

# Roasting & Flow Profiling

Adjusting extraction for every  
roasting profile

Danilo Lodi

MAKE it  
BETTER

DALLA  
CORTE

**DANILO LODI**  
**COFFEE PRO**



DALLA CORTE - MINA



# DALLA CORTE - MINA

## FLOW PROFILING, CONTROL OVER FLAVORS

Dalla Corte  
Presentation

### Mina Flow Profiling Control over flavors



Flow profiling allows the user control over the coffee flavors profile.



Acidity, sweetness and body can be changed by regulating the quantity of water flow and time.



Profiles can be easily saved and repeated on the app.



The extraction can be profiled in five steps, with the possibility to set up the flow steps with one hundredth of a millimeter precision.

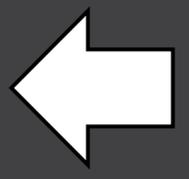
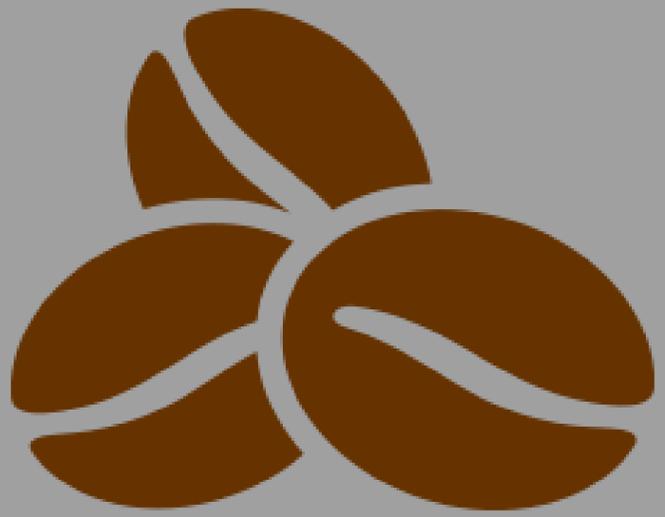
### WATER FLOW



# FROM LIGHT TO DARK

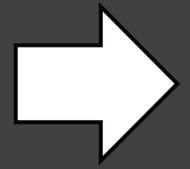
## Extremes of Roasting

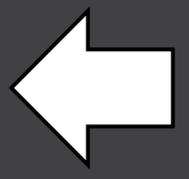
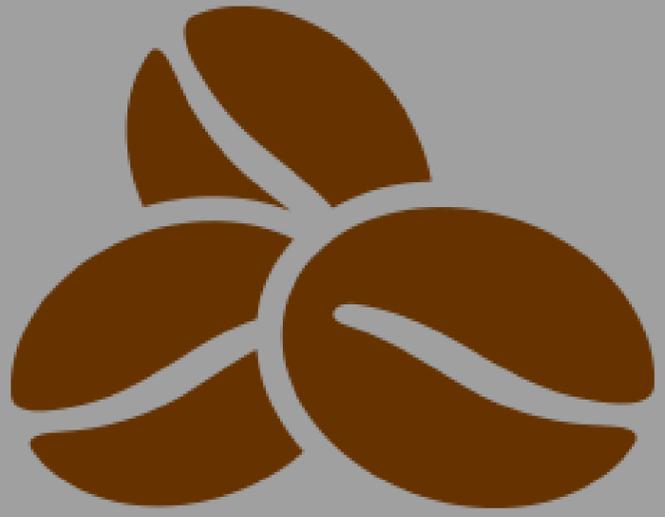




