



Fruit fly Threats and Management perspectives in Ethiopia

Ethiopian Team

Fruit Production in Ethiopia

- **Diverse ecological zones and biodiversity**
- **Several species of fruit plants**
 - Avocado, banana, citrus, grape, pineapple, papaya, mango, peach, apple, vegetables
- **Production at different capacities.**
 - **Few large commercial farms**
 - The largest fruit farms of Ethiopia are found in the rift valley
 - **Majority are small scale producers**
 - **A few private investors are currently involved**

Pests of Fruit Crops in Ethiopia

- Numerous fruit crops pests have been recorded
- The status of most of the listed pests are not known.

Present status of Fruit flies management activities

- Major pest in all areas of fruit production
 - Fore example in Arbaminch, Southern Ethiopia losses are huge (up to 80%)
- Upper Awash Agro Industry Enterprise (UAAIE) has ventured in to the use of bait Sprays
- *Bactrocera invadens* is well established in the southern and western part.
- No National Plant Protection Organization apparatus against *B. invadens*
- National Horticultural development strategy being developed with focus to produce quality fruit for export
- Fruit flies are expected to be export impediments

Management Practices of Fruit flies

- **The only experience comes from Upper Awash Agro Industry Enterprise (UAAIE)**
- **Earlier experience**
 - **Periodic ground and canopy spraying with OPs mainly**
 - **Sanitation of orchard**
 - **Sorting of fruits**
- **Recent experiences: Integration of Methods**
 - **Monitoring of fruit flies**
 - **Use of success bait**
 - **Prompt harvesting**
 - **Orchard sanitation**

Fruit sorted out because of fruit fly damage at UAAIE



Challenges

Technical

- **Insecticide sprays are not effective, costly, unacceptable,**
- **Orchard sanitation is labor intensive**
- **Bait sprays**
 - **Unavailable, expensive**

Knowledge

- **Few components of IPM developed**
- **Little management skills**
- **Few suppliers of management products**
- **Absence of center of excellence for researches and development on fruits**

Challenges

Organizational

- **No institutional arrangements**
- **Limited involvement of private sector on fruit production and management**
- **Weak research, extension and producers linkage**
- **Ethiopia does not have formal ties in the east African collaborations**

