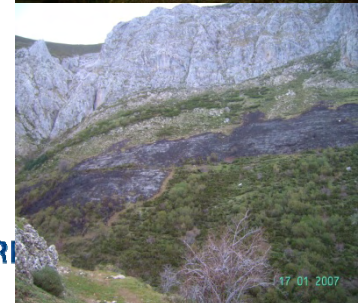


FOREST COMBUSTIBLE MATERIAL AND FIRE RISK

PRESCRIBED BURNS





FUNDAMENTALS

**ELIMINATION OF COMBUSTIBLE
VEGETATION THROUGH ITS
TREATMENT WITH FIRE**

¿WHERE IS IT DONE?

- Terrain covered with bushes which make traditional cutting difficult or impossible
- Bush low cover near or in forest (protects the trees)
- Stripes parallel to roads and firebreaks (enhancement of its efficacy as firebreaks)

¿ON WHICH ESTATES?

- PRIVATE PROPERTY. BOTH OWNERSHIP AND MANAGEMENT IS PRIVATE
- LOCAL ENTITIES' ESTATE. FOREST MANAGEMENT IS COMMISSIONED TO THE REGIONAL FOREST SERVICE

¿HOW IS IT AUTHORISED?

- **PRIVATE ESTATE:** the owner requires an authorisation. The Regional Forest Service appraises it and may issue a conditional authorisation
- **PUBLIC ESTATE:** the owner requires an authorisation or the Regional Forest Service acts *ex officio*. Conditional issuance of authorisation is also possible

¿WHO EXECUTES IT?

- PRIVATE ESTATE: the applicant
- PUBLIC ESTATE: the local entity by its own means or the Regional Forest Service through means from the fire prevention deployment

IT IS MANDATORY TO FULFILL ALL CONDITIONS ESTABLISHED IN A CONDITIONAL AUTHORISATION

- PROTECTION OF VALUABLE FORESTS
- ~~LIGHTENING COMBUSTIBLE UNDER TREES~~
- TERRITORIAL CONTINUITY BREAKING
- ENHANCEMENT OF PASTURES AND GAME-HUNTING HABITAT



- PROTECTION OF VALUABLE FORESTS
- LIGHTENING COMBUSTIBLE UNDER TREES
- ~~TERRITORIAL CONTINUITY BREAKING~~
- ENHANCEMENT OF PASTURES AND GAME-HUNTING HABITAT



- PROTECTION OF VALUABLE FORESTS
- LIGHTENING COMBUSTIBLE UNDER TREES
- TERRITORIAL CONTINUITY BREAKING
- ENHANCEMENT OF PASTURES AND GAME-HUNTING HABITAT

LINEAR BURNING SUPPORTED ON A ROAD



- PROTECTION OF VALUABLE FORESTS
- LIGHTENING COMBUSTIBLE UNDER TREES
- TERRITORIAL CONTINUITY BREAKING
- ENHANCEMENT OF PASTURES AND GAME-HUNTING HABITAT



FAUNA PROTECTION PATCHES

- Time interval which meets the conditions for a prescribed burning to behave according to its objectives
 - General suitable period in Castilla y León: 1 November to 30 March (fresh weather and humid soil).

*METEOROLOGICAL WINDOW:
FIELD DATA*

- Relative moisture range
- Temperature range
- Wind speed range
- Soil moisture
- Litter moisture (HCFM)
- # of days without rain (>30 mm)
- Propagation speed (optional)
- Fire height (optional)

MEASUREMENT EQUIPMENT



***METEOROLOGICAL WINDOW:
GENERAL PRESCRIPTION FOR BUSH BURNING***

VARIABLE	RANGE
TEMPERATURE	0 - 15 °C
RELATIVE MOISTURE	30 - 50 %
WIND SPEED	2 - 15 Km/h
SOIL MOISTURE	50 - 100 %
LITTER MOISTURE (H.C.F.M.)	5 - 15 %
DAYS WITHOUT RAIN (SHADOW)	5-12 Days
DAYS WITHOUT RAIN (SUN)	3-8 Days
ATMOSPHERIC STABILITY	