**LIGHT**

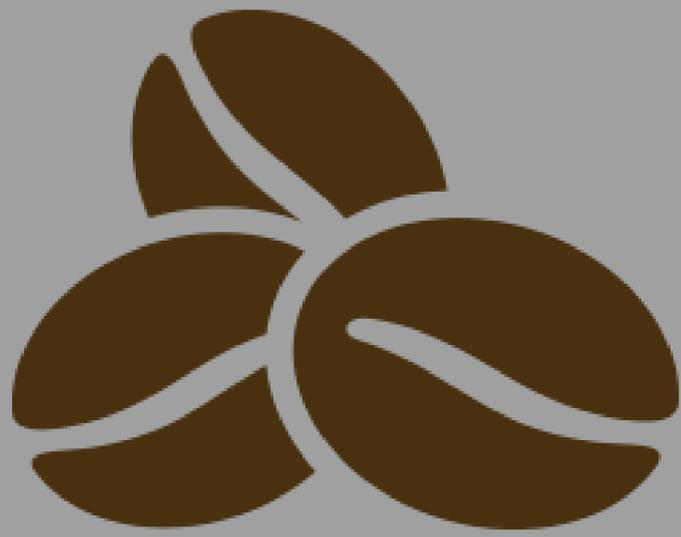
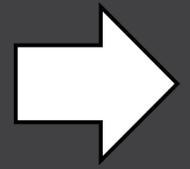
**DARK**





**FILTER**

**ESPRESSO**



Dark roast (not burned)  
how usually taste:

low or no  
acidity

short  
sweetness

bitter  
compounds

heavy body  
(is it?)

long  
aftertaste

strong  
flavors

Ligth roast (not underdeveloped)  
how usually taste:

