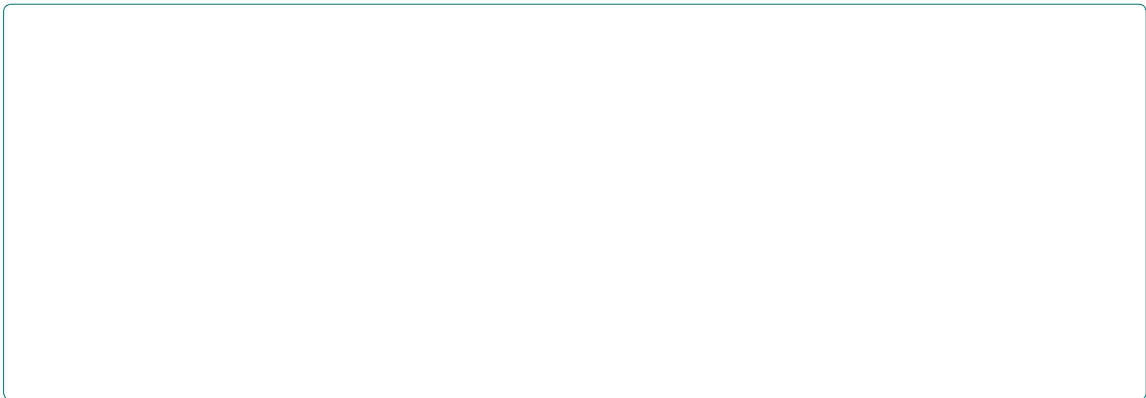


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**Keywords:** Abundance of weed; Frequency; Major crops; Weed  
ora; Similarity index.

### Introduction

Weeds are plants that interfere with the objectives and requirements of man (Steven, 1984). Weeds are genetically diverse and can readily take advantage of the variety of conditions created by any give crop production system. is primarily due to their ability to produce a large quantity of viable seeds (if it is an annual) or vegetative tissues such as rhizomes (if it is a perennial) in a single growing season Weed serve as alternate and alternative for pest organisms that adversely a ect crop production system [1]. e degree of yield loss due to weeds crop depends on the species' competitive ability, relative growth height, time of emergence (relative to the crop), leaf area, vegetative

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more favorable living entities, but unlike the other districts found in these zones Bule Hora has different agro climatic conditions which tends to mid highland and has a long rainy season than the others. Geographically they fall under an elevation of 1356masl to 1874masl for Borana, and 1422-2328masl for west Guji. Specifically, by districts the altitude range of the surveyed area are as follows Yabello 1490-1800masl, Teltelle 1356-1460masl, Abaya 1422-1460masl and Bule Hora 1860-2328masl [9].

**Assessment methods**

The survey was done in four districts above listed zones and the districts were selected purposively based on potential of crop they produce. Fields were assessed with the distance of about 3-5KM apart accordingly i.e. based on crop abundance. But, the assessed field for each crop was not equal, for instance for common bean about 113 fields, for maize 94 and for Teff 89 fields were assessed. GPS was used during the assessment for the purpose of geographical data such as elevation, latitude and longitude, distance and area of the survey areas. Also, 1m<sup>2</sup> quadrat was used during the survey to take sample from the fields and the sampling was done in diagonal pattern in each field. During the survey the producers/farmers were interviewed for source of seed they use, cropping pattern, input used for the crop and sowing date (early or late), presence or absence of the weed in the previous cropping year or season. Weed species compositions frequency (F), abundance (A), dominance (D) and similarity index (SI) were summarized using the formula.

**Frequency** (constancy): Is the percentage of sampling plots (vegetation registrations) on which a particular weed species is found. It explains as how often a weed species occurs in the survey area. Frequency is calculated for all weed species as follows.

$F=100 \times X/N$ ; Where F= frequency, X=number of weed species occurrences, N= sample number

Similarity index/Community index is the similarity of weed communities between different locations or crop types.

**Similarity index**= $SI = 100 \times Epg / (Epg + Epa + Epb)$

Where, SI = Similarity index; Epg = number of species found in both locations; Epa = number of species found in location I; Epb = number of species found in locations II

**Data analysis**

All collected data were feed into computer and managed by using Excel and lastly the data was analyzed using IBM SPSS Statistics 20.

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climatic condition of Bule Hora, dissimilar with any of other districts, their similarity index ranged from 46.66%-57.89 and below 60%. Weed growth, population density and distribution vary from place to place depending upon altitude, soil and climatic factors that affect the weed flora, and farmers' management practices [11] (Table 6).

### Major Weed flora recorded from Teff fields

In Teff fields about 21 species of weed species which grouped under 7 families of the weeds were identified from four districts, where the survey was conducted (Table 7). The result from this assessment showed that, broad leaf weeds were the dominant the other weed species. Among a total of 21 weed species of farm fields' 54.55% broad leaf, 27.27% grass types and 18.18% sedge types (Table7-8).

**e similarity Index of weed recordm Teff fields** **The ide** **10005**

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Dis Abaya	Bule Hora	Teltalle	Yaballo	Yaballo
Abaya				