

## Weed Management Programs in Peanut

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Weed control in peanut is crucial. Yields losses attributed to competition with weeds can be as high as 60%. A diversified herbicide program is key to weed management in peanut, this includes both preemergence (PRE) and postemergence (POST) applications. The objectives of this project were to evaluate the efficacy of various herbicides combinations to determine best management options for weed control in peanut.

This multi-state research was conducted in Georgia, Mississippi, and Oklahoma in 2020. Treatments included Valor (2 oz/A), Outlook (12.8 fl oz/A), and Pursuit (4 fl oz/A) applied PRE alone and in combination. Pursuit was applied PRE or as a split application PRE (2 fl oz/A) followed by At-Crack (2 fl oz/A). All PRE applications were applied with Prowl H2O (32 fl oz/A). These were all followed by Gramoxone (16 fl oz/A) + Zidua SC (1.75 fl oz/A) + Agridex (1% v/v) At-Crack and Cobra (12.5 fl oz/A + 2,4-DB (21 fl oz/A) + Agridex (1% v/v) early POST. The Georgia location included Storm At-Crack. The Mississippi and Oklahoma locations also included Select Max (16 fl oz/A) + Agridex (1% v/v) late POST. Valor (3 fl oz/A) PRE followed by Cadre (4 fl oz/A) + Dual Magnum (16 fl oz/A) + 2,4-DB (21 fl oz/A) + Agridex (1% v/v) early POST were included as a comparison treatment. All treatments increased yield by 58% over the untreated check at all locations. The PRE application of Pursuit resulted in peanut injury over 21% at Georgia and Oklahoma. However, when applied as a split application injury lowered by 14%. There were still visible injury symptoms reported in late June at both locations, however by July the peanut had recovered at Oklahoma. Most treatments provided over 90% weed control regardless of weed species or location. All treatments provided over 90% control of browntop millet, eclipta, and smallflower morningglory in Mississippi. A few exceptions include early season weed control of wild radish when Valor and Pursuit were applied alone in Georgia. The Oklahoma location resulted in less than 77% mid and late season control of Texas panicum and ivyleaf morningglory when Valor and Outlook were applied alone PRE and yellow nutsedge when Valor was applied alone PRE. This research confirmed that a comprehensive preemergence herbicide program is needed to control a diverse population of weeds.