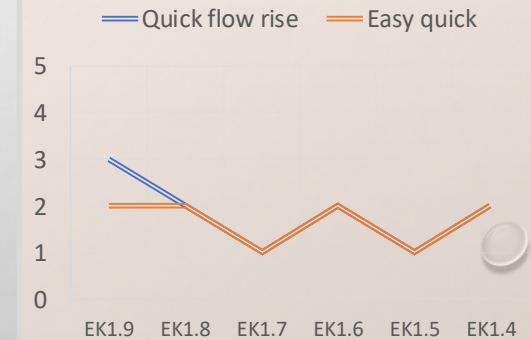
SWEETNESS



FLAVOR CLARITY



ASTRINGENCY

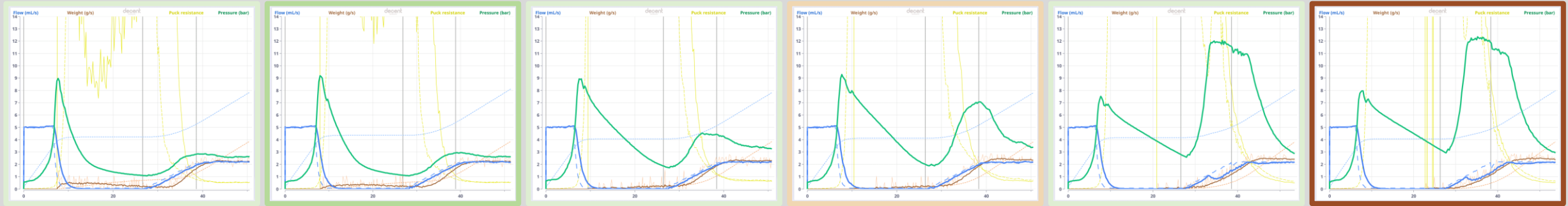


12/09/2020 – EASY BLOOMING

SLOW FLOW RISE

20 sec bloom – Flow ramp to 2.2 mL/s: 12 sec

Beans from Guatemala, natural process
18 grams dose in a 18g VST basket, 45g output
Decent mesh shower screen, no hog tool