**pungent  
acidity**

**fruity  
sweetness**

**off  
balance**

**low body  
(is it?)**

**short  
aftertaste**

**mild  
flavors**

# FROM FRESH TO OLD

## Extremes of Roasting Dates



# TOO FRESH

48 hours or less

degasification

crema

undeveloped  
flavors

short  
aftertaste

# TOO OLD

30 days or more

loss of  
organic matter

crema

oxidized  
flavors

faded  
body & sweetness

# ADJUSTING THE EXTRACTION

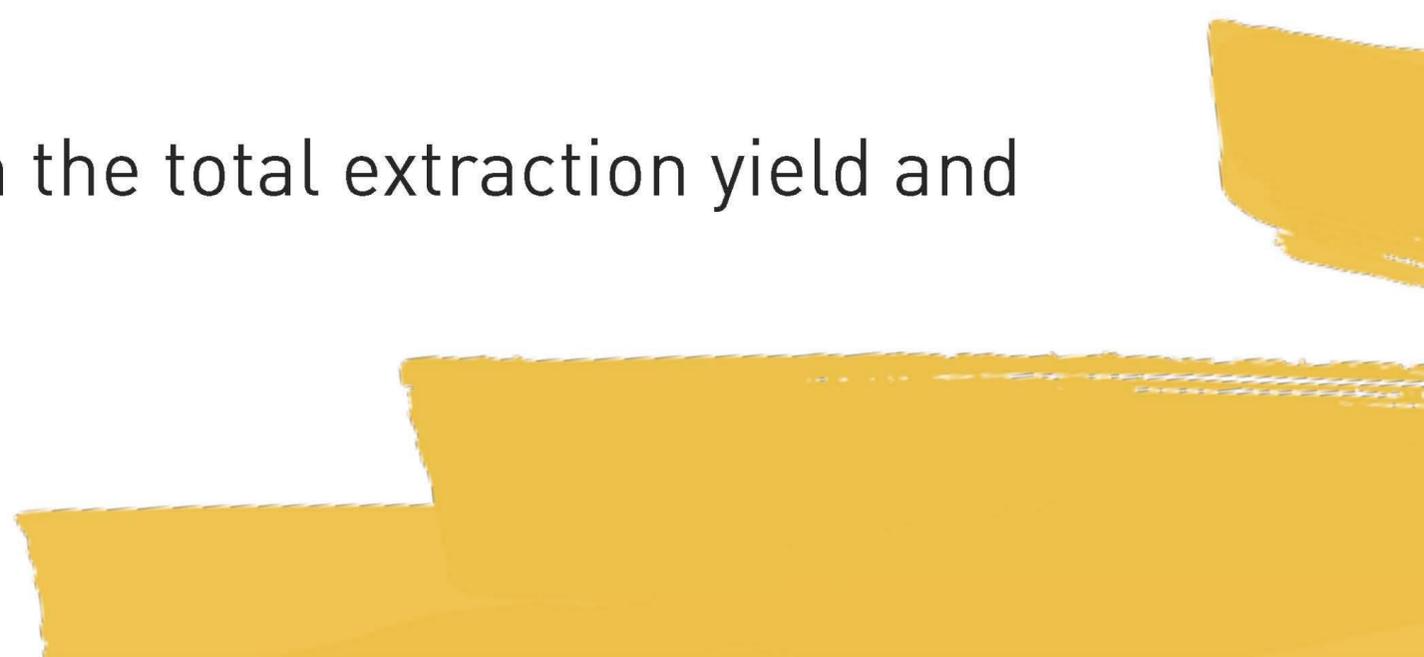
Go With The Flow



### Fours stages of control

- **Blooming** When pressure starts – what volume, time and g/s –  
