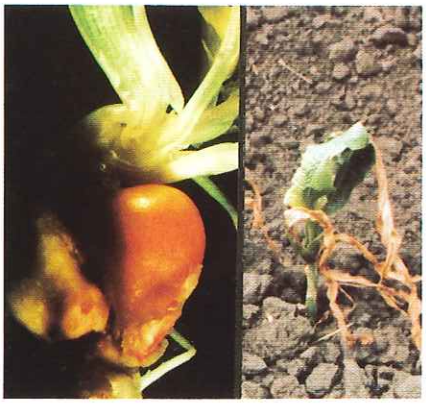
CORN HERBICIDE INJURY I

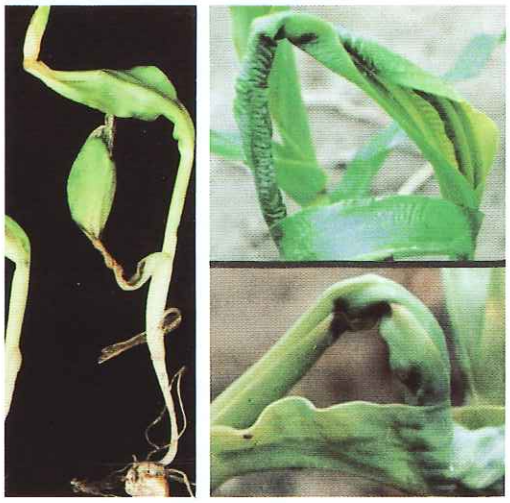


1. Frost injury

2. Insect damage

3. Cyanazine, preemergence

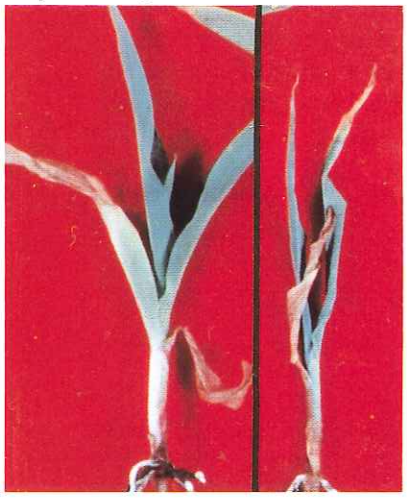
4. Linuron, preemergence



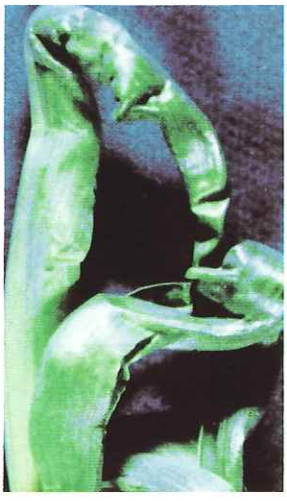
5. Acetanilide herbicide injury

6. Underground leaf unfurling

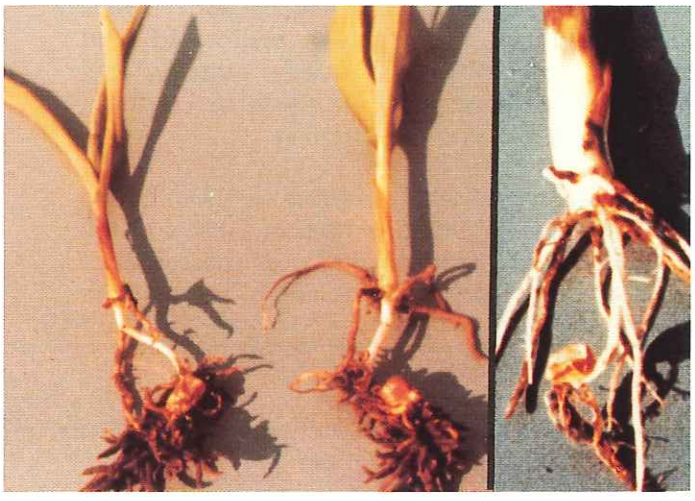
7. Thiocarbamate herbicide injury



8. Pendimethalin, preemergence



9. Alachlor and dicamba, preemergence



10. Benzoic acid herbicide injury

UNIVERSITY OF ILLINOIS COLLEGE OF AGRICULTURE
COOPERATIVE EXTENSION SERVICE
and VOCATIONAL AGRICULTURE SERVICE

HERBICIDE INJURY NO. 1
MAY 1980
URBANA, ILLINOIS

CORN HERBICIDE INJURY I

1. **Frost injury** — Information on environmental conditions prior to appearance of injury symptoms is necessary, since environmental stress may cause symptoms that might be confused with herbicide injury.

2. **Insect damage** — Factors such as dry soil conditions, shallow planting, insect damage, or disease may also cause symptoms or problems confused with herbicide injury.

3. **Cyanazine, preemergence** — Chlorosis and necrosis of corn leaves, beginning at the leaf tips, may result from over application of cyanazine (Bladex) applied preemergeence. Injury may occur under prolonged cool, wet stress conditions.

Avoid use of cyanazine on sandy soil or soils very low in organic matter.

4. **Linuron, preemergence** — The risk of injury to corn from soil-applied treatments of linuron (Lorox) is usually considered too great to recommend its use for corn. Plants appear stunted with yellowing and necrosis of the leaves from the tips back.

5. **Acetanilide herbicide injury** — Excessive rates of alachlor (Lasso) or metolachlor (Dual) may cause improper unfurling of corn leaves. Corn seedlings may appear malformed and stunted. Injured plants usually outgrow this damage once emerged. Injury may be confused with corn germ injury or crusting.

6. **Underground leaf unfurling** — Germinating corn affected by excessive rates of Lasso or Dual may result in plants leafing out underground. The problem may become more severe with deep planting, soil crusting, and certain sensitive corn hybrids.

7. **Thiocarbamate herbicide injury** — Thiocarbamate herbicides such as butylate (Sutan) or EPTC (Eptam) may cause stunting, twisting, and knotting of some corn plants. Sutan+ and Eradicane have a "crop safener" in the formulation. This reduces but may not eliminate the risk of injury, especially with certain sensitive corn hybrids.

8. **Pendimethalin, preemergence** — Pendimethaline (Prowl is a dinitroaniline herbicide that should only be surface-applied (preemergence) for corn and not incorporated. If incorporated, pendimethalin may cause pruning and stunting of corn roots.

9. **Alachlor and dicamba, preemergence** — Preemergence combinations of alachlor (Lasso) or metolachlor (Dual) and dicamba (Banvel) should only be used on soils relatively high in organic matter and under conditions favorable for rapid corn emergence and growth. Since any one of these herbicides may cause injury when applied alone, the combination may result in symptoms of acetanilide and/or benzoic acid herbicide injury (No. 5 and 10).

10. **Benzoic acid herbicide injury** — The primary root system of corn may show proliferation and appear stubby where excessive rates of dicamba (Banvel) applied preemergence have accumulated over the germinating seed.

Other benzoic acid herbicides, such as chloramben (Amiben), which is also a benzoic acid herbicide, may cause a proliferation of stubby roots as well as stunting of the corn plant.

Photo credits: Joe Paul Downs, Michael D. K. Owen, Ellery L. Knake, Marshal D. McGlamery; University of Illinois at Urbana-Champaign, Extension Agronomists.

Subject Matter: Joe Paul Downs, University of Illinois at Urbana-Champaign, Extension Agronomist, Review by Marshal D. McGlamery, Agronomy Dept., University of Illinois at Urbana-Champaign.

Graphic Design: Martha Martin.