Gs EK1.9

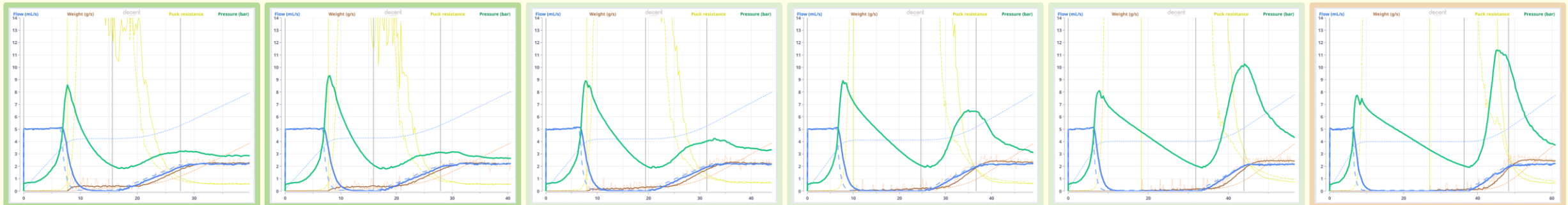
EK1.8

EK1.7

EK1.6

EK1.5

EK1.4



Bloom ends when Pressure reaches 1.2 bar – Flow ramp to 2.2 mL/s: 12 sec

12/09/2020 – EASY BLOOMING

SLOW FLOW RISE

30 sec bloom – Flow ramp to 2.2 mL/s: 12 sec