**Flow Control**
- **Ramp up** When pressure is reached **Flow & pressure**
- **Extraction** When we see the coffee - **Pressure**
- **Extraction development** - **Flow & Pressure** maintaining extraction flow through and out of the coffee bed.

We are looking for consistency in terms in both the total extraction yield and uniformity across the coffee bed.



# Lighth roast (not underdeveloped)

## General Rule

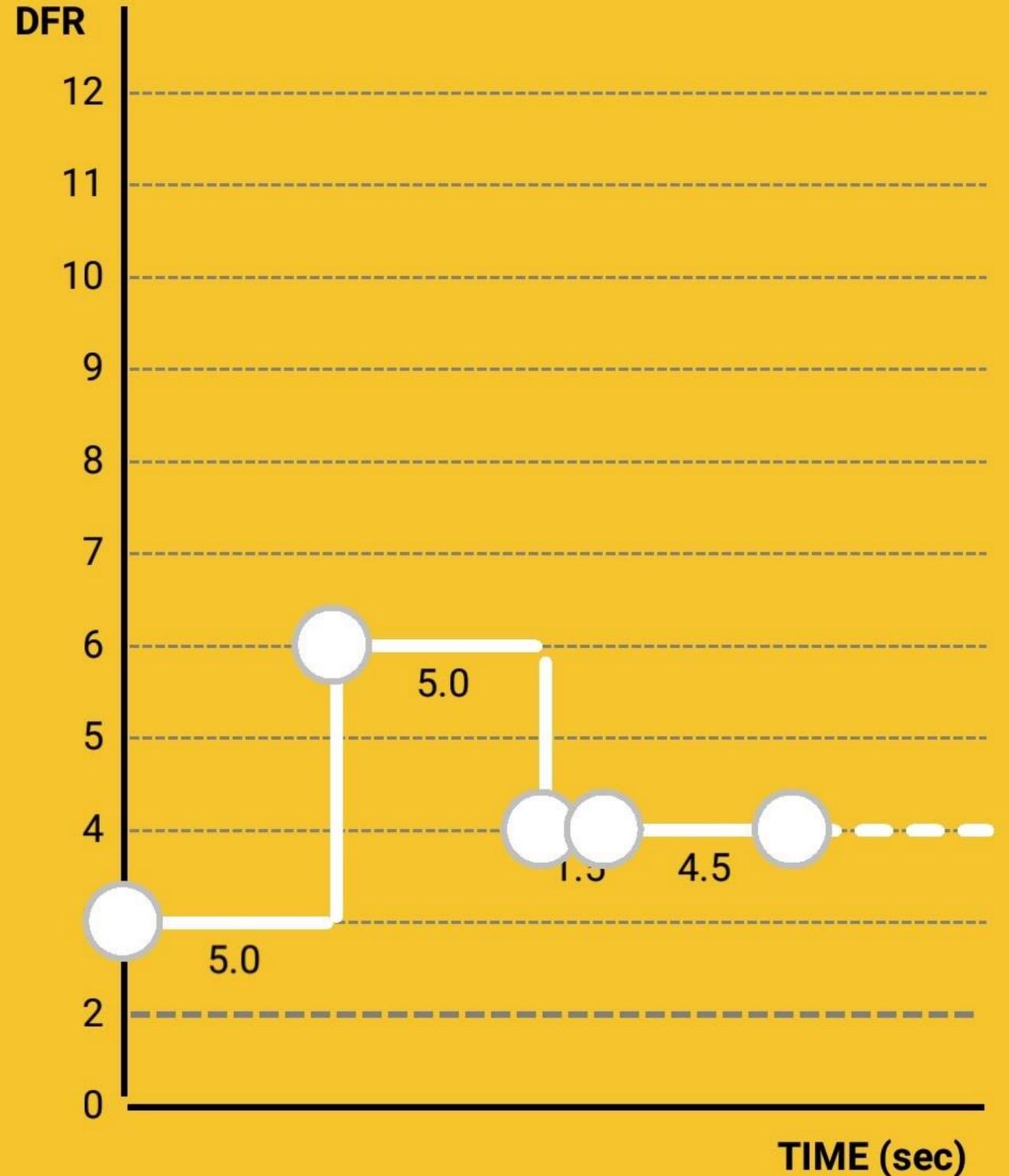
A lighter roasted coffee has a predominant acidity and the sweetness of the fruit are more preserved, but at the same time, there's not a lot of solids to be extracted.

