Fire Ant Initiative Action Plan – FY 2006-2007

Maximum 500 words, double-spaced, type size at least 12 points, do not exceed boundaries. Include statement on anticipated outcomes.

Fire ant management strategies must be tailored to human expectations for use of the infested area. Fire ant baits offer flexibility in developing such strategies by understanding several factors. These include: the time required for reducing densities (hours to weeks), residual activity of the bait (hours to months), effects on non-target species (low to high), and time of control maintenance before re-treatment is needed. The interaction of the primary means of controlling fire ants - pesticides - and the primary natural enemy of fire ants - native ants - remains relatively unexplored, particularly under field conditions. Recent studies by the authors show that some baits that effectively suppress fire ants also result in increased densities of competitor ant species. Further, our work shows that some competitor species like pyramid ant directly compete with fire ant in the field, indicating conservation of such species will reduce fire ant reinvasion rate. This proposal focuses on how to incorporate both bait and natural enemy interactions into management strategies. Data on fire ants, competitor ants and other arthropods will be collected before and after treatment in replicated plots using various baits to determine: 1) rate/amount of reduction or increase; 2) amount of competitive bait foraging by and effects on non-target species; 3) factors that affect re-infestation; 4) conditions requiring retreatment; and, 5) effects of retreatment on fire ant/native ants. This will provide solid scientific data on fire ant-bait-competitor ant interactions. Expected outcomes will be scientifically based recommendations on the best methods and products for fire ant control tailored to environmental conditions and human needs for the infested area.