Gs EK1.9



EK1.8



EK1.7



EK1.6



EK1.5



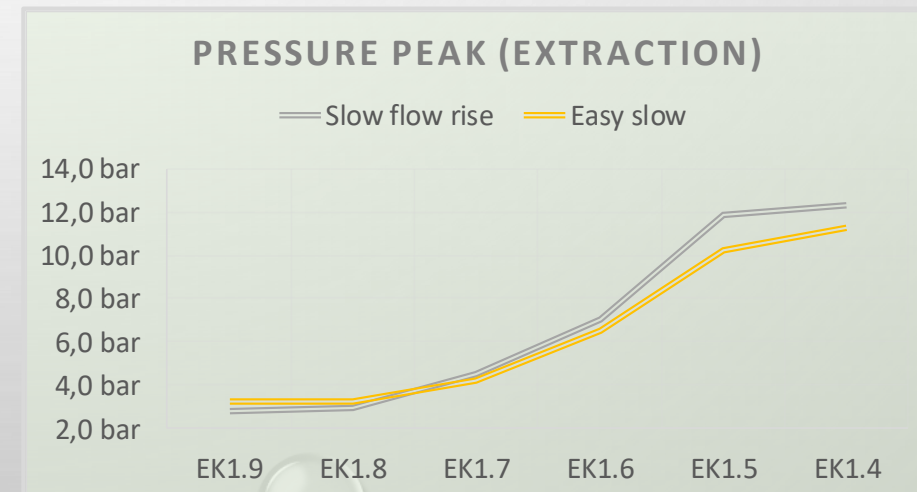
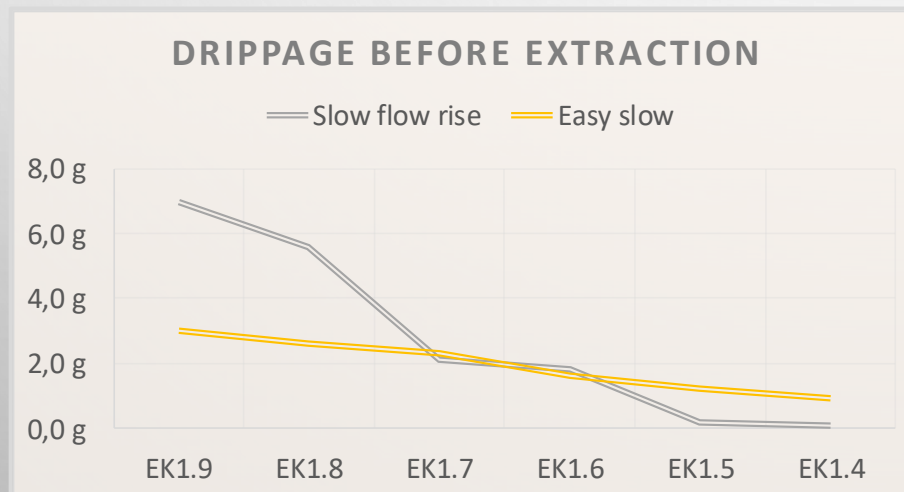
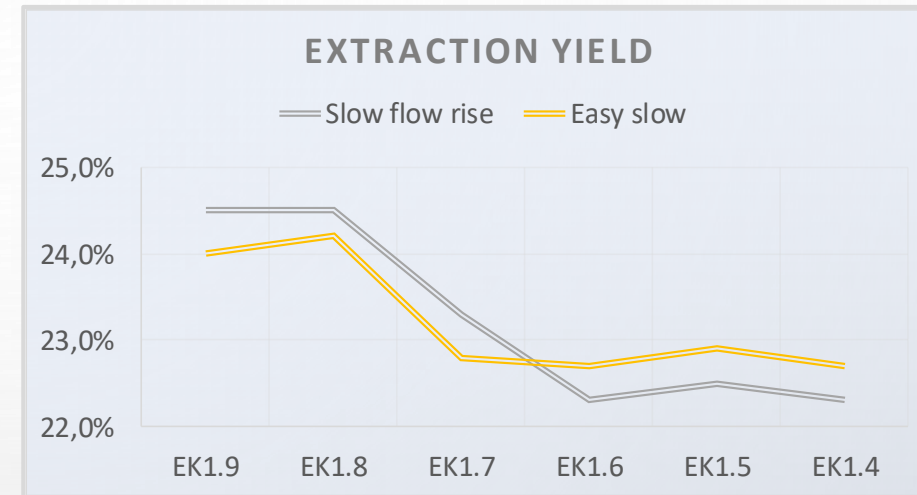
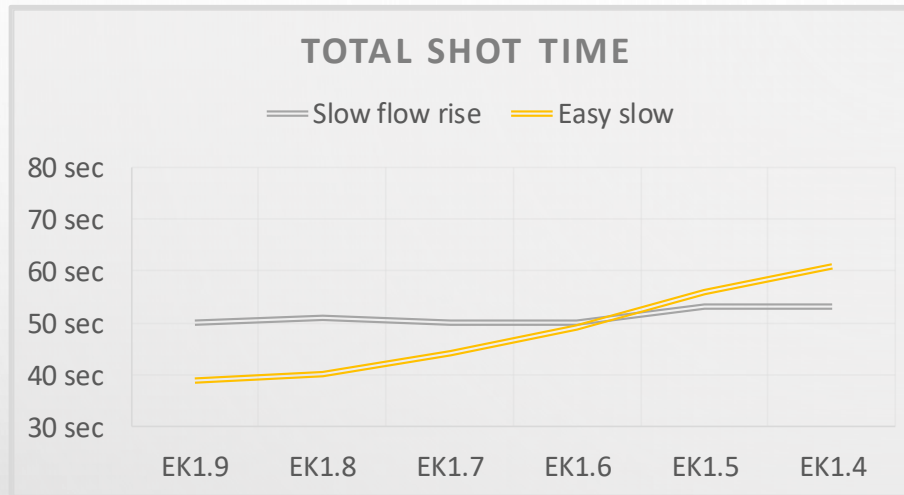
EK1.4



