the pollen showed it, also, to be similar to that of the other varieties, with considerable variation in size and many shrunken grains. Anthers and stigmas were normal and functional, except in one or two flowers, where the anthers failed to dehisce and appeared to be sterile. In all, a total of about 50 blossoms were produced, generally one or two per day, and these on particular branches. Three plants of another Jersey variety, Maryland Golden, grown similarly failed to flower.

One hundred fifty-three crosses were made, using Orange Little Stem as the pollen parent and various of the moist-flesh varieties as female parents. Of these, only 6, or 3.9% (involving B-5928, UPR-3, Don Juan, and Mameya), were successful and set seed. This is a low percentage of set but compares favorably with 492 crosses made at the same time among moist-flesh varieties, of which only 17, or 3.5%, were successful. Seeds also were obtained from several open-pollinated Orange Little Stem flowers, thus proving this variety to be both male- and female-fertile. The open-pollinated and hybrid seeds were sent to Dr. C. E. Steinbauer, at Beltsville, for germination, distribution, and testing under a cooperative sweet potato-breeding agreement.

It is of interest that W. K. Bailey, working at this station more than 10 years ago, also reported flowering in Jersey varieties (*1, 2*). He brought Big Stem Jersey, Vineland Bush, and Yellow Jersey into flower and succeeded in crossing the first two of these with moist-flesh varieties. Moreover, at least some of these crosses produced offspring. This early work of Bailey and the production of flowers by Orange Little Stem here at Mayaguez this past season indicate that the Jersey varieties will flower and probably are not fundamentally very different from the moist-flesh varieties, with regard to flowering, if grown under the proper environmental conditions.

The conditions under which the Jersey varieties have flowered here are: (1) an average annual rainfall of 80″ which falls off from a high of 11″ in August to 2.5″ in December; (2) a mild temperature, with average maxima and minima for August of 90° and 68° F, respectively, and for January of 86° and 62° F, respectively; (3) a day length which varies from 13.2 hrs in June to 11.0 hrs in December, with a yearly average of about 8 hrs of sunshine per day. Under these conditions, sweet potatoes behave as perennials and grow throughout the year.

Most moist-flesh varieties flower and seed profusely in Puerto Rico. This past season, plants of B-5988 and Mameya frequently produced 50–100 new blossoms each day and were literally covered with seed capsules. It is also of interest that some of these varieties appear to lose their seasonal flowering response in Puerto Rico. The varieties B-5928, UPR-3, and Mameya, which began flowering in November, 1947, did not return to a vegetative state at the end of the usual flowering period, but continued to flower during the spring and summer months. This flowering was not as profuse as during the fall and winter, but some buds and flowers were in evidence continually.

Other Jersey varieties, including Yellow Jersey, Red Jersey, Big Stem Jersey, and Vineland Bush, and the new wilt-resistant introductions, 153655, 153907, and 153909, have been included in the breeding project for the coming season. This station will cooperate with the Division of Vegetable Crops and Diseases of the Bureau of Plant Industry, Soils, and Agricultural Engineering, at Beltsville, and the sweet potato breeders of the southern states in an attempt to combine the desirable root characteristics of the Jersey varieties with the vigor, high carotene content, and fusarium wilt resistance of some of the moist-flesh varieties, through hybridization.

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Influence of Texture of Food on Its Acceptance by Rats

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It is known that rats often eat only the germ part of whole kernels of corn and leave the starchy part when sufficient corn or other food is available. The gnawing out of the germ part of corn by rats usually seems to be so precise that it has been regarded as a reliable method of determining the proportion of germ in kernels of corn and also as evidence of a high "nutritional I. Q." in rats. Some rats, nevertheless, eat the white starchy part of kernels of corn as well as the germ part but still leave the flintlike yellow part of the kernels and separated skin, which obviously has a considerable "edge resistance." It therefore appeared possible that the rats ate the germ part or germ and white starchy part of corn because these parts are of softer texture than the yellow part and skin.