To balance the high acidity, you should start with a very gentle flow (2 to 3g/s) making a longer pre-infusion (from 5 to 8 seconds) that will break down the acidity and will bring more flavors to the final cup.

The next step you should increase the flow (5 to 7g/s) for the same amount of time to get most of the lipids and carbohydrates as fast as possible, increasing the tactile in the process.

Lower the flow (3 to 5g/s) for the rest of the extraction to make a more gentle finish that will make the aftertaste more pleasant and not extract undesirable acids and solids.

# LIGHT ROAST



# DARK ROAST



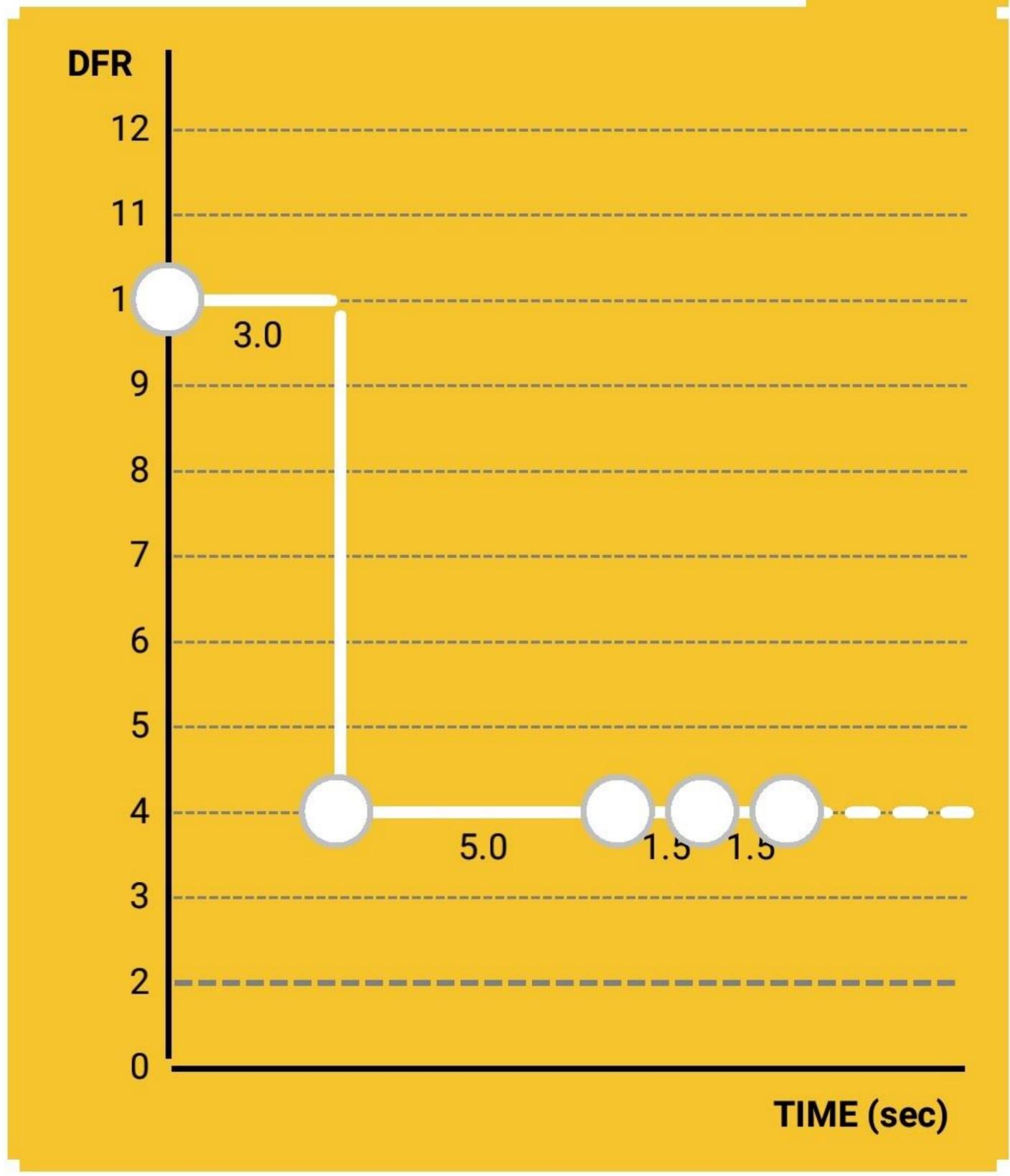
## Dark roast (not burned)

