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**I. PROJECT TITLE:** Evaluation of chickpea varieties for alternative dryland cropping, SARC Huntley.

**II. PROJECT LEADERS:** G.F. Stalknecht, K.M. Gilbertson

**III. PROJECT PERSONNEL:** Fred Muehlbauer, USDA, ARS, Washington State University, Pulman, WA.

**IV. OBJECTIVE:** To evaluate chickpea varieties, large seeded (Kabuli) and small seeded (Desi), for yield, quality, and consideration for production of an alternative annual legume crop under dryland cropping.

**V. RESULTS:** Studies over the past five years have indicated that economical yields of both the large and small seeded chickpea cultivars can be grown under dryland cropping in Montana. The 1994 yield data on chickpeas is described in (Table 1). The small seeded Desi types are represented by Sarah and 92001, while Surutato 77, Spanish White, Dwelley, and Sanford are large seeded (salad) Kabuli types. The 1994 yields are well above the five year average range of 1200-2200 lbs/Acre. However again, the results indicate that chickpeas grow very well under dryland cropping in Montana.

**VI. SUMMARY:** Chickpeas have the potential to be a productive economical crop in dryland production in Montana. Limiting factors at present are Brokers contracts or contacts for sales of the chickpeas. The chickpeas grown in Montana are of excellent quality. The average size of the Kabuli types tend to be small, making from 60-75 percent number one grade, however the price per pound would still represent a return well above wheat or barley. The small Desi types would have to be channeled into export markets.

**VII. FUTURE PLANS:** The chickpea trials will continue at SARC. The results of the past five years including data from other research centers will be published in Montana Ag Research in 1995.

TABLE 1 . 1994 DRYLAND CHICKPEA VARIETY TRIAL, SARC, HUNTLEY, MT.

VARIETY	YIELD LBS/ACR	WT/100 SEEDS	FLOWER DATE	PLANTHT INCHES	22/65 mm SCR
SARAH	3835.83	20.80	163.00	.00	.00
920001	3727.05	18.40	162.33	.00	.00
SURUTATO 77	3219.90	54.60	162.33	15.67	88.90
SPANISH WHITE	2813.52	48.80	163.67	16.67	75.00
DWELLEY	2653.81	51.00	164.00	19.00	60.00
SANFORD	2571.84	42.90	162.67	20.00	39.50

## \*\*\*\*\* STATISTICAL TABLE \*\*\*\*\*

	YIELD LBS/ACR	FLOWER DATE	PLANT HT INCHES
EXPERIMENTAL MEANS	3136.99	163.00	11.89
C.V. 1: (S/MEAN)*100	9.37	.40	4.77
C.V. 2: (S OF MEAN/MEAN)*100	5.41	.23	2.76
LSD (0.05)	534.85	1.20	1.03

DATE PLANTED: 4/15/94  
DATE HARVESTED:

94CHKPEA.CPD  
CHICKPEA.STT