To test this possibility further, 12 rats on an otherwise adequate diet and in separate cages were provided on alternate days with a supplement of dry kernels of corn and one with kernels that had been soaked in water at room temperature from 24 to 48 hrs. In practically all instances the rats ate all but the skin of the soaked or softened kernels of corn, while only the germ part or germ and white starchy part of the dry or hard kernels was eaten. It seems doubtful that a diffusion of tasty substances throughout the kernels of the corn, as a result of soaking in tap water, explains the difference in the parts consumed. It is more likely that soaked corn is less tasty than dry corn, but soaking evidently makes kernels of corn more completely edible.

The influence of the texture of food on its acceptance by rats was also noted by us in previously reported studies. Thus, in a study on rats fed vegetarian self-selection diets (*1*), it was found that no dry green peas

or dry soybeans were eaten, but, when they were provided in the soaked or softened state, substantial amounts of peas (excepting the skin) and some soybeans were eaten. In a study of the effect of the addition of various types of bulk-formers to the diet of rats (*2*), it was also found that the food intake was influenced considerably by the texture of the added bulk-former. Thus, the growth of young rats, particularly females, was retarded much more by the addition of 10% ground cellophane (40 mesh) to the diet than by the addition of 10% cellulose flour (Cellu Flour). The acceptance of food by rats, like the acceptance of food by man, is therefore influenced more or less by the texture of the food.

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The Influence of Brief Periods of Strenuous Exercise on the Blood Platelet Count

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Reports in the literature on the effect of exercise on the blood platelet count have been conflicting. Behrens (*1*) found that rowing over a course 6 km long or running a distance of 200–400 m always caused an increase of 18–20% in the platelet count of trained and untrained men. Isaacs and Gordon (*3*) estimated that the number of platelets was increased 2–3 times after a race lasting 2.5–3 hrs over a 26-mile course. Biggs, MacFarlane, and Pilling (*2*) observed platelet increases of approximately 20–40% in subjects running up flights of stairs for periods of 2–12 min. Kristenson (*4*), on the other hand, found no significant change in the platelet count after exercise of moderate intensity that lasted 1.5–9 hrs. Differences in the type and duration of the exercise and in the technique of collecting the blood and making the platelet counts may account for these discrepancies. Our experience in counting platelets has convinced us that counts are unreliable unless they are made quickly after the sample is obtained and that the importance of meticulous technique cannot be overemphasized. The data in this paper represent a large number of platelet counts on one subject, in moderately good training, who performed at two standardized grades of exercise.

The exercise consisted in running on a treadmill for 5 min at a speed of 7 mph and a grade of 17.5% (strenuous exercise), or for 2 min at 12 mph, zero grade (exhausting exercise). The severity of the exercise was judged on the basis of the subjective impressions of the subject and the magnitude of the leucocytosis. The platelets were counted in a certified counting chamber using the diluting fluid of Rees and Ecker (*6*). Daily blank counts were made on the diluting fluid in order to avoid artifact errors. Leucocyte and erythrocyte counts were also made in most of the experiments. In each experiment platelet counts were made on blood samples obtained before exercise, immediately after exercise, and at intervals of 10, 30, 60, and 90 min during the recovery period.

The data on the platelet counts are recorded in Table 1. The data on leucocyte and erythrocyte counts are omitted because they are in accord with previous studies on exercise of comparable intensity (*5*). It is apparent that there was no increase in the platelet count in short periods of exercise.

TABLE 1

EFFECT OF BRIEF PERIODS OF EXERCISE ON THE BLOOD PLATELET COUNT*

No. of experiments	Intensity of exercise	Blood platelets (thousands/mm³)					
		Pre-exercise	Minutes postexercise				
			0	10	30	60	90
13	Strenuous	213 ± 15	208 ± 19	205 ± 18	201 ± 17	195 ± 18	196 ± 19
3	Exhausting	212 ± 13	198 ± 18	197 ± 17	200 ± 10	195 ± 15	197 ± 12

* The duration of the periods of strenuous exercise was 5 min and of the periods of exhausting exercise 2 min.

The lack of increase in the platelet count in these experiments, in spite of increases of 60–100% in the leucocyte count, may be interpreted as evidence against an appreciable storage or sequestration of platelets. The extreme fragility of platelets, however, renders them readily susceptible to mechanical trauma, and it is possible that the greatly increased circulation velocity during exercise may destroy enough platelets to mask a moderate increase in numbers. The small postexercise decline in platelet count seen in most of our experiments is probably to be explained on this basis.

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