

# **Potassium forms in soils of Poland**

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## Potassium forms in soils (medians) mg K\*kg<sup>1</sup> soil

Potassium forms	K mg*kg <sup>-1</sup> in soil layer 0-20 cm			K mg*kg <sup>-1</sup> in soil layer 20-40cm		
	light	medium	heavy	light	medium	heavy
<b>structural*</b>	<b>10135</b>	<b>13341</b>	<b>16282</b>	<b>10515</b>	<b>14600</b>	<b>17408</b>
<b>„total”</b>	<b>486</b>	<b>872</b>	<b>2372</b>	<b>407</b>	<b>789</b>	<b>2256</b>
<b>„reserve”</b>	<b>239</b>	<b>382</b>	<b>655</b>	<b>180</b>	<b>204</b>	<b>470</b>
<b>exchangeable</b>	<b>86,4</b>	<b>112</b>	<b>166</b>	<b>52,2</b>	<b>72,6</b>	<b>104</b>
<b>water soluble</b>	<b>23,2</b>	<b>22,0</b>	<b>21,6</b>	<b>13,9</b>	<b>13,8</b>	<b>10,1</b>

## Potassium amount in light soils $\text{kg K} \cdot \text{ha}^{-1} \cdot 0-50 \text{ cm}$

K uptake	K content	light soils			
		$\text{K}_{\text{tot}}$	$\text{K}_{\text{res}}$	$\text{K}_{\text{ex}}$	$\text{K}_{\text{wat}}$
<b>60</b>	<b>Very low</b>	<b>2839</b>	<b>963</b>	<b>216</b>	<b>60</b>
	<b>Low</b>	<b>3231</b>	<b>1300</b>	<b>397</b>	<b>103</b>
	<b>Medium</b>	<b>3594</b>	<b>1728</b>	<b>640</b>	<b>176</b>
	<b>High</b>	<b>4659</b>	<b>2380</b>	<b>949</b>	<b>281</b>
	<b>Very high</b>	<b>5921</b>	<b>3161</b>	<b>1473</b>	<b>385</b>
	<b>Average</b>	<b>3355</b>	<b>1572</b>	<b>520</b>	<b>140</b>

