The witchweed, *Striga hermonthica* (Del.) Benth., is a major constraint to maize (*Zea mays* L.) and sorghum (*Sorghum bicolor* (L.) Moench) production in sub-Saharan Africa. Intercropping maize and sorghum with desmodium (*Desmodium* spp.) effectively controls *Striga* and enhances grain yields. Studies were thus conducted to assess the potential role of intercropping maize and sorghum with different food legumes for control of *Striga*. Seasonal *Striga* counts in the intercrops, other than greenleaf desmodium where the counts consistently remained close to zero, were generally not significantly different from those in the control in both crops. A pooled analysis across seasons, however, showed that intercropping sorghum with cowpea (*Vigna unguiculata* (L.) Walp.), greengram (*Vigna radiata* (L.) Wilczek), and crotalaria (*Crotalaria ochroleuca* G. Don), and maize with crotalaria significantly reduced *Striga* populations. Within-season analysis showed that it was only the greenleaf desmodium intercrop that maintained significantly enhanced grain yields relative to the control. On the other hand, multiseason analysis showed that it was only the crotalaria, cowpea, and greenleaf desmodium intercrops in maize and greenleaf desmodium intercrop in sorghum that significantly enhanced grain yields. These results indicate that intercropping sorghum with cowpea, greengram, or crotalaria and maize with crotalaria could be combined with other cultural methods for a sustainable control of *S. hermonthica*. 