***METEOROLOGICAL WINDOW:
GENERAL PRESCRIPTION FOR UNDER-TREES BURNING***

VARIABLE	RANGO
TEMPERATURE	-2 - 15 °C
RELATIVE MOISTURE	30 - 45 %
WIND SPEED	5 - 20 km/h
SOIL MOISTURE	50 - 100 %
LITTER MOISTURE (H.C.F.M.)	7 - 15 %
FLAME HEIGHT	0,5 m
PROPAGATION SPEED	Variable whenever fire height is OK
BURNING PATTERN	Less aggressive: rear and side



➤ Uphill burning (head)

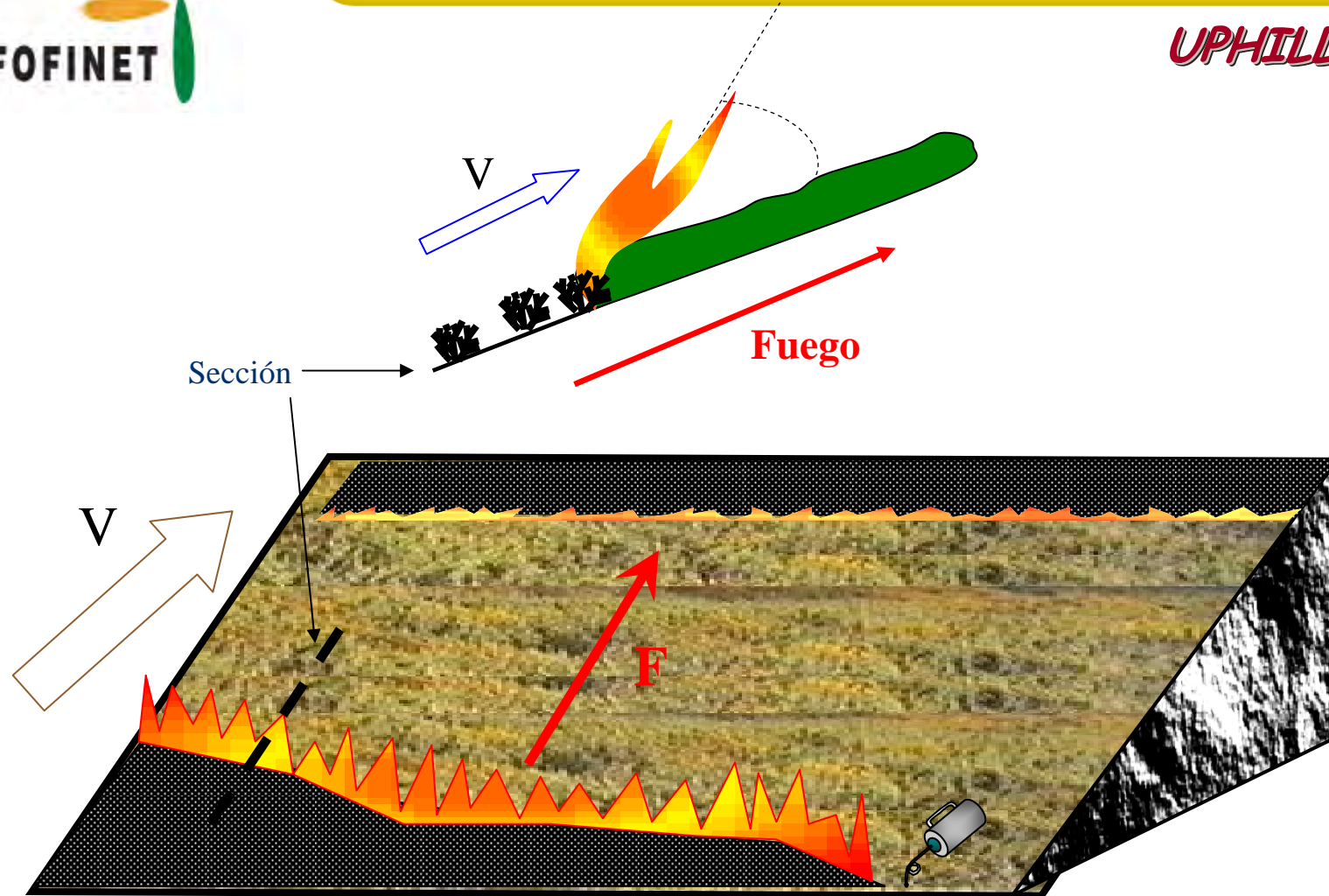
➤ Uphill burning (stripes)

