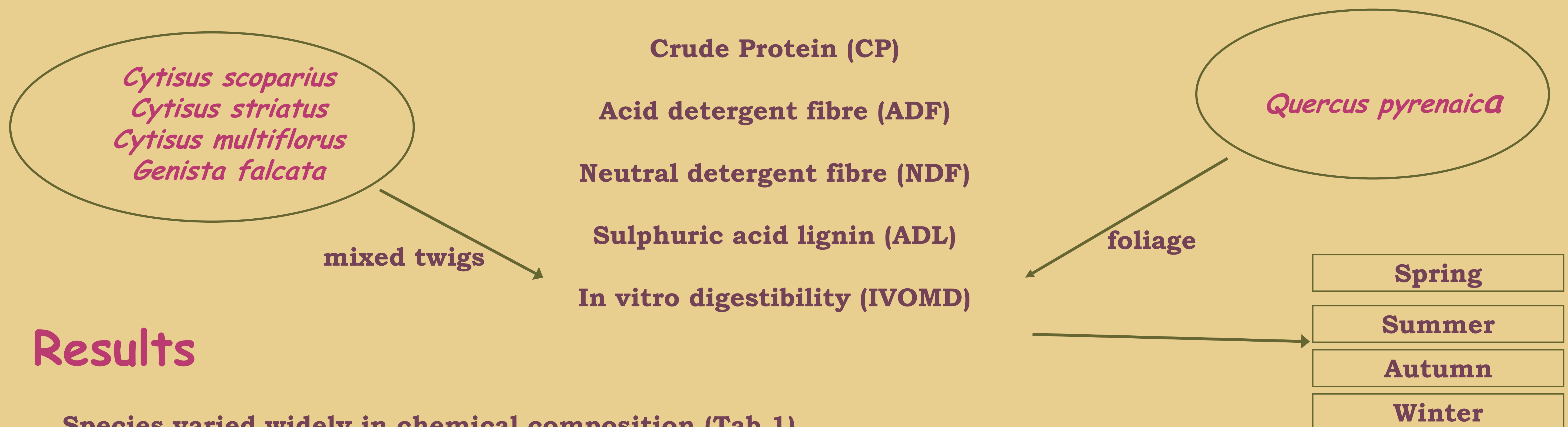


Nutritive value of *Quercus pyrenaica* Willd browse species in NE Portugal

Objectives

The aim of this study was to assess the nutritive value of key browse species of pyrenean oak forests in Trás-os-Montes region (NE of Portugal)

Material and methods



Results

Species varied widely in chemical composition (Tab.1)

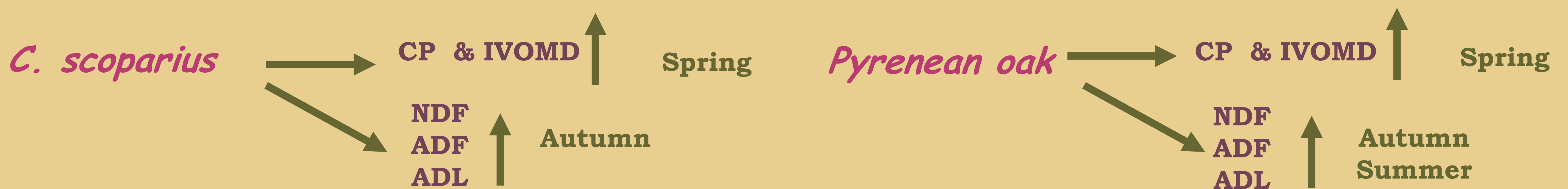


Table 1. Seasonal evolution of CP, IVOMD, NDF and ADL for shrub species.

	Specie	March	May	July	Sept	Dec
CP (g.Kg-1)	<i>C. scoparius</i>	147,2	225,7	149,5	121,1	132,4
	<i>C. striatus</i>	134,9	190,3	183,4	118,5	143,6
	<i>c. multiflorus</i>	131	195,7	147	110,8	111,5
	<i>G. falcata</i>	138,4	159,2	131,1	91,9	120,4
NDF (g.Kg-1)	<i>C. scoparius</i>	489,9	360,3	558,6	591,6	567,5
	<i>C. striatus</i>	460,5	399,8	516,4	597	504,2
	<i>c. multiflorus</i>	542,9	517	615	665,3	590
	<i>G. falcata</i>	403,6	363,9	502,9	559,6	514,8
ADF (g.Kg-1)	<i>C. scoparius</i>	375,10	253,5	413,6	442,3	436,5
	<i>C. striatus</i>	327,10	296,3	358,1	472,1	385,9
	<i>c. multiflorus</i>	429,50	375,9	447,7	535	456,5
	<i>G. falcata</i>	299,90	261,1	384,2	424	380,8
ADL (g.Kg-1)	<i>C. scoparius</i>	120,8	56,7	130,1	157,6	130,3
	<i>C. striatus</i>	106,7	78,2	67,6	138,1	121,6
	<i>c. multiflorus</i>	125,5	104,2	86,6	165,2	146,5
	<i>G. falcata</i>	101,1	78	116,6	140,8	127,5
IVMOD (%)	<i>C. scoparius</i>	60,231	70,39	59,02	61	62,2
	<i>C. striatus</i>	60,661	66,25	60,84	57,43	64,09
	<i>c. multiflorus</i>	55,202	58,22	51,65	49,01	57,37
	<i>G. falcata</i>	54,592	63,08	53,61	50,18	52,04

Table 2. Seasonal evolution of CP, IVOMD, NDF and ADL for *Q. pyrenaica*.

<i>Q. pyrenaica</i>	May	July	Aug	Sept	Oct
CP (g.Kg-1)	161,20	117,50	119,90	114,20	109,60
NDF (g.Kg-1)	365,70	466,00	435,60	428,60	445,40
ADF (g.Kg-1)	277,90	361,30	335,40	332,00	360,50
ADL (g.Kg-1)	64,80	122,60	111,80	114,50	131,60
IVMOD (%)	59,68	41,73	49,25	51,83	42,49

Discussion

Nutritive value

Pyrenean oak leaves:

Constant composition along the leaf cycle just, this pattern changed in very young leaf stages (May) when leaves were not formed.

Shrubs species:

Highest nutritive value in late spring (May) and the lowest values in autumn (September).

Consumption

Pyrenean oak leaves:

Increases through the season, becoming very high in August - September, when the other resources become less abundant and with less quality.

Summer diet of goats contained about 25% of leaves whereas it was only 2.5% in the diet of sheep

Shrubs species:

The consumption of *C. scoparius*, *C. multiflorus* and *C. striatus* reaches in spring 38%, in summer and autumn about 10% and in winter 14% of total goat's diets.

Conclusion

The relative quality of browse resources assessed and their high consumption by extensive livestock animals, confirm the role of grazing in shrub encroachment control, as well as, in reducing the risk fire.