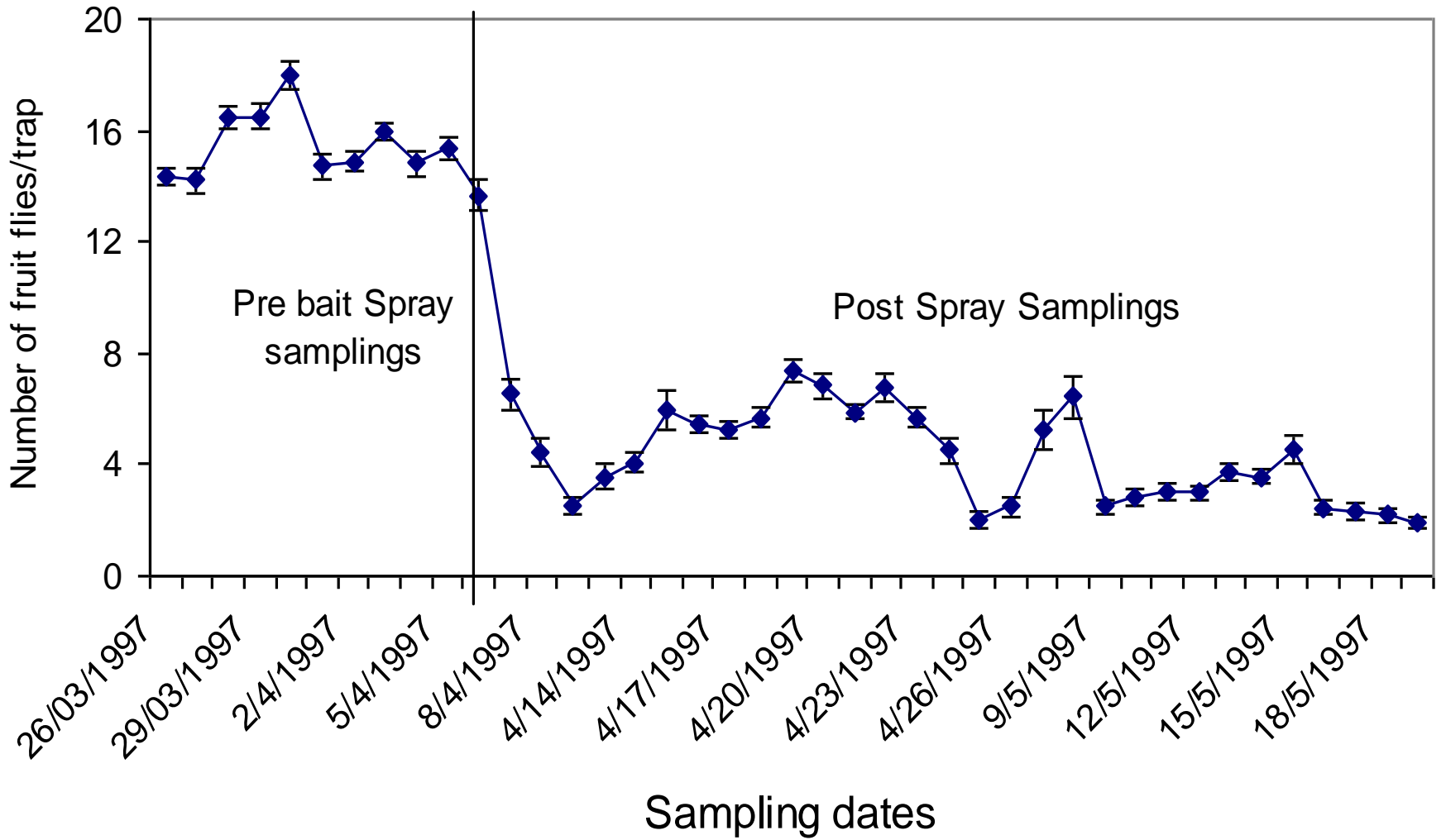


Figure 1. Populations of Fruit flies in Guava fields at UAAIE