➤ Uphill burning (dots)

➤ Side burning

➤ Downhill burning (rear or tail)

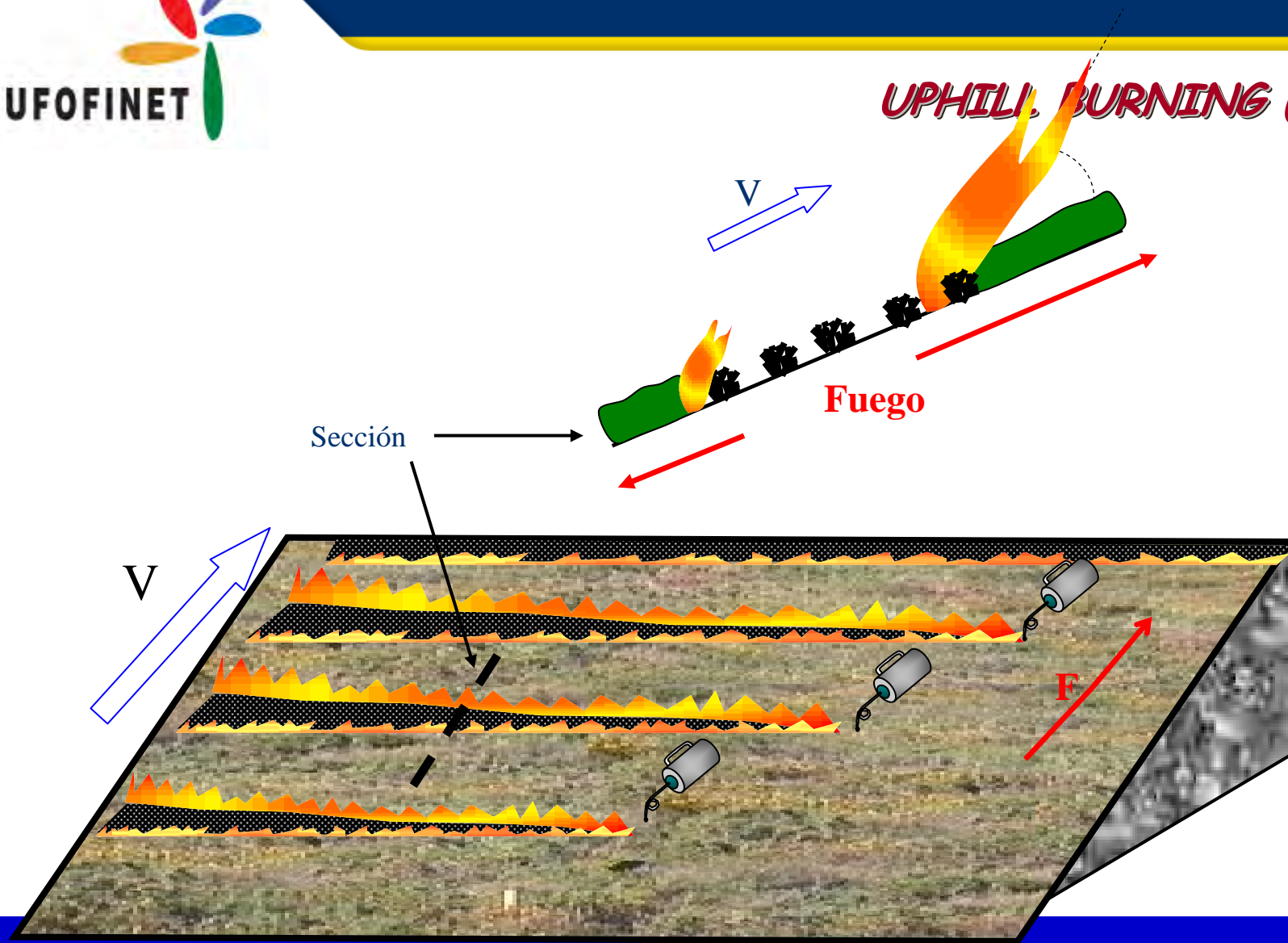
UPHILL BURNING





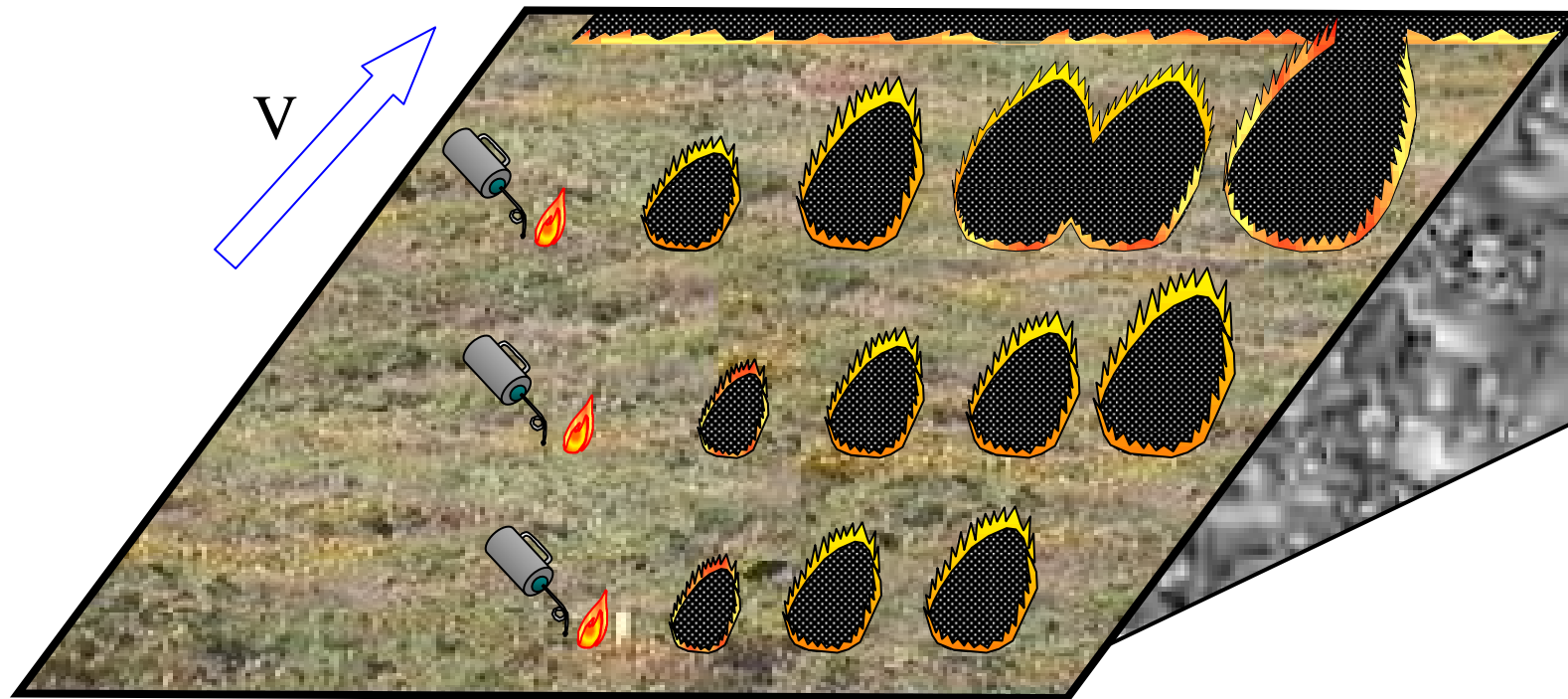
- Uphill burning (head)
- Uphill burning (stripes)
- Uphill burning (dots)
- Side burning
- Downhill burning (rear or tail)

UPHILL BURNING (STRIPES)





- Uphill burning (head)
- Uphill burning (stripes)
- Uphill burning (dots)
- Side burning
- Downhill burning (rear or tail)