Bloom ends when Pressure reaches 1.2 bar – Flow ramp to 2.2 mL/s: 12 sec

12/09/2020 – EASY BLOOMING

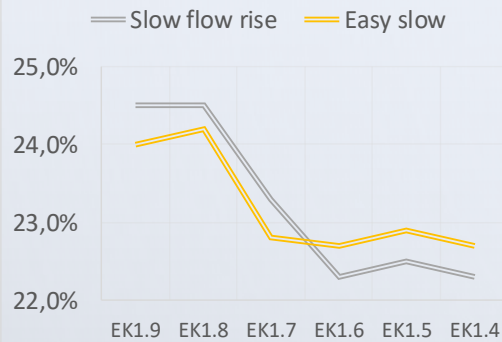
SLOW FLOW RISE



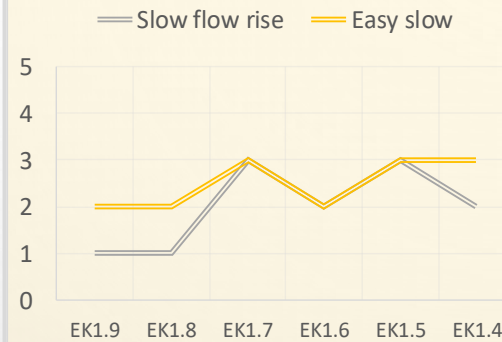
12/09/2020 – EASY BLOOMING

SLOW **FLOW** RISE

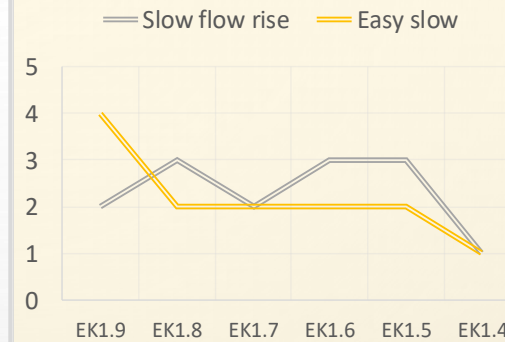
EXTRACTION YIELD



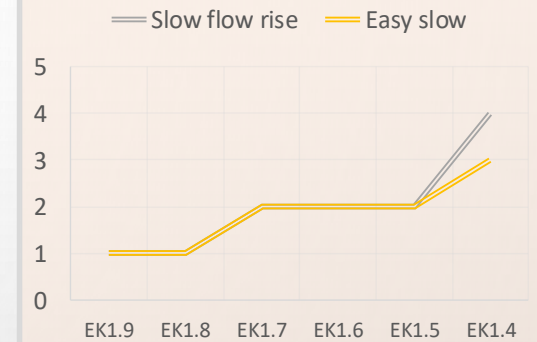
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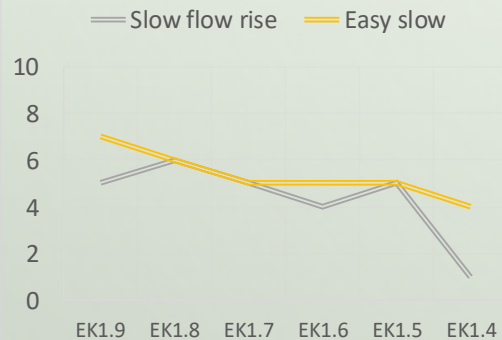
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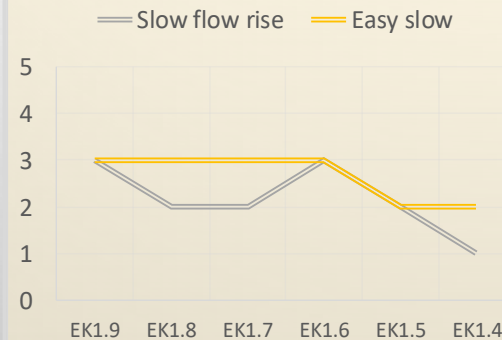
BITTERNESS



