

Sunflower genotype reactions to *Orobanche cumana* under natural infestation in Brăila County, Romania

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INTRODUCTION

In countries around the Black Sea area, such Turkey, Ukraine, Bulgaria and Romania the the most virulent races of sunflower broomrape are present.

METHODOLOGY

In this paper we studied the behavior of some sunflower genotypes under natural field infested with parasitic plant *Orobanche cumana* Wallr, in Braila County during the years, 2024 and 2025. Attack Degree(%) of parasite *Orobanche cumana* was calculated after follow formula:

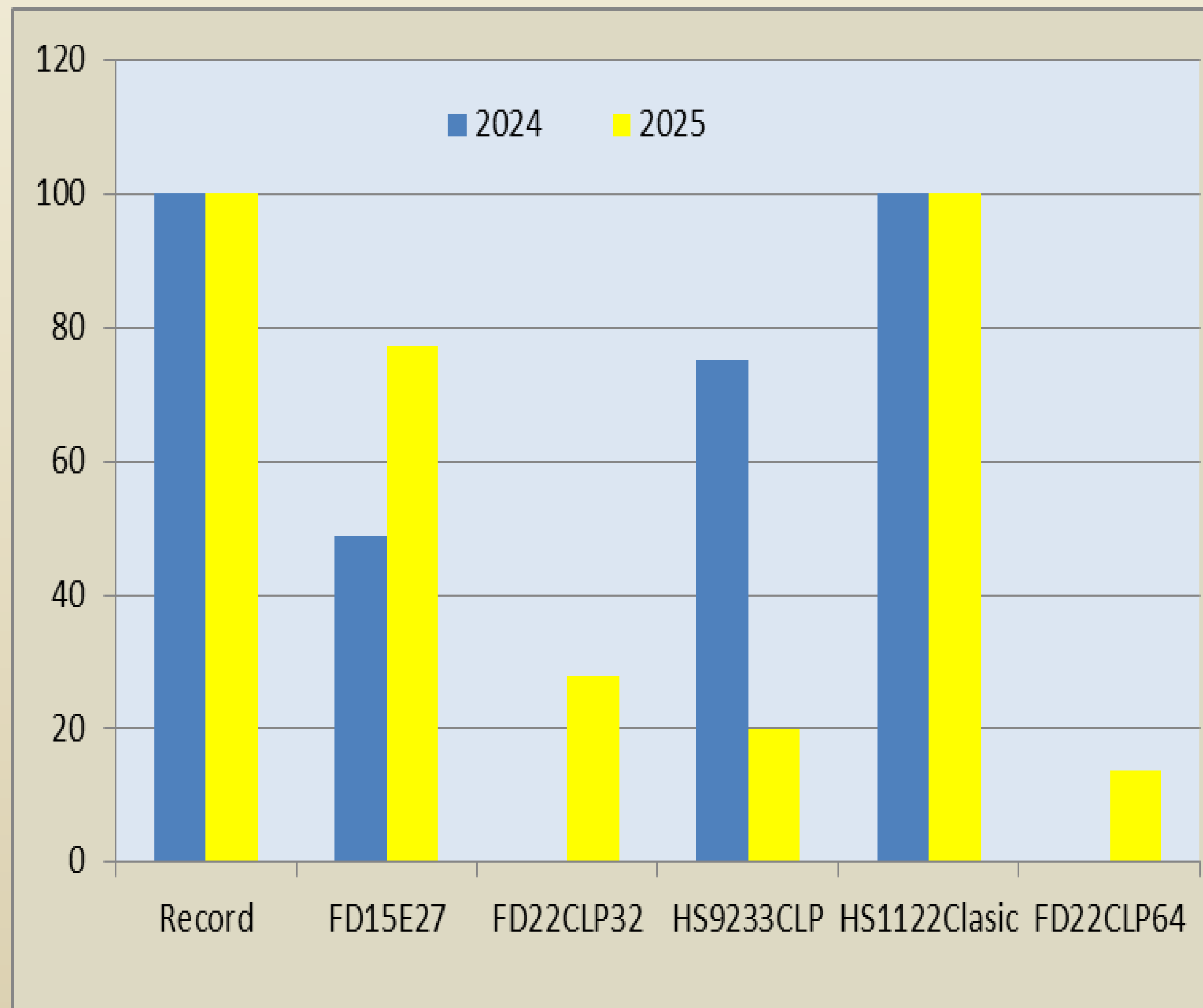
$$AD=Attack\ Degree(\%) = \frac{F \times I}{100}$$

