chemically combined into homogenous pellets.

Golf Green Weed & Feed contains 2,4-D and 2,4,5-TP (Silvex) weedkillers to control broadleaf and chickweed type weeds, including dandelion, ragweed, plantain, henbit, common chickweed and others.

Golf Green Crabgrass and Insect Control has the same properties as the other new products plus Dacthal for pre-emergent crabgrass control and Aldrin to kill lawn insects.

More information on the new Golf Green line may be obtained by writing to the Smith-Douglass Turf and Garden Division, P.O. Box 419, Norfolk, Va.

New Herbicides Show Promise For Southern Naiad Control

Researchers with the Plantation Field Laboratory, Ft. Lauderdale, a branch of the Florida Agricultural Experiment Station, say four new herbicides may well provide the means for control of southern naiad, an underwater aquatic weed. The new herbicides are acrolein, endothall, diquat and paraquat.

R. D. Blackburn, assistant agronomist, explained that diquat and paraquat were the "two most promising materials evaluated." In another report, Dr. Lyle W. Weldon, also an assistant agronomist, said, that although endothall and acrolein gave the "most rapid kill" of southern naiad, re-treatment was needed at the end of four months. In comparison, re-treatment after using diquat was not necessary for 18-21 months.

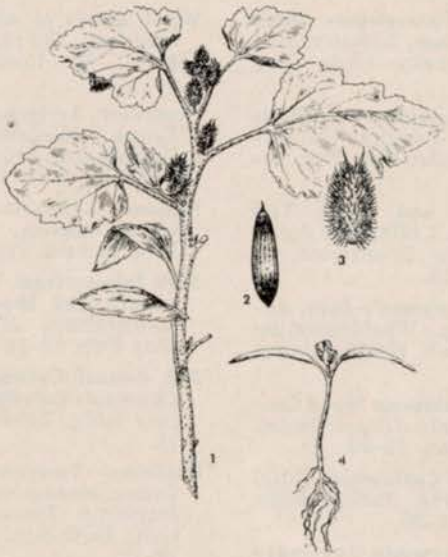
Both men emphasized that diquat and paraquat were the only herbicides that were not toxic to fish.

Measurements of water flow have been made in South Florida irrigation channels showing that southern naiad and other underwater weeds may "reduce water flow as much as 97%." The researchers also said that many canals dug for recreational purposes have been closed due to health hazards from the submersed aquatics.

Know Your Species

COCKLEBUR

(Xanthium pensylvanicum)



Cocklebur grows from southern Canada throughout the United States to Mexico, being very common in the Mississippi Valley. This pesky species is known for its sticky burs and is sometimes called clotbur, sheepbur, button bur, ditch bur, hedgehog burweed, or sea burdock. It is found in ditches, along fencerows and roadsides, in abandoned or poor pastureland, and in lowlands.

Cocklebur is an annual, hairy-stemmed, bushy plant. It is pale green and reproduces only by seeds.

Its generously branched taproot is stout, woody, and penetrates deeply in the soil. Stems (1) grow erect from two to five feet tall. They are ridged, rough, hairy, and often have distinct red spots. Stems are branched and give the plant a bushy appearance.

Leaves are either toothed or lobed, and they branch alternately from the stem. Leaf size varies from one to three inches wide and two to five inches long. The upper surface is dark- or yellowish-green, and the lower surface is pale green. Both surfaces are very rough.

Seeds (2) are produced in pairs within a burry pod. At maturity seed burs (3) are hard, woody, and covered with hooked prickles and are from ½ to one inch long.

Seeds are ½ inch long, dark brown, rather flat and slender, and have pointed tips. Usually only one of the seeds in each bur germinates during the first year, and seeds may remain in burs for several years before germinating. Burs easily stick to fur and human clothing and "hitchhike" sometimes great distances before they drop.

Seedlings (4) are very poisonous to livestock if eaten. Young plants are most dangerous just after seeds germinate. Hogs are extremely susceptible to the poisonous seedlings, and sheep, cattle, horses, and chickens have been poisoned. The poison (xanthostrumarin) decreases as the plant grows.

Cocklebur is difficult to control in floodplains, but applications of either ¼ to ¾ lb. 2,4-D ester or ½ to 1 lb. amine per acre will give control.

Prepared in cooperation with Crops Research Division, Agricultural Research Service, United States Department of Agriculture, Beltsville, Maryland.

(DRAWING FROM UNIVERSITY OF ARIZONA AGRICULTURAL EXTENSION CIRCULAR 265, TUCSON)