

**Supplementary data Table 1.** Concentrations of chlorophyll *a* (*Ca*), chlorophyll *b* (*Cb*), total carotenoids (TC) and malonaldehyde (MDA) in white oat plants at 21 days after application (DAA) of herbicides applied alone or previously treated with a metabolism or conjugation inhibitor. 2021/2021 season, Lages – SC.

Treatment	<i>Ca</i>	<i>Cb</i> ----- $\mu\text{g g FM}^{-1}$ -----		<i>CT</i>	<i>MDA</i>
					$\text{nmol ml}^{-1}$
<b>Control</b>	100.8	ns	25.5	ns	25.2
<b>Malathion</b>	106.1		31.2		26.1
<b>NBD</b>	113.5		32.9		27.7
<b>Mesotrione (1xD)</b>	104.0		30.4		26.0
<b>Mesotrione + Malathion</b>	111.6		31.9		29.3
<b>Mesotrione+NBD</b>	118.7		34.7		29.3
<b>Tembotrione (1xD)</b>	103.0		30.0		25.9
<b>Tembotrione+Malathion</b>	104.8		30.3		26.0
<b>Tembotrione+NBD</b>	94.9		27.3		24.8
<b>p-value</b>	0.084 <sup>ns</sup>		0.135 <sup>ns</sup>		0.467 <sup>ns</sup>
<b>C.V. (%)</b>	9.5		12.6		8.2
					13.0

<sup>ns</sup> non-significant by the F-test (p>0.05); identical letters in the column do not differ from each other (p>0.05) by Tukey's test; CV: coefficient of variation; FM, fresh mass.

**Supplementary data Table 2.** Plant height, harvest index (HI), number of panicles per m<sup>2</sup> (NPM), number of spikelets per panicle (NSP) and number of grains per spikelet (NGS) of white oat according to the application of herbicides alone or previously treated with a metabolism or conjugation inhibitor. 2021/2021 season, Lages – SC.

Treatment	Height (cm)	HI (-)	NPM (n°)	NSP (n°)	NGS (n°)
<b>Control</b>	109.0	ns	0.47	ns	520.8
<b>Malathion</b>	109.3		0.47		499.2
<b>NBD</b>	108.8		0.47		492.5
<b>Mesotrione (1xD)</b>	107.0		0.48		510.8
<b>Mesotrione + Malathion</b>	105.4		0.48		545.8
<b>Mesotrione+NBD</b>	104.4		0.48		555.0
<b>Tembotrione (1xD)</b>	109.0		0.47		553.3
<b>Tembotrione+Malathion</b>	109.1		0.45		506.7
<b>Tembotrione+NBD</b>	108.2		0.48		514.2
<b>p-value</b>	0.058 <sup>ns</sup>		0.524 <sup>ns</sup>		0.267 <sup>ns</sup>
<b>C.V. (%)</b>	2.2		4.2		7.8
					12.0
					14.5

<sup>ns</sup> non-significant by the F-test (p>0.05); identical letters in the column do not differ from each other (p>0.05) by Tukey's test; CV: coefficient of variation; FM, fresh mass.

**Supplementary data Table 3.** Grain harvest moisture (U%), thousand grain weight (TGW) and white oat grain yield on the basis of the application of herbicides alone or previously treated with a metabolism or conjugation inhibitor. 2021/2021 season, Lages – SC.

Treatment	Humidity		TGW		Yield
	(%)		(g)		(kg ha <sup>-1</sup> )
<b>Control</b>	11.8	ns	36.4	ns	5934
<b>Malathion</b>	12.1		36.9		6455
<b>NBD</b>	11.7		37.0		5751
<b>Mesotrione (1xD)</b>	12.3		37.0		5721
<b>Mesotrione + Malathion</b>	11.2		37.3		5475
<b>Mesotrione+NBD</b>	11.3		37.1		5524
<b>Tembotrione (1xD)</b>	11.8		36.9		6054
<b>Tembotrione+Malathion</b>	11.6		37.2		6268
<b>Tembotrione+NBD</b>	11.8		37.0		5974
<b>p-value</b>	0.833 <sup>ns</sup>		0.117 <sup>ns</sup>		0.065 <sup>ns</sup>
<b>C.V. (%)</b>	8.2		1.2		7.5

<sup>ns</sup> non-significant by the F-test (p>0.05); identical letters in the column do not differ from each other (p>0.05) by Tukey's test; CV: coefficient of variation; FM, fresh mass.

**Supplementary data Table 4.** Percentage of grains > 2mm (G>2), hectoliter weight (HW), dehulling index (DHI) and industrial yield (Avenacor) of white oat grains produced from plants treated with application of herbicides alone or previously treated with a metabolism or conjugation inhibitor. 2021/2021 season, Lages – SC.

Treatment	G>2		HW		DHI	Avenacor	
	(%)		(kg hL <sup>-1</sup> )		(%)	(kg ha <sup>-1</sup> of caryopsis)	
<b>Control</b>	90.7	ns	50.6	ns	75.6	ns	4072
<b>Malathion</b>	90.5		50.5		76.0		4343
<b>NBD</b>	90.7		50.9		76.2		3972
<b>Mesotrione (1xD)</b>	90.4		49.8		75.3		3891
<b>Mesotrione + Malathion</b>	89.8		50.2		74.3		3766
<b>Mesotrione+NBD</b>	90.4		50.6		76.3		3811
<b>Tembotrione (1xD)</b>	90.9		50.5		74.5		4099
<b>Tembotrione+Malathion</b>	90.3		50.6		75.6		4275
<b>Tembotrione+NBD</b>	90.6		51.0		75.4		4076
<b>p-value</b>	0.961 <sup>ns</sup>		0.608 <sup>ns</sup>		0.109 <sup>ns</sup>		0.092 <sup>ns</sup>
<b>C.V. (%)</b>	1.3		1.6		1.4		6.9

<sup>ns</sup> non-significant by the F-test (p>0.05); identical letters in the column do not differ from each other (p>0.05) by Tukey's test; CV: coefficient of variation.