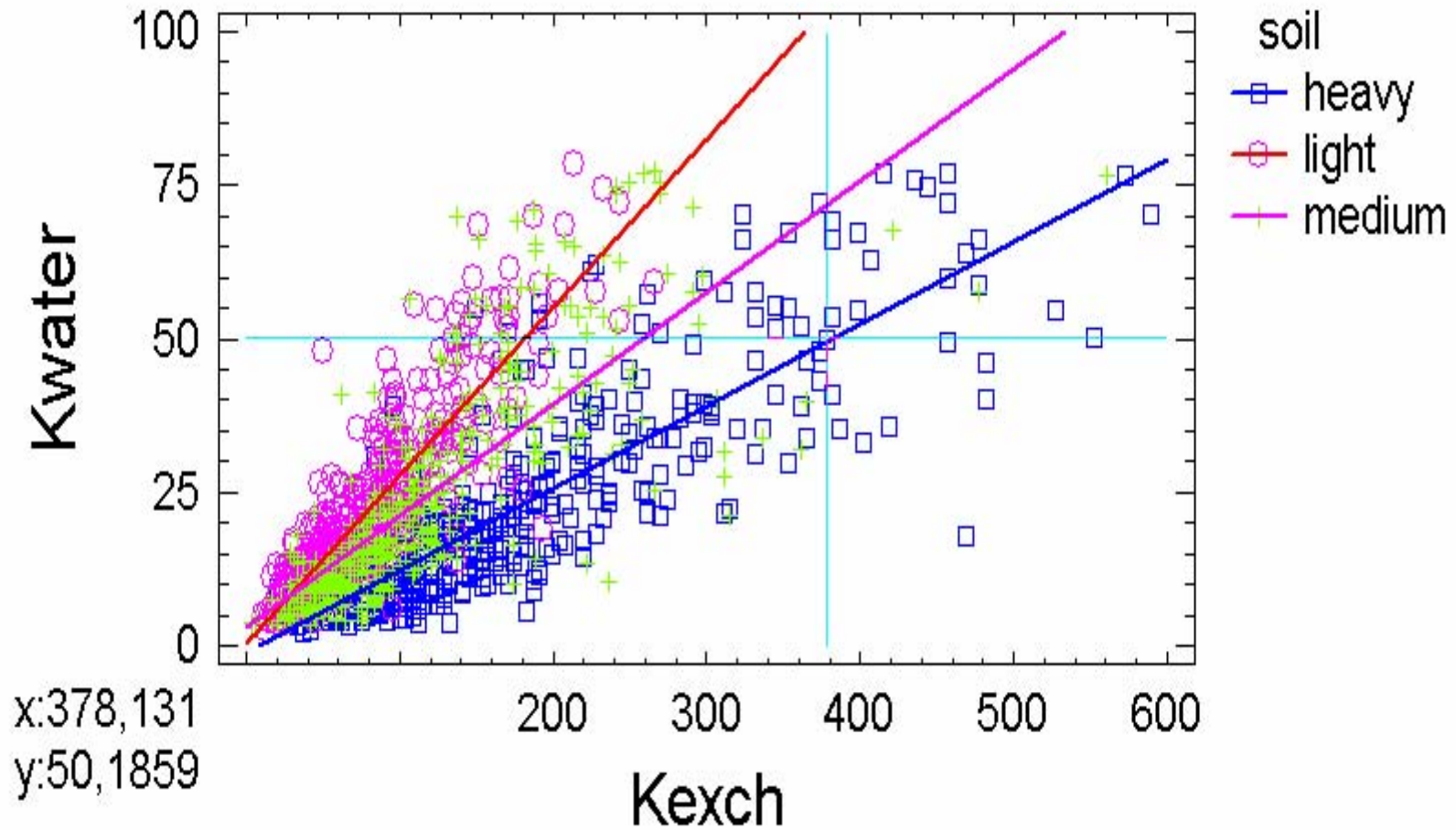
## Potassium amount in medium soils kg K\*ha<sup>-1</sup>\*0-50cm

K uptake	K content	medium soils			
		K <sub>tot</sub>	K <sub>res</sub>	K <sub>ex</sub>	K <sub>wat</sub>
<b>74</b>	<b>Very low</b>	<b>5463</b>	<b>1663</b>	<b>347</b>	<b>64</b>
	<b>Low</b>	<b>6888</b>	<b>2281</b>	<b>629</b>	<b>124</b>
	<b>Medium</b>	<b>8123</b>	<b>2851</b>	<b>944</b>	<b>217</b>
	<b>High</b>	<b>8457</b>	<b>3350</b>	<b>1266</b>	<b>327</b>
	<b>Very high</b>	<b>11427</b>	<b>4218</b>	<b>2027</b>	<b>458</b>
	<b>Average</b>	<b>5882</b>	<b>2391</b>	<b>654</b>	<b>127</b>

