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Effect of Different Chemical Concentrations on Control of Dodder (Cuscuta campestris Yunck.) in Vitex (Agnus castus)

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Abstract : Pot experiment was conducted at the landscape unit of Modibbo Adama University of Technology, Yola in 2015 and 2016 to determine the effect of some chemicals namely glyphosate, salt and detergent on Golden dodder (Cuscuta campestris Yunk). The experiment was laid in a completely randomized design (CRD) with three replications. The treatments include the following: glyphosate-T0= (control),(Og a.i/ha-1) T1=35g a.i/ha-1, T2=70g a.i/ha-1, T3=105g a.i/ha-1, T4=140 a.i/ha-1 and T5=175g a.i/ha-1: Salt (T0=control O mole/ha-1 T1=1mole/ha-1 T2=2mole/ha-1, T3=3mole/ha-1 , T4=4mole/ha-1 and T5=5mole/ha-1:washing detergent T0=Og/ha-1(control), T1=30ml detergent +70ml distilled water T2=45ml detergent+65ml distilled water T3=60ml detergent+40ml distilled water, T4=75ml detergent+25ml distilled water and T5=90ml detergent +10mldistilled water, the treatments were replicated three times. Data were collected include: plant height, number of leaves, leaf area, leaf area index and Cuscuta cover score at 3,6,9and 12 weeks after sprouting(WAS). Biomas of Vitex was also collected at the end of the experiment. Data collected were analyzed using software Genstat version 8.0. Results showed that glyphosate gave the least Cuscuta cover score and the tallest Vitex plant. However, detergent mildly controlled Cuscuta, while salt has no effect on Cuscuta campestris indicating that glyphosate could be used in the control of parasitic dodder (Cuscuta campestris) on Vitex plant.

Keywords : chemical, control, dudder, Vitex
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