



Trials of Xcelbio with Mung Bean Root systems

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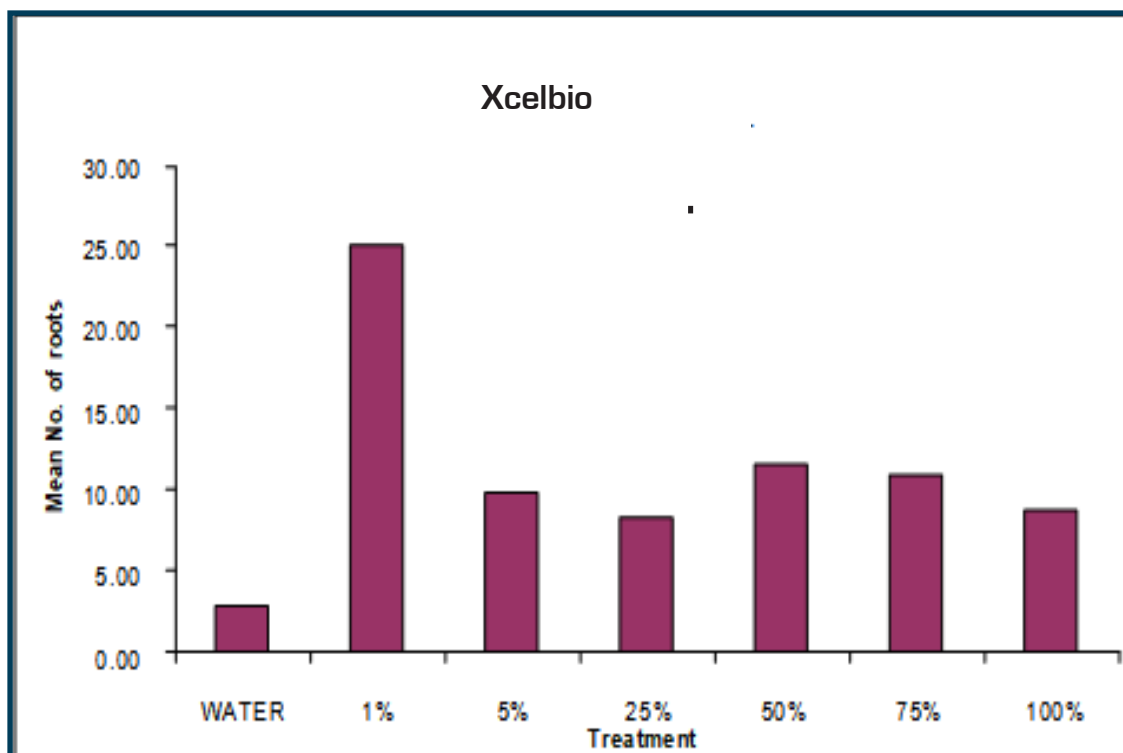


Figure 1: Effect of various continuous (1%) and pulse (5-100%) treatments on root production of mung bean.

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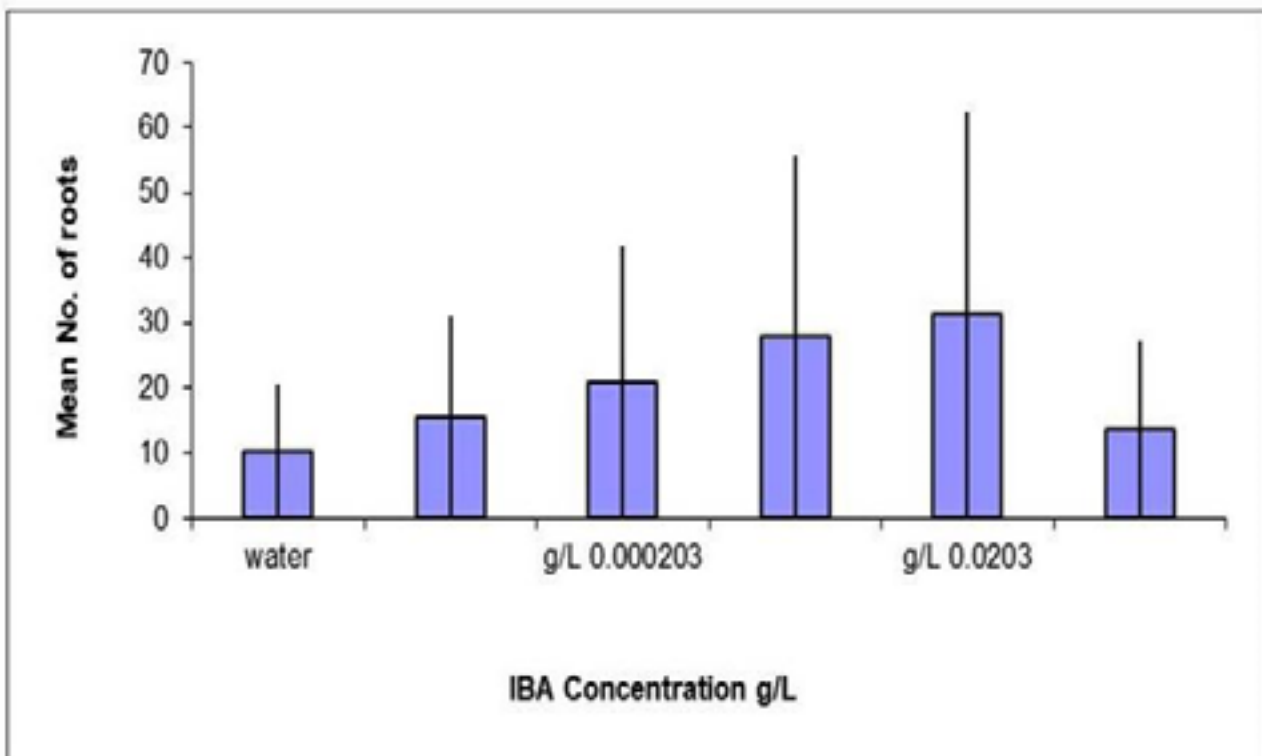


Figure 2: Effect of (IBA) inhibiting binding assay concentrations on root induction of mung bean (standard curve).

The root induction bioassay tests the ability of a particular solution to induce root formation on young seedlings of mung bean. An increase in the mean number of roots indicates the presence of root-promoting factors (such as auxin or auxin-like compounds). The equivalent level of activity of a particular solution can be compared to a standard concentration curve using pure auxin (IBA).

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In this case, a continuous 1% treatment with Xcelbio (ie seeds in continuous contact) showed a significant increase in root production compared to the control (Figure 1). This equated to a comparable activity of a 10^{-5} M concentration of (IBA) M indole-3-butyric acid (Figure 2). This strongly suggests that a Xcelbio solution contains auxin or auxin-like compounds. It is possible that auxins or similar compounds are being produced by Xcelbio since these compounds are key regulators in the cell cycle and cell division processes.



Therefore, addition of Xcelbio to the plant watering systems is likely to have a pronounced effect on root growth, and subsequent plant health and vigour. It is significant that an IBA assay carried out at the same time was discarded since poor rooting of the batch of seeds was noted in the water controls and yet large increases were measured in the Xcelbio test.

The IBA results above are records of periodic Quality Assurance tests for a particular commercial product. (Note the difference in usual water result of 10 roots versus the control in the Xcelbio tests at 2,5. This makes the impact of the Xcelbio even more pronounced)

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