F=Attack frequency (the percentage of sunflower plants in a plot that are infested)

I= Attack intensity (the percentage of broomrape on a single infested plant)

RESULTS AND DISCUSSION

Attack frequency (F) in year 2024 ranged from 0% in sunflower hybrids FD22CLP32 to 100% in the hybrids FD22CLP64 and HS1122C as well as in old variety Record. In 2025, attack frequency (F) ranged from 13.6% in FD22CLP64 to 100% in hybrid HS1122C and old variety Record. The attack intensity (I) in year 2024 where between 0% at sunflower hybrids FD22CLP32 and FD22CLP64 and 5.75% at old variety Record. Attack intensity (I) in year 2025 ranged from 0.13% in hybrid FD22CLP64 to 1.06% in hybrid FD22CLP32



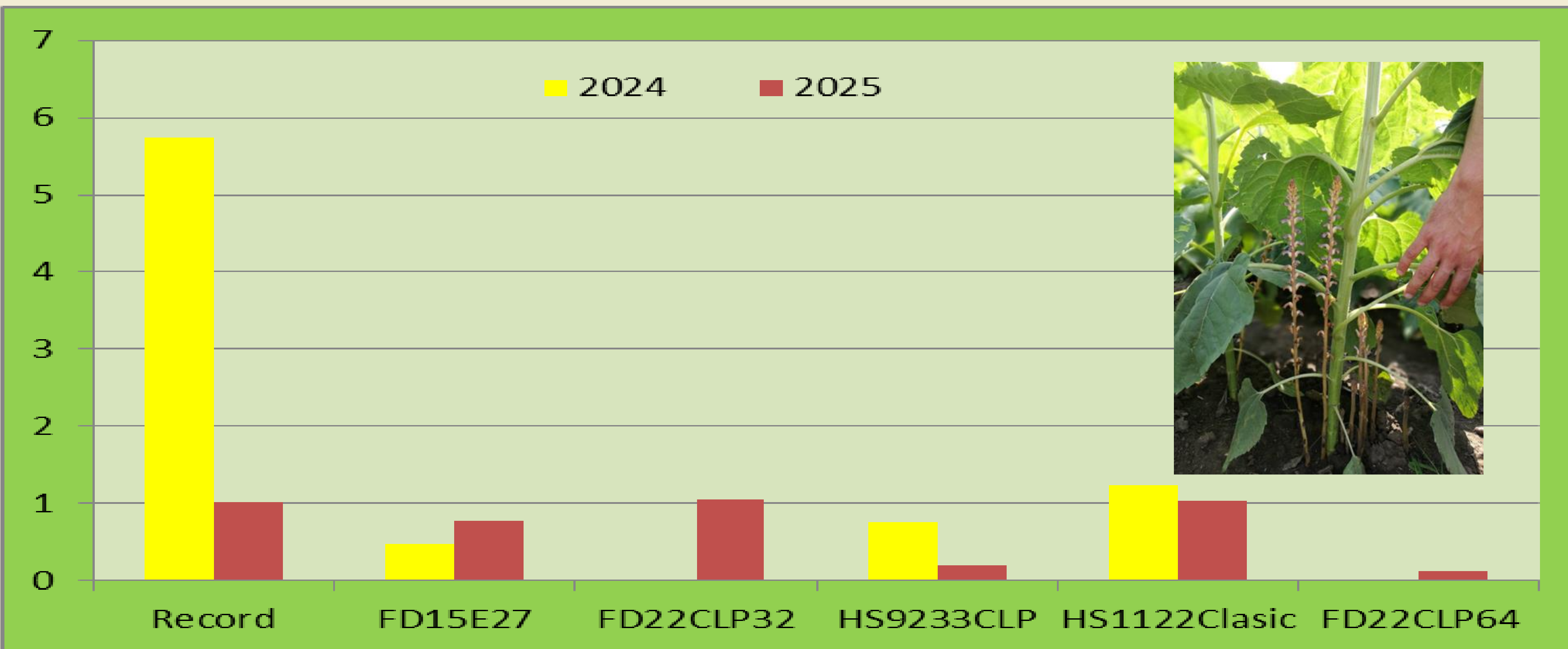
F=Attack frequency (the percentage of sunflower plants in a plot that are infested whit broomrape) , in years 2024 and 2025, in Braila county

Sunflower genotype reactions to *Orobanche cumana*, in year 2024, in Braila county

