

## **Growth, yield and economics of Ashwagandha as influenced by sowing dates and seed rates**

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**ABSTRACT** : The present study entitled “Effect of sowing dates and seed rates on yield of Ashwagandha” was conducted during kharif season of 2009-2010 on the Farm of Nagarjun Medicinal Plant Garden, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola. The soil of experimental site was medium black in colour, clayey in texture, medium in organic carbon, low in available nitrogen, phosphorus and medium to high in potash content. The soil was slightly alkaline in reaction. The experiment was laid out in Factorial Randomized Block Design with three replications and twelve treatment combinations comprised with factor A viz., four sowing dates as 28<sup>th</sup> MW (D<sub>1</sub>), 31<sup>st</sup> MW (D<sub>2</sub>), 33<sup>rd</sup> MW (D<sub>3</sub>) and 35<sup>th</sup> MW (D<sub>4</sub>) and factor B viz., three seed rates as 8 kg/ha (S<sub>1</sub>), 10 kg/ha (S<sub>2</sub>) and 12 kg/ha (S<sub>3</sub>). Now a days use of ayurvedic medicine is increasing due to its less side effects. Ashwagandh roots, and occasionally its leaf and seeds are used in ayurvedic and unani medicines. The pharmacological activity of the roots is attributed to the presence of several alkaloids and withaniols. The total alkaloidal content of the Indian roots is reported to vary between 0.13 and 0.31 per cent .There is good demand for root, seed and leaves of ashwagandha, which is used in medicines. The results of the study showed that significantly maximum plant height and root shoot ratio, were recorded with sowing at 28<sup>th</sup> MW. Same characters were proved significantly better with 12 kg/ha seed rate. There was no any significant effect of sowing dates on plant stand. Sowing on 28<sup>th</sup> MW week with seed rate 12 kg/ha produced significantly maximum plant height, root shoot ratio, root and seed yield. The same treatment combinations recorded ultimately significantly maximum gross monetary returns, net monetary returns and B : C ratio.

**Key Words:** Sowing date, seed rate, growth, yield and economics.