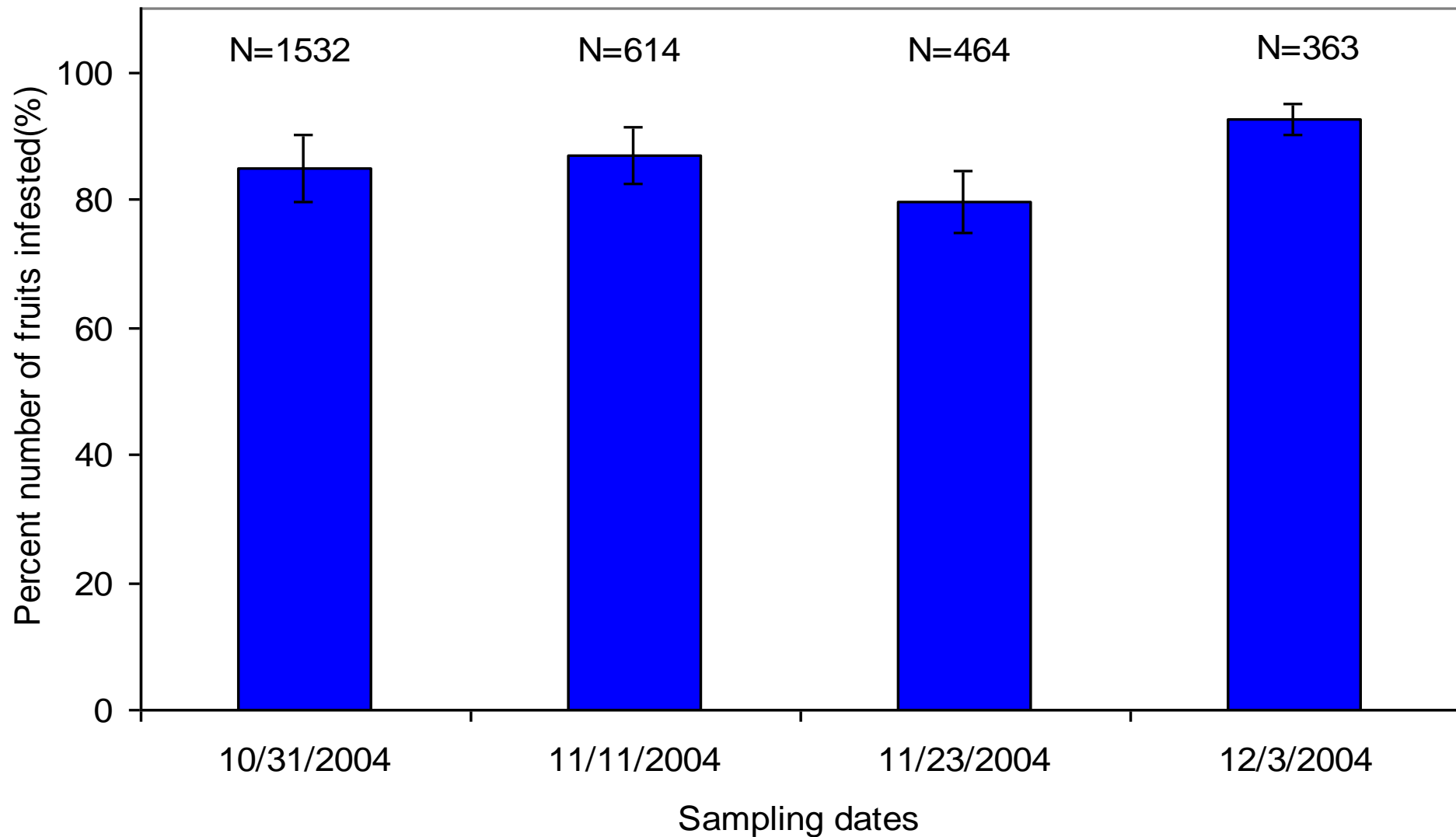


Figure 2. Extent of Guava Infestation by fruit flies at UAAIE before spraying the Sucess (GF120)