- Uphill burning (head)
- Uphill burning (stripes)
- Uphill burning (dots)
- Side burning
- Downhill burning (rear or tail)





➤ Uphill burning (head)

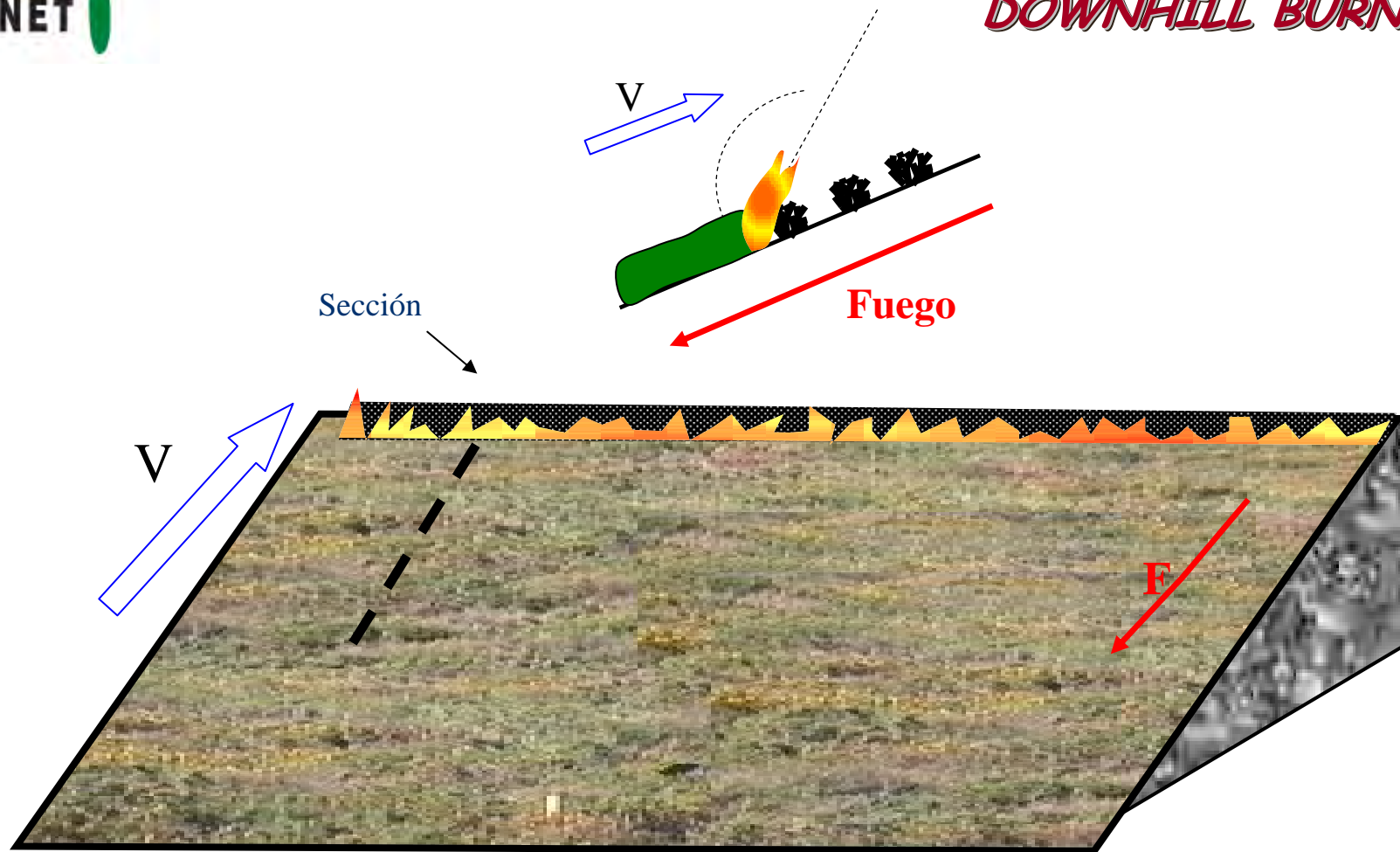
➤ Uphill burning (stripes)

