tetrahydro-1,2,4-thiadiazole was found to be permanent.

Albinism was also induced in plants grown from replantings made 45 days after the initial treatment with 4000 ppm concentrations of bisthiocarbamyl hydrazine and 1,2-diacetyl-3,5-diamino-1,2,3,5-tetrahydro-1,2,4-thiadiazole without any further addition of chemical. This fact demonstrates the strong persistence of the active agent in soil.

Spraying plants with solutions of the three compounds was found much less effective than applying the chemicals directly to the soil. The compounds are apparently systemic in their mode of action in that they are taken up from the soil through the root system with subsequent development of albinism.

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Anterior Choroidal Artery Ligation for Involuntary Movements

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A new procedure for the investigative surgical treatment of involuntary movement disorders has been in use for the past 7 months. Certain significant clinical and physiological consequences of the operation appear to be worthy of note at this time. The procedure consists of an attempt to affect involuntary movement disorders and disorders of muscular tonus by ligation of the anterior choroidal artery. The rationale of this procedure lies in the fact that this blood vessel supplies most of the structures which have been attacked surgically in the attempt to relieve intractable involuntary movements (*1–4*). Among the structures irrigated by this vessel are the globus pallidus, ansa lenticularies, red nucleus, retrolenticular portion of the internal capsule, corpus luysii, substantia nigra, optic tract, and cerebral peduncle (*5*).

We should like to point out that the anterior choroidal artery has been ligated 8 times in 6 patients; the ligations were performed bilaterally in 2 of the cases. In our early studies, we have noted striking alleviations of Parkinsonian tremor at rest in the contralateral extremities. The procedure has been invariably followed by disappearance of most of the rigidity and cogwheelism from the contralateral extremities. There has been no instance of contralateral hemiplegia or hemianesthesia which was previously reported to be invariable following occlusion of this vessel (*6*). Tremor at rest has been relieved in the first patient of this series, since the operation was performed 7 months ago. This technique is believed to be of considerable significance for the future investigative surgery of involuntary movement disorders.

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Effect of Maleic Hydrazide on Auxin-Induced Water Uptake by Pea Stem Segments[1]

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One of the most typical responses of plants to subherbicidal dosages of maleic hydrazide is the repression of terminal growth of stems and roots (*1–7*). Since growth in length is the resultant of meristematic activity and cell enlargement, inhibition of either or both processes will lead to a retardation of apical growth. The experiments of Greulach and Atchison (*2*) with root tips indicate that maleic hydrazide may, in fact, retard either cell division or enlargement, or both, depending upon the concentration of the chemical applied. In some instances, however, cell enlargement seems to be increased by applications of maleic hydrazide, e.g., Struckmeyer (*6*) observed that stems of treated Croft Easter lilies may be shorter but of larger diameter than the controls. In cross section the cells of treated stems appear larger than those of untreated stems, suggesting a change in shape along with possible changes in cell volume. Similar results have been reported by McIlrath (*4*) for the mesophyll cells of treated cotton leaves. Moore (*8*) has shown that maleic hydrazide sprays often have a dehydrating effect on the plant as a whole. Auxin, on the other hand, tends to promote water uptake, in a manner thought to be largely nonosmotic (*9*).

The present study was to elucidate the effect of maleic hydrazide[2] on auxin-induced water uptake in tissues relatively free of meristematic activity. For this purpose, stem segments of pea were chosen as test material, such having been used successfully by Christiansen and Thimann (*10*) in studies on the effect of various inhibitors on growth and water uptake. The techniques of preparing the seedlings were essentially similar to those described by Went and Thimann (*11*) for the split pea stem test for auxin. Seeds of *Pisum sativum* L., var. Alaska, were ger-

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[2] The maleic hydrazide used in this work was supplied as the diethanolamine salt by the Naugatuck Chemical Division, U. S. Rubber Co.