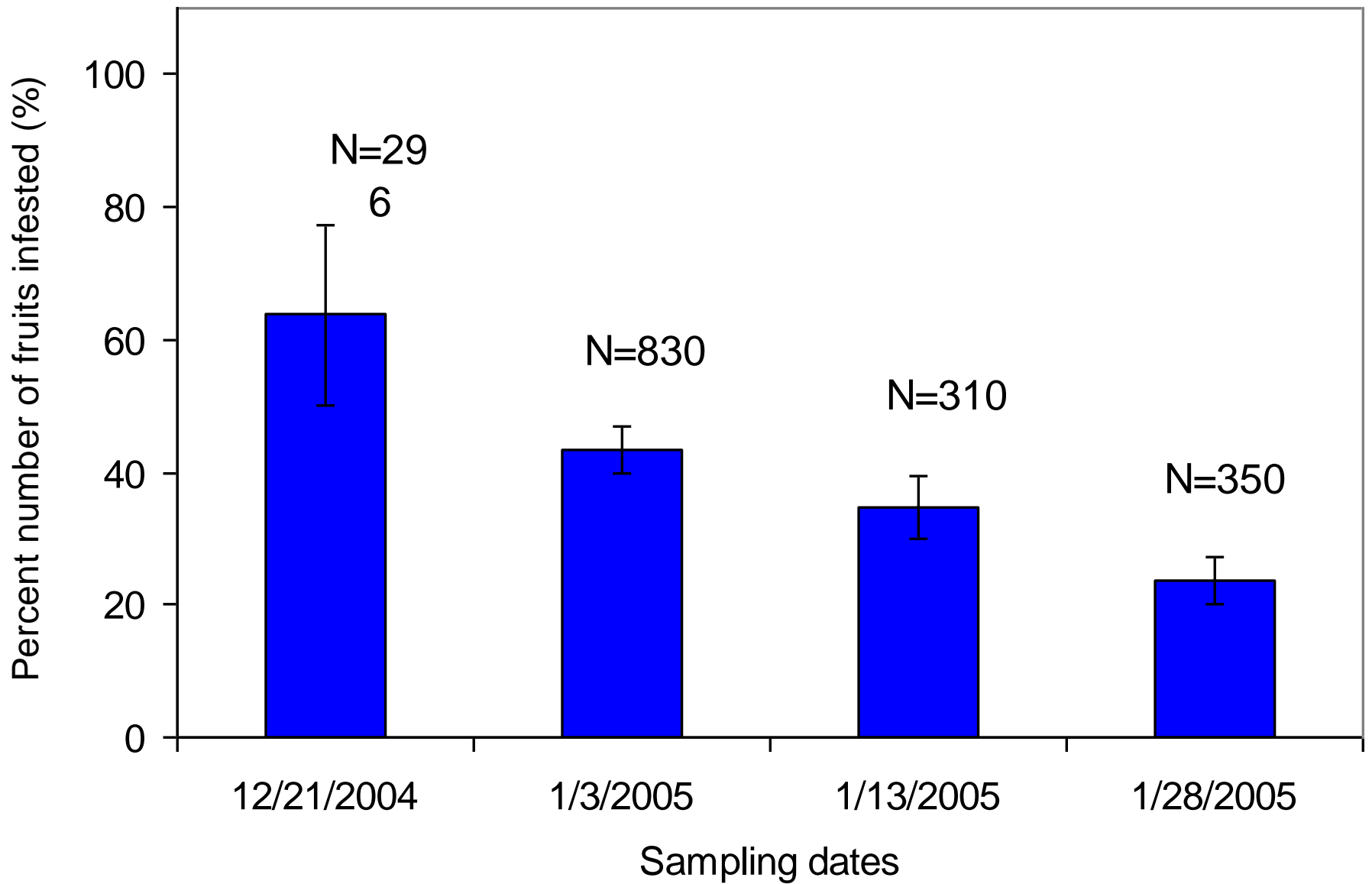


Figure 3 . Extent of Guava fruits infestation at UAAIE after spraying with Success bait (GF120)

Current Activities on Fruit flies

- Few researches on fruit flies supported by the government
- Graduate students working in the east, west and southern part of the country.

Focus Areas of FF management in Ethiopia

- A. Establishment of National Fruit Fly Task Force (NFFTF) comprising of various institutions (Research, Academia, Private sector, NGOs, etc**
- **Define national strategy frame work for FF management**
 - **Coordination of R&D on FF**
 - **Build national network**
 - **Link to regional hub**

Focus Areas of FF management in Ethiopia

B. Development of IPM packages

- Validation and adoption of technologies including use of bait, biocontrol, male annihilation techniques, SIT, post-harvest treatments**
- Development of local baits and pilot facility within the country**
- Develop effective methods of monitoring, detection, surveillance**
- Containment and imposition of domestic quarantine system**

Focus Areas of studies and management of fruit flies in Ethiopia

C. Build the national human and material capacity

- Training at various levels (graduate and post graduate, extension workers and farmers)**
- Establish facilities in the NARS to undertake studies on fruit flies and training**
- Establish resource centre**

Summary

- **Fruit fly management in Ethiopia is not well developed**
- **There is a dearth of data on the species of fruit flies, distribution spread and their economic importance and management.**
- **Preliminary studies show huge losses**
- ***Bactrocera invadens* is established in the south and western part of the country**
- **Linkage of the Ethiopian fruit fly researches to international institutes and provision of funds is crucial**