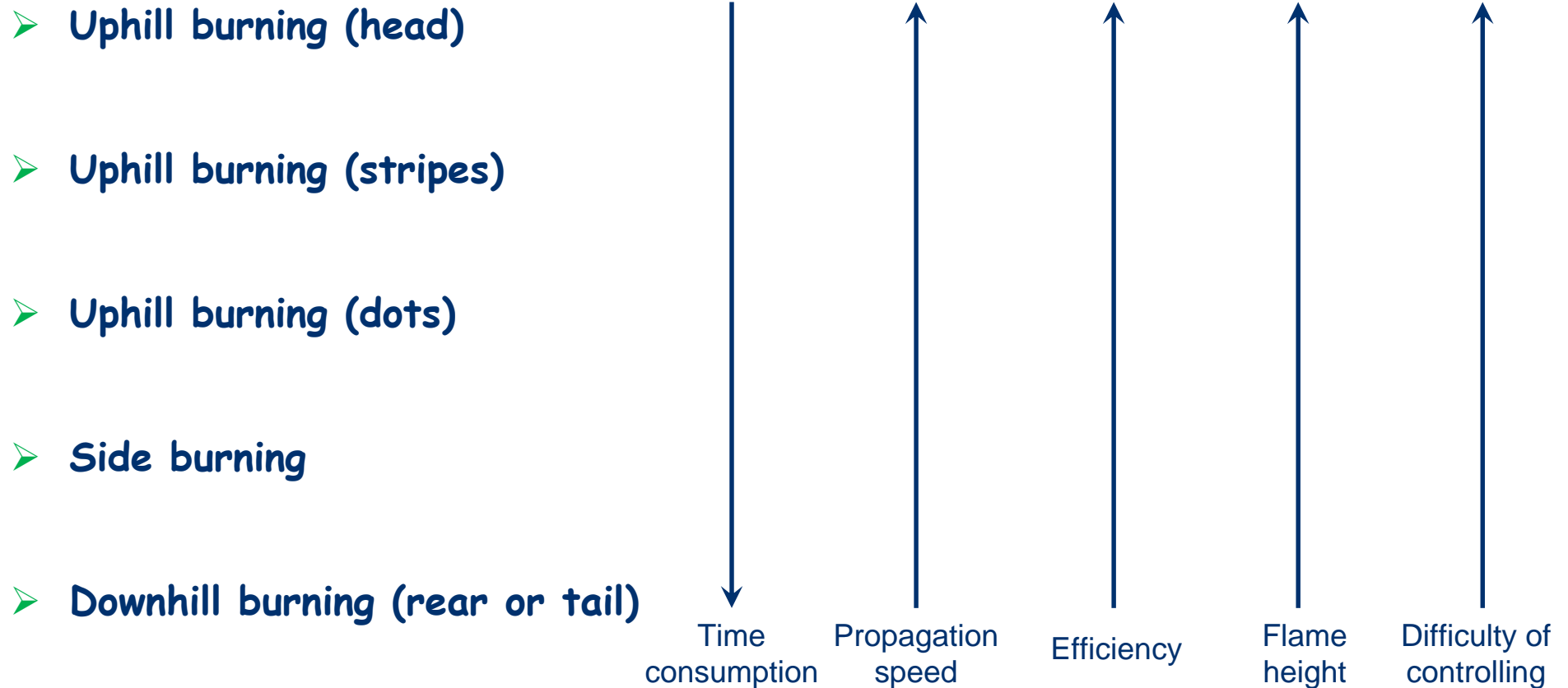
➤ Uphill burning (dots)

➤ Side burning

➤ Downhill burning (rear or tail)

DOWNHILL BURNING





QUEMA DE ENSANCHE SUPERIOR



COMIENZO BAJADA FLANCO IZQUIERDO



GOBIERNO
DE ESPAÑA

MINISTERIO
DE MEDIO AMBIENTE
Y MEDIO RURAL Y MARINO



CIERRE PARTE INFERIOR



GOBIERNO
DE ESPAÑA

MINISTERIO
DE MEDIO AMBIENTE
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Thank you for your attention