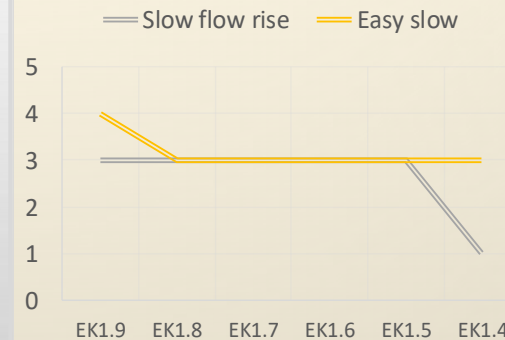
TASTE SCORE



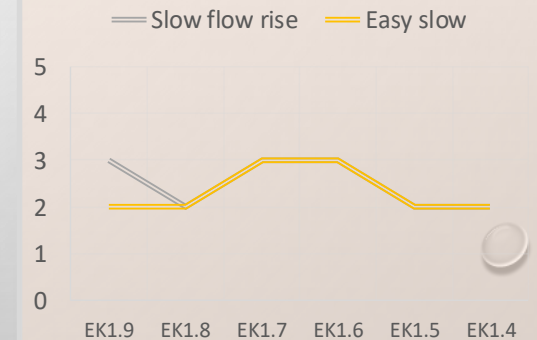
SWEETNESS



FLAVOR CLARITY



ASTRINGENCY

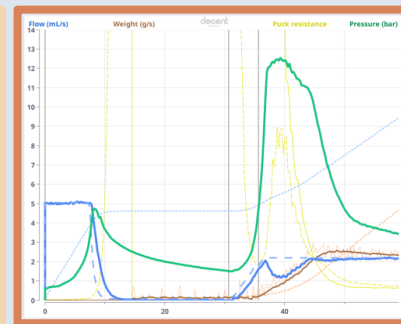
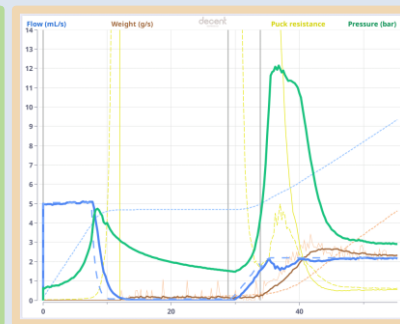
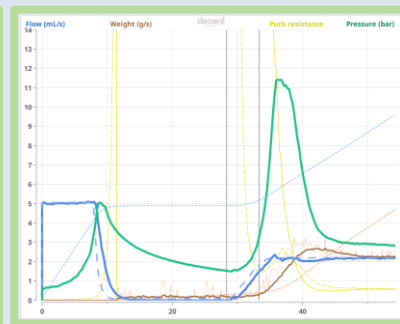
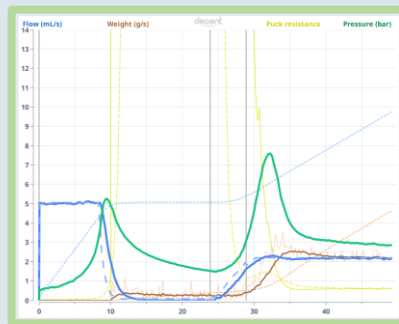
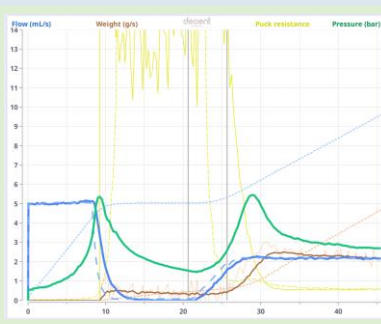
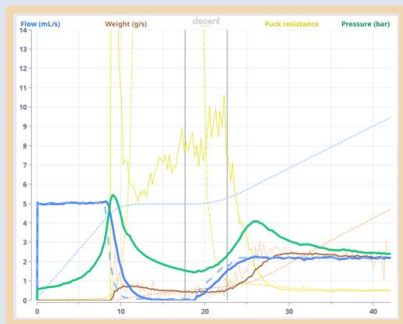


19/09/2020 – EASY BLOOMING

PRESSURE EXTRACTION WITH DYNAMIC DECLINE