### General Rule

When the coffee is roast to a certain degree, longer time or higher temperatures, the coffee becomes more soluble and less dense.

To decrease the bitter compounds, start with a high/aggressive flow (around 10 to 12 grams per second) for a short time (2 to 4 seconds) to create pressure inside the porta filter fast but not for a long period of time.

Next step, lower the flow to 4 grams per second or lower to only extract the remained sugar and oils, but avoiding the solids that can bring bitter tastes and earthy mouthfeel.



# MEDIUM ROAST



## Medium Roast General Rule

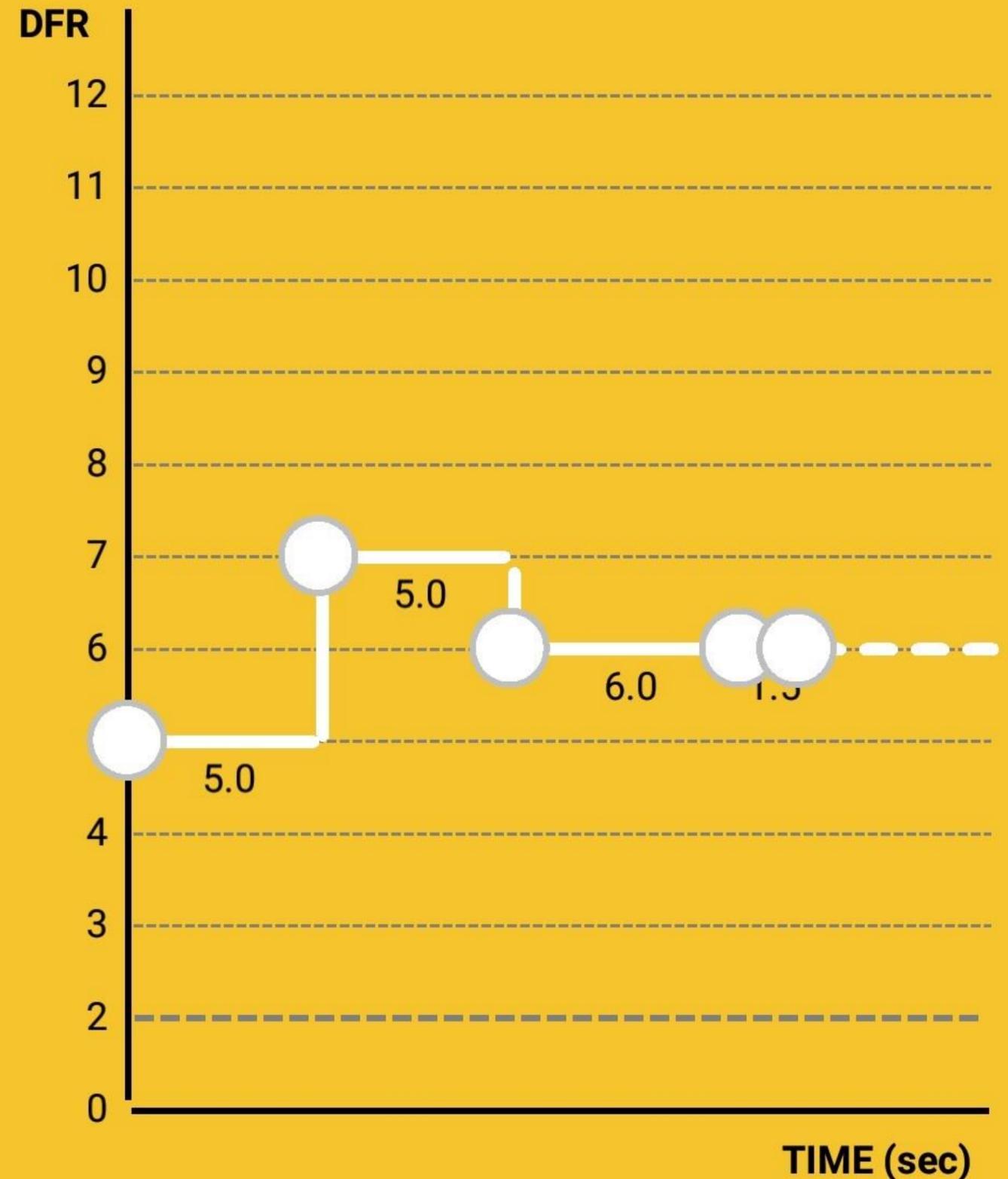
A medium roasted coffee can vary from different parts of the world.

This profile is a good step to start exploring most coffees and adapting according to your preferences.

Start with a medium to gentle pre infusion (5 to 6g/s) for 5 seconds to extract flavors and aromas from the coffee.

In the second step, increase the flow in 30% (to 6,5 to 8g/s) for another 5 seconds and with this ramp up in the extraction will bring more oils and will showcase the body of the espresso.

At the end, lower the flow a bit (7,5 to 5,5g/s) till the end of the extraction for a clarity in the aftertaste.



## TOO OLD

### General Rule

After a certain period of time after roasting, the coffee starts to get oxidized, stale and losing the aromatics and flavors.