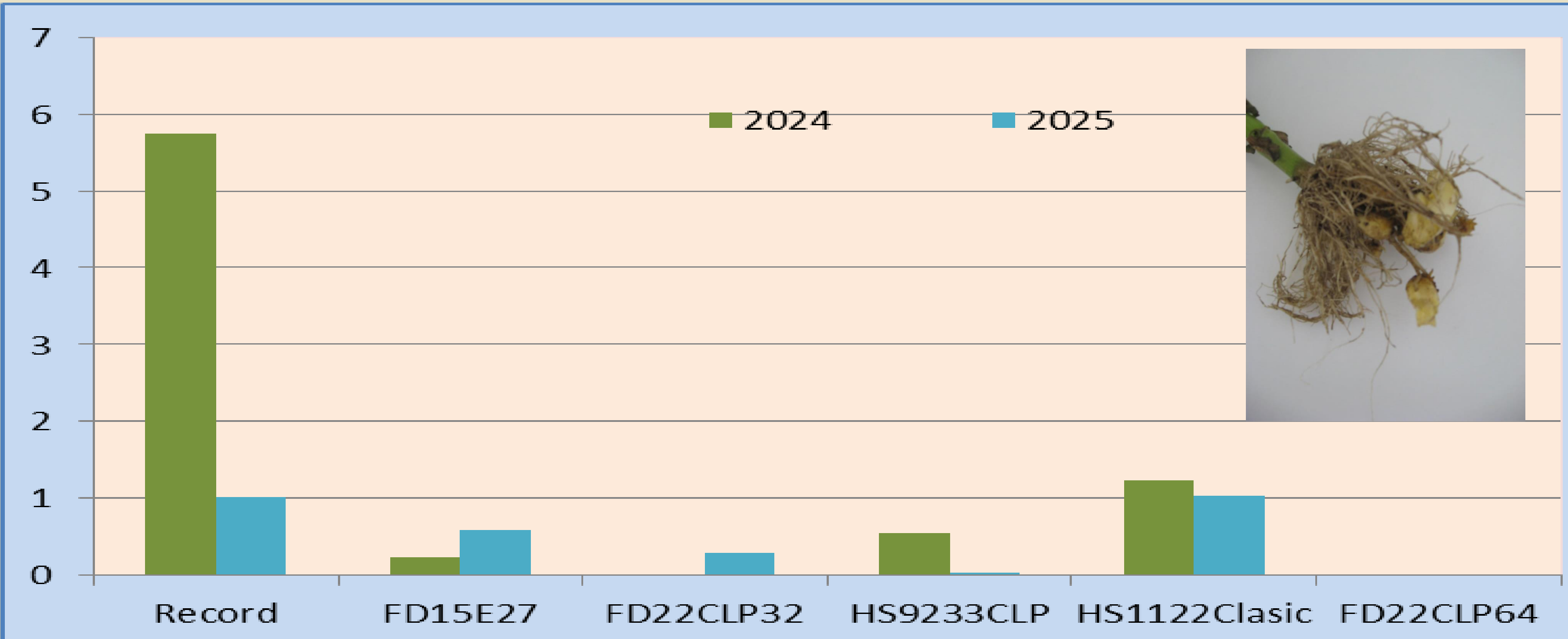
Sunflower genotype	Total number of sunflower plants	Total number of broomrape	F %	I %	AD %
Record	4	23	100	5.75	5.75
FD15E27	37	18	48.64	0.48	0.23
FD22CLP32	21	0	0	0	0
HS9233CLP	36	27	75	0.75	0.56
HS1122Clasic	25	31	100	1.24	1.24
FD22CLP64	46	0	0	0	0

Sunflower genotype reactions to *Orobanche cumana*, in year 2025, in Braila county

Sunflower genotype	Total number of sunflower plants	Total number of broomrape	F %	I %	AD %
Record	52	53	100	1.01	1.01
FD15E27	53	41	77.35	0.77	0.59
FD22CLP32	61	17	27.86	1.06	0.29
HS9233CLP	55	11	20	0.2	0.04
HS1122Clasic	63	66	100	1.04	1.04
FD22CLP64	66	9	13.6	0.13	0.01



I= Attack intensity (the percentage of broomrape on a single infested plant), in years 2024 and 2025, in Braila county



AD=Attack Degree(%) of broomrape , in years 2024 and 2025, in Braila county

CONCLUSIONS

In year 2025, virulence of parasite *Orobanche cumana* increased and is very important to studied in every year reactions of sunflower genotypes to this biotic stressor who led to low seed yield.