A 150-day cycle pole bean cv. Negro-150 was planted in rows 1.6 m apart. Twenty eight plants per square meter were used with types A and B trellises and one plant per square meter for type C. These were the best population densities determined by previous works, based on seed yields.

In order to get a better land use, an earlier (90 day-cycle) bush bean at 22 plants per square meter was planted, in rows between the rows of trellises. A randomized block with 4 replications was used. Fertilizer at the rate 100-100-60 (NPK) was applied for the entire crop.

RESULTS: No significant yield difference was found between types A and B trellises, which gave respectively 427 and 478 g of seeds per square meter. These yields, as well as the number of pods and seeds at harvest, were higher than those for type C, (287 g of seeds per square meter).

The bush beans gave 191, 118 and 180 g of seed per square meter when associated with trellises of type A, B and C. respectively.

It was concluded that trellises of types A and B were equally satisfactory. However, from the standpoint of mechanical resistance, the latter is more favorable. Type C was less satisfactory.

The association with an early bush bean adds to the yield per square meter and enables a more efficient use of the land.

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ANATOMY OF FLOWER BUDS WITH HIGH AND WITH LOW POTENTIAL FOR ABSCISSION IN *Phaseolus vulgaris* L.

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In beans (*Phaseolus vulgaris* L.) abscission of reproductive organs, buds, and young pods, accounts for the loss of up to 80% of potential seeds. Abscission of reproductive organs has been related to abnormalities in the development of the ovule and the embryo sac. However, most of these observations come from studies with woody perennial plants. In the present study, we compared anatomically the ovules from flowers buds with high potential for abscission with those of buds with low potential in order to verify whether ovule and embryo sac development is related to fruit set or bud abscission.

MATERIAL AND METHODS. Flower buds were collected from bean plants (Phaseolus vulgaris L. Cv. Cacahuate 72) grown in a greenhouse. This is a determinate variety with terminal, subterminal and axillary inflorescences. Buds at the stage when the corrolla was just protruding from the enveloping bracteoles were collected from sites of low and high potential for abscission as follows: a) Buds at the second and third nodes of the terminal inflorescence of (the branches at the fourth or fifth nodes of the main stem) almost never produce flowers. They abscise when tapped lightly with the finger; b) Buds from the subterminal inflorescence (two flowers in the axil of a trifoliolate leaf) of the main stem usually set two pods with seeds. When tapped lightly with the finger those buds do not abscise.

The sample size for each type of bud was twelve. The ovaries were fixed in Craf III, stained with safranin, mounted in synthetic resin and studied under the microscope.

RESULTS Ovules from flower buds with high potential for abscission were characterized by higher frequencies of abnormalities such as: a) necrosis of the embryo sac and the nucellus b) absence of embryo sac c) delayed megagametophyte development. These abnormalities were so common that only 4% of the ovules were normal. In contrast, in ovules from flower buds with low potential of abscission, 69% of the embryo sacs developed normally to maturity. These observations suggest that abscission of flower buds is related to previously developed anatomical abnormalities in the ovules.

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PHYSIOLOGICAL SPECILIZATION OF COLLECTOTRICHUM LINDEMUTHIANUM IN BULGARIA

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From the economical point of view anthracnose is the second most important disease on beans after bacteriosis. It is particularly dangerous in years of moderate temperatures and great amounts of rainfall.

Infected plant samples, mostly green stem parts and mature seeds, have been collected in the course of four years. After being dried in the shade they have been put in paper bags, sealed, and stored until the moment of isolation in a dry room at a temperature of 18°C. Being stored in that way the pathogene can be isolated from the stem parts even after a period of 18 months and from the seeds - after 30 months. 47 monospore cultures were obtained by the method of diluting the spore suspension.

The spore suspension involved 1.-14 day cultures of Colletotrichum lindemuthianum on a glucose-peptone agar of pH 6 and at 20°C for cultivation. The pathogen was maintained on the same medium by a 2-week renewal of the cultures with spores and not with mycelium. That was done with the aim to prevent the selection of non-sporulating strains of the