Bloom ends when P reaches 1.5 bar – 5 sec ramp to 2.2 mL/s

Beans from Costa Rica, anaerobic fermentation
19 grams dose in a 22g VST basket, 53g output
IMS SI200 IM shower screen, thin hog tool



G_s EK2.1

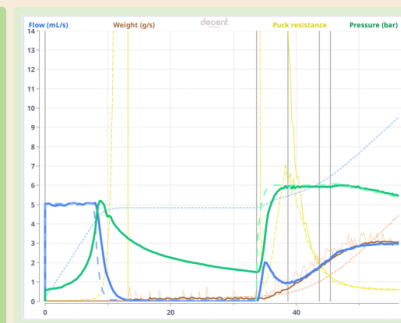
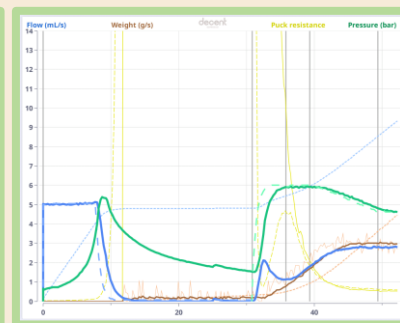
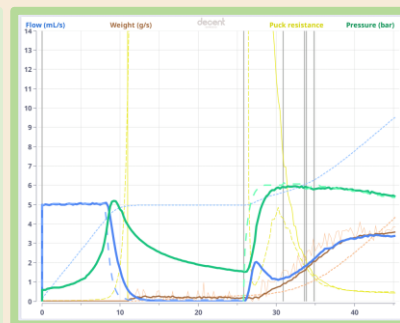
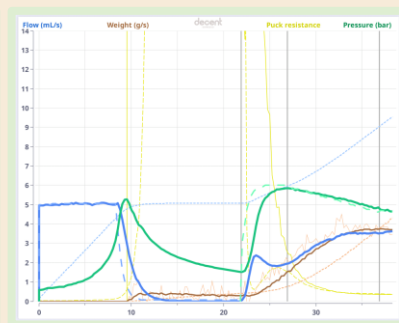
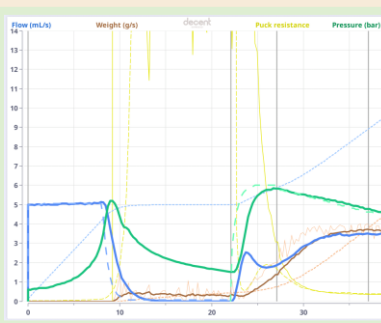
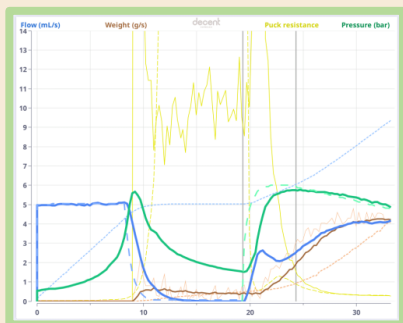
EK2.0