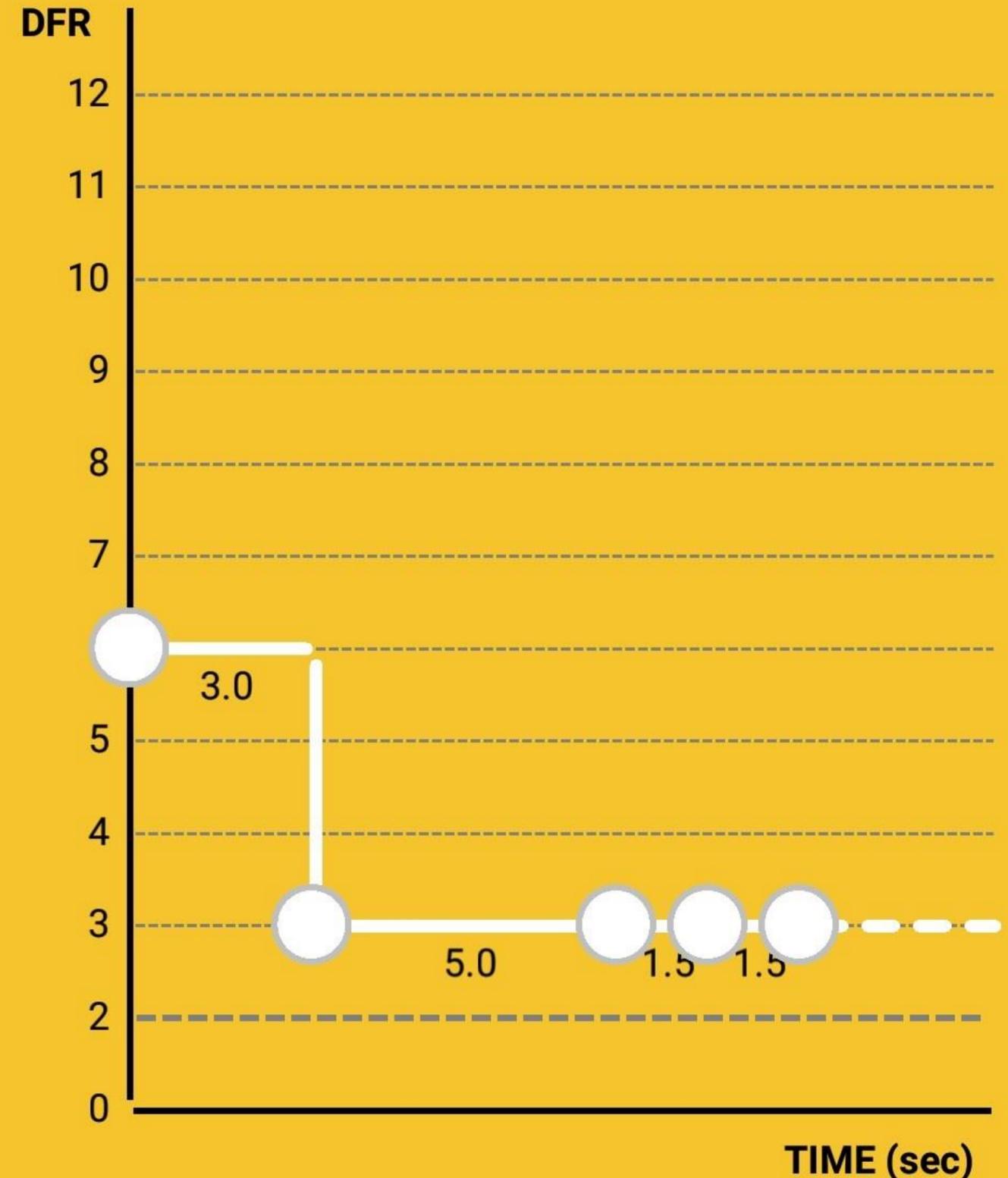
To try to recover a little bit of the flavors preserved in the bean, you should start with a short pre infusion (around 3 seconds) with a medium flow (from 5 to 7g/s).

After that you should lower the flow significantly (to 3 or 2g/s) and keep low until the end of the extraction.

Since the coffee lost most of the volatiles and is starting to fade, the medium flow in the beginning will help to extract all the remaining flavors fast, but not aggressively.

The low flow will help the mouthfeel by not bringing the stale and oxidized compounds to the cup.

