Notes Section

Equipment for metering, distributing and mixing granular herbicides into bands. Weed control in sugar beets, in particular those weeds in the adjacent three to four inches of the row, has received considerable attention the last few years. Liquid herbicides applied in a water carrier have given good results under favorable conditions; however, granular type carriers may have better residual characteristics and promise to provide for easier handling by the farmer. Because of the potential advantages for granular carriers, the Agricultural Engineering Section of the University of Wyoming, in cooperation with The Great Western Sugar Company and the Holly Sugar Corporation, has been working on metering, distributing and mixing equipment for granular herbicides in connection with weed control in sugar beets. The work to date has resulted in the development of a machine for the band application of both spray and granular herbicides.

Experimental work on metering has resulted in the development of principles necessary for accurate metering; some of which are being used by manufacturers of equipment. Grinding due to excessive agitation was found to be one of the causes for inaccurate metering. The moisture content of the attaclay carrier, which changes with the relative humidity of the atmosphere affects the weight-metering rate. However, the error in calibration will be small if the attaclay is treated and the calibra-

Figure 1.—The machine development for the band application of granular and spray herbicides. The distributing device and spray nozzles are located ahead of four rotary-tillage units. A four-row planter is pulled by the tractor.
tion of the metering device is performed when the attaclay is in equilibrium with atmospheres between 30 and 75 percent relative humidity.

A band distributor consisting of a series of 1/8 and 7/16 inch pins was developed and found to give a uniform distribution pattern for a six-inch band.

The mixing of the granules into the upper one to two inches of soil was more uniform for the rotary-tillage and finger weeder units than for other mixing devices worked with.

A more complete report of the work appears in Vol. 3, No. 2 of the Transactions of the American Society of Agricultural Engineers. A copy of the report can be secured from the authors.

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**Crop Science** is the name of the new research journal which will appear in February 1961, as the official publication of the Crop Science Society of America, an affiliate of the American Society of Agronomy.

This new, bimonthly journal will carry research reports on breeding, genetics, physiology, ecology, and management of field crops, pastures, ranges, and turfgrasses from crop scientists in the U. S., Canada, and other countries.

Crop Science will be a companion publication to Agronomy Journal, the official organ of the ASA. It will alternate in publication dates with the Journal and will carry the articles (formerly publishable in the Journal) of direct interest to workers in the above-mentioned areas of research. Agronomy Journal will continue to carry the articles of wider agronomic scope—of interest to both crop and soil scientists, seed and weed technologists, plant pathologists, agricultural meteorologists, and others.

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