EK1.9

EK1.8

EK1.7

EK1.6



Bloom ends when Pressure reaches 1.5 bar – 6 bar pressure and dynamic pressure decline

19/09/2020 – EASY BLOOMING

PRESSURE EXTRACTION WITH DYNAMIC DECLINE

Bloom ends when Pressure reaches 1.5 bar – Flow ramp to 2.2 mL/s: 5 sec



Gs EK2.1



EK2.0



EK1.9



EK1.8



EK1.7



EK1.6

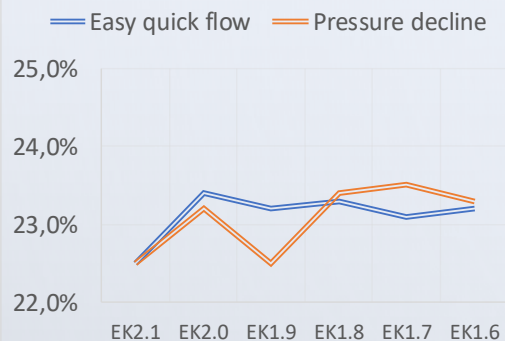


Bloom ends when Pressure reaches 1.5 bar – 6 bar pressure and dynamic pressure decline

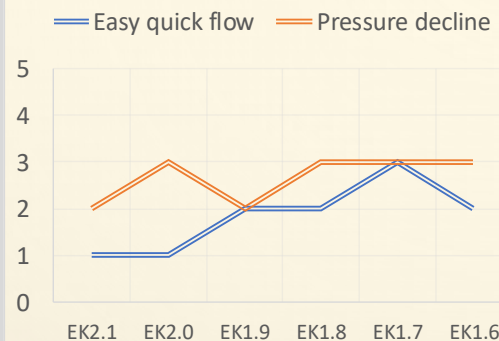
19/09/2020 – EASY BLOOMING

PRESSURE EXTRACTION WITH DYNAMIC DECLINE

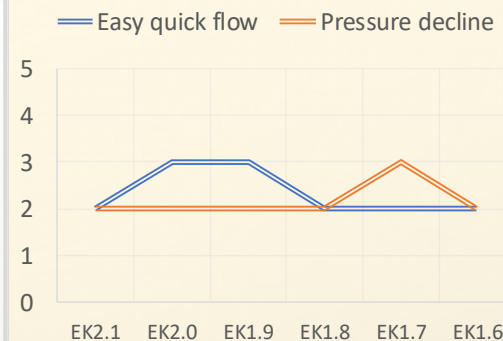
EXTRACTION YIELD



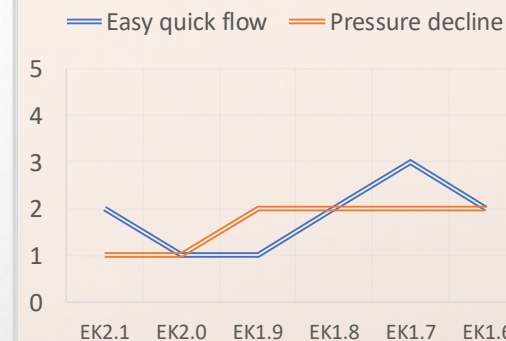
MOUTHFEEL



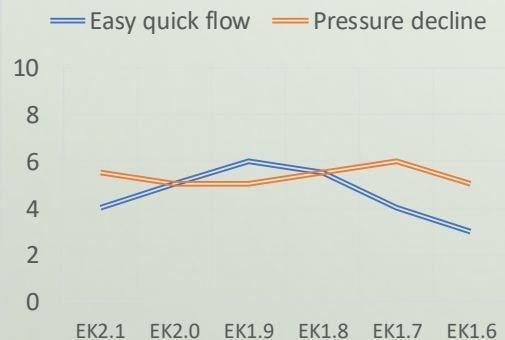
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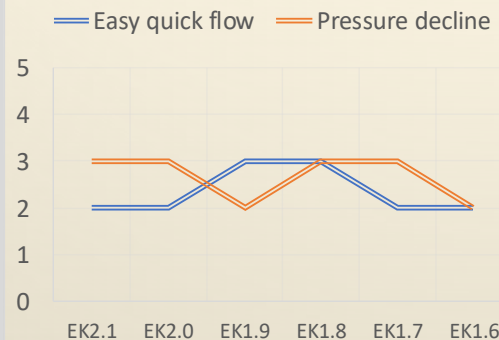
BITTERNESS



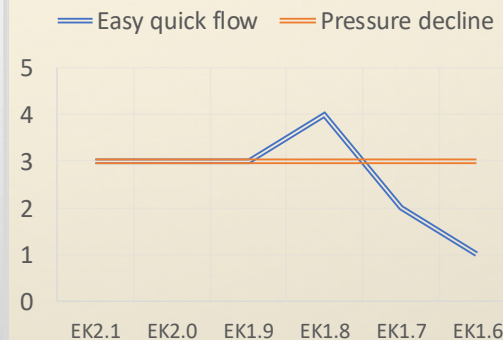
TASTE SCORE



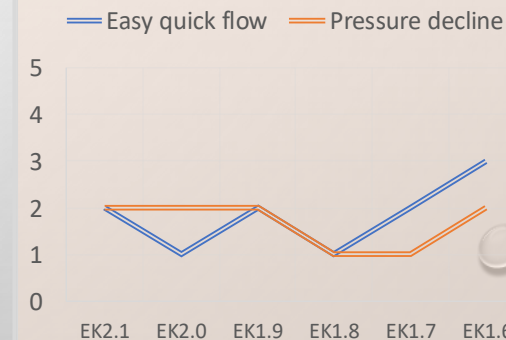
SWEETNESS



FLAVOR CLARITY



ASTRINGENCY



EASY BLOOMING TEST PROTOCOL

- **Decent Espresso Machine DE1PRO v1.1** with the S10 Ultem prototype screen
- Mahlkönig EK43 S grinder – SSP burrs “High Uniformity” with Silver Knight coating
- Montcalm water (Pyrenees, France), **adjusted to 35 ppm eq. CaCO_3 alkalinity and 112 ppm eq. CaCO_3 total hardness**, with sodium carbonate and Epsom salts
- Portafilter and basket pre-heating: 80°C in a kettle
- Complete drying of the basket and shower screen before each shot, with a clean tissue
- Single dosing of frozen beans ground in a double walled stainless steel cup
- **WDT** in the basket with a home-made tool with **3 needles of 0.4 mm diameter** (and a Decent funnel) – gentle vertical taps
- **19/09/2020: Hog puck preparation tool** (0.8 mm needles) in and out of the puck, with a stand to ensure a straight vertical movement (right picture →)
- **Bravo Tamer**, 58.50 mm diameter, set at 36 lbs pressure
- TDS measurements: Atago PAL zeroed with adjusted Montcalm water – no filtering of the coffee samples – all samples measured at room temperature after vigorous stirring
1 data point = average of 3 to 5 measurements of each coffee sample