## OVER 30 DAYS OF ROASTING



## TOO FRESH

### General Rule

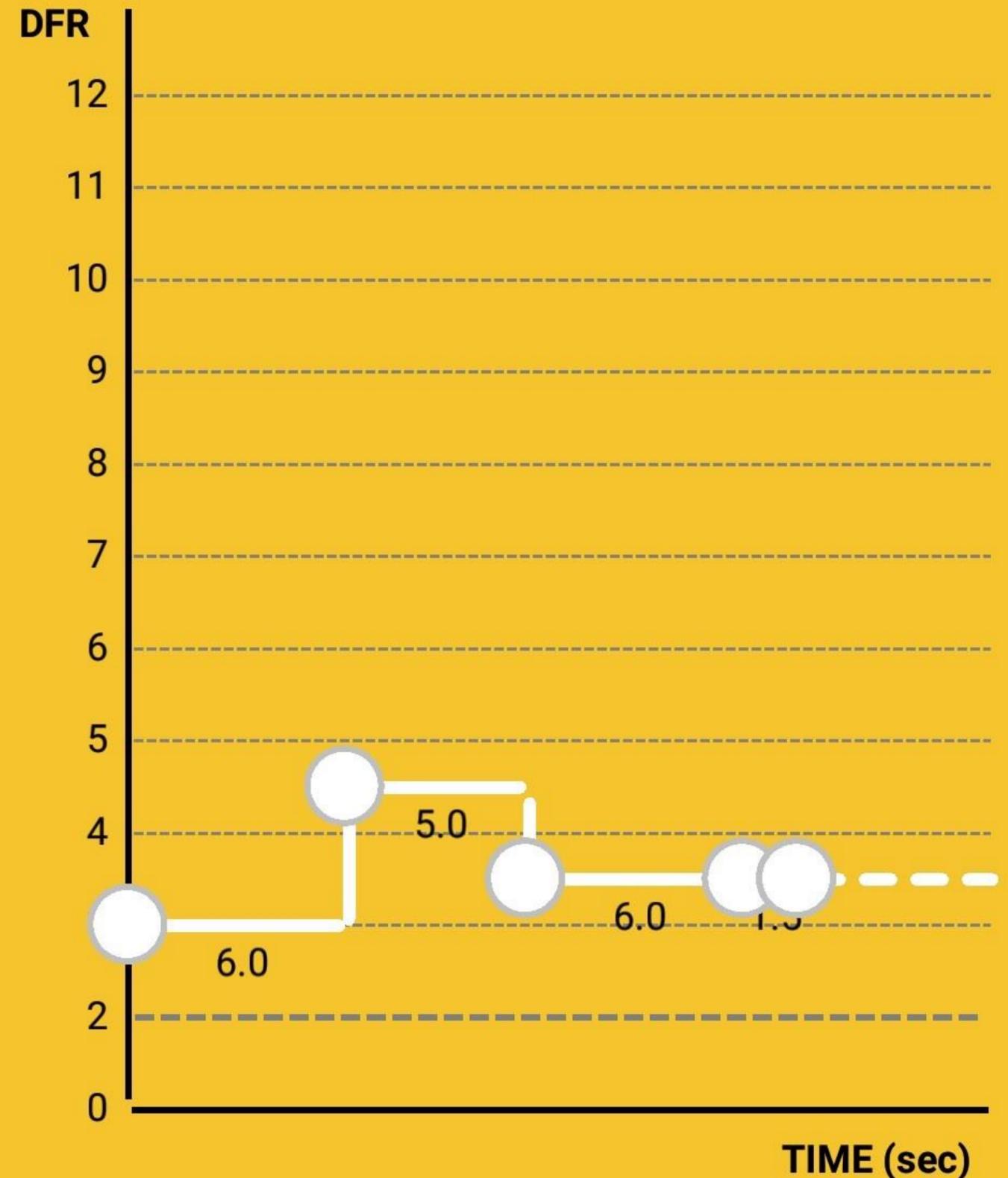
Very similar to lighter roasted coffee, when the coffee is too fresh we have a feeling of higher acidity, but also that unstable crema and 'gassy/bubbly' tactile sensation.

To overcome the freshness you should start with a very gentle flow (2 to 4g/s) making a longer pre-infusion (from 4 to 6 seconds) that will work by gently breaking down CO<sup>2</sup> and decreasing the bitterness that comes with it.

The next step you should increase a little bit the flow (3,5 to 5g/s) for 3 to 5 seconds, keeping the extraction gentle, but a little more powergull to extract the sugars and flavors from the coffee.

Lower the flow (2,5 to 4g/s) for the rest of the extraction to make a more build a pleasant and sweeter aftertaste.

## FRESHLY ROASTED COFFEE



# Guidelines

choose your  
coffee

create your  
recipe

find the right  
temperature

mind the roasting  
date and profile

change  
the flow and...

**MAKE it  
BETTER**

# THANK YOU

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*make it Better*

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