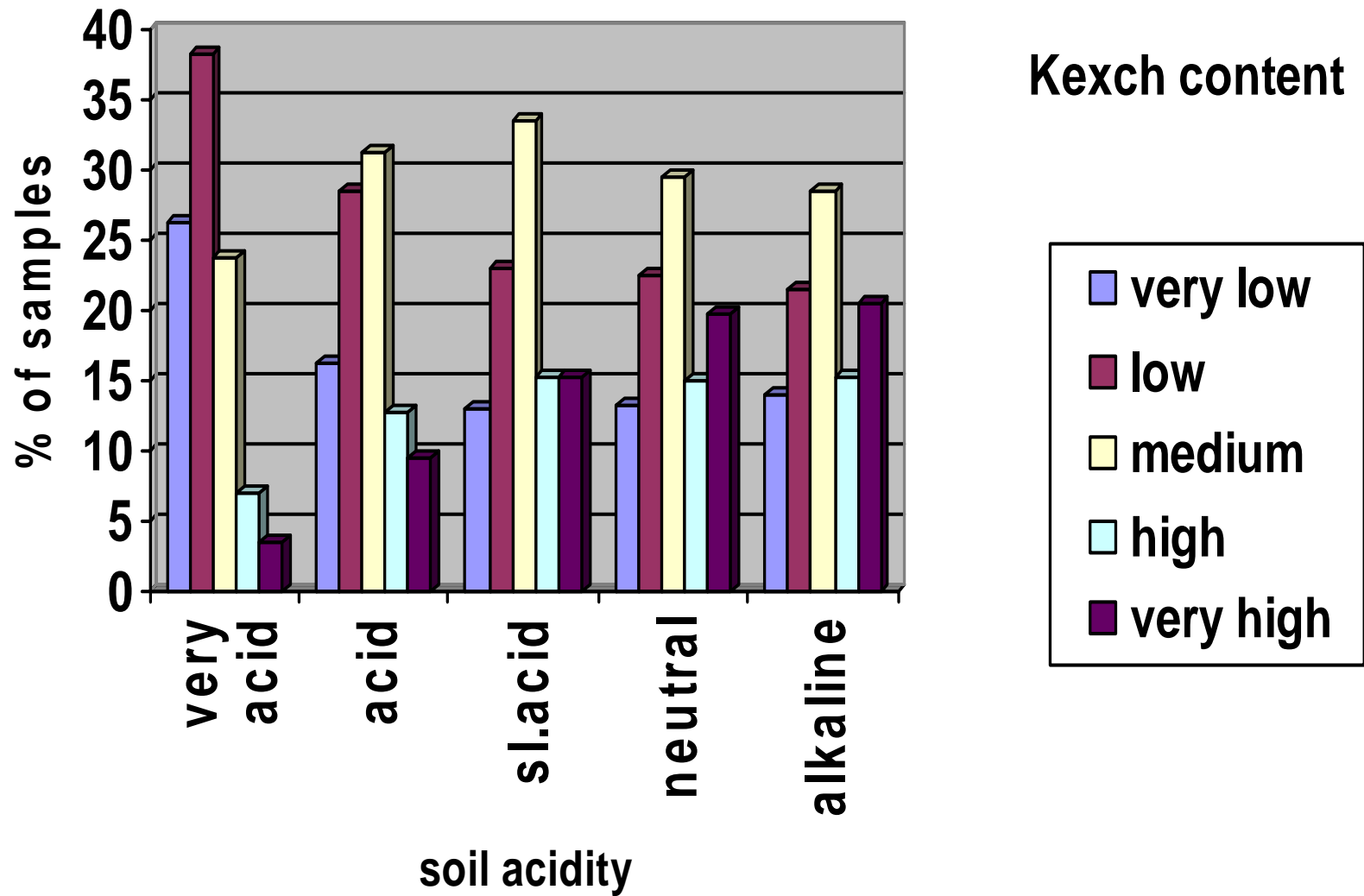
## Potassium amount in heavy soils kg K\*ha<sup>-1</sup>\*0-50 cm

K uptake	K content	medium soils			
		K <sub>tot</sub>	K <sub>res</sub>	K <sub>ex</sub>	K <sub>wat</sub>
<b>97</b>	<b>Very low</b>	<b>11808</b>	<b>2598</b>	<b>527</b>	<b>57</b>
	<b>Low</b>	<b>14783</b>	<b>3551</b>	<b>890</b>	<b>104</b>
	<b>Medium</b>	<b>15939</b>	<b>4083</b>	<b>1330</b>	<b>178</b>
	<b>High</b>	<b>19617</b>	<b>5576</b>	<b>1836</b>	<b>253</b>
	<b>Very high</b>	<b>22323</b>	<b>6913</b>	<b>3090</b>	<b>520</b>
	<b>Average</b>	<b>15042</b>	<b>3656</b>	<b>877</b>	<b>103</b>

# Relation between $K_{\text{water}}$ and $K_{\text{exch}}$



## Relation between $K_{\text{exch}}$ content and soil acidity



## Relation between $K_{con}$ and $K_{exch}$

