

IOWA AGRICULTURAL EXPERIMENT STATION

C. F. Curtiss, Director

BOTANY SECTION

Weeds in the Vicinity of Elevators

BY L. H. PAMMEL AND C. M. KING

A study was made in 1928 of the weed flora in the vicinity of numerous elevators in Iowa. It was undertaken in order to determine to what extent elevators are a means of distributing weeds.

The accompanying table shows the weeds observed at widely separated locations in the state. This list shows that the weeds about elevators do not differ greatly from those of their several neighborhoods. Common weeds were those generally found.

This survey also indicates the general migration tendency. Buffalo bur, *Solanum rostratum*, more or less common in western Iowa, is found not infrequently near elevators at Hamburg and Denison, and its migration tendency is shown by its occurrence at Cambridge in central Iowa. Marsh elder, *Iva xanthiifolia*, common in western Iowa, frequently occurs at Denison and Hamburg, and we find it is migrating eastward. Sunflower, *Helianthus annuus*, and western sunflower, *H. petiolaris*, showed similar situations to that of marsh elder. Such weeds as the Pennsylvania smartweed, *Polygonum pennsylvanicum*, and dooryard knotgrass, *P. aviculare*, are common at nearly every station. On the other hand, erect knotweed, *Polygonum erectum*, was found only at two points which were in northern Iowa. Wild mustard, *Brassica arvensis*, coincides in occurrence with the oats and spring wheat in the grain belt. Quack grass, *Agropyron repens*, and Canada thistle, *Cirsium arvense*, belong to the northern region. Water-hemp, *Acnida tamariscina*, belongs to southern Iowa.

Corn cockle, *Lychnis githago*, the vetches and wild oats, *Avena fatua*, special weeds of wheat fields, were not found growing near any of the elevators.

TABLE I. DOMINANT WEEDS IN VICINITY OF ELEVATORS IN IOWA,
IN 1928.

	Lake Mills	McGregor	Oskaloosa	Hamburg	Denison	Story City	Cambridge	Nevada	Ames	Des Moines
<i>Abutilon theophrasti</i>		x	x	x			x			x
Butterprint, velvet-weed										
<i>Acalypha virginica</i>		x	x					x	x	x
Three-seeded mercury										
<i>Agropyron repens</i>	x	x	x		x	x			x	x
Quack-grass										
<i>Acnida tamariscina</i>				x						
Water-hemp										
<i>Acnida tuberculata</i>							x			
Water-hemp										
<i>Amaranthus blitoides</i>	x	x	x		x	x		x		x
Prostrate pigweed										
<i>Amaranthus retroflexus</i>	x	x	x		x	x		x		x
Red-root										
<i>Ambrosia artemisiifolia</i>	x	x	x							x
Small ragweed										
<i>Ambrosia psilostachya</i>				x						x
Western ragweed										
<i>Ambrosia trifida</i>	x	x	x	x	x	x				x
Greater ragweed										
<i>Anthemis gotula</i>	x		x					x		x
Mayweed										
<i>Arctium minus</i>	x	x	x	x	x	x				x
Burdock										
<i>Asclepias syriaca</i>		x	x					x	x	x
Common milkweed										
<i>Asclepias verticillata</i>				x					x	x
Whorled milkweed										
<i>Atriplex patula</i> var. <i>hastata</i>									x	
Orach										
<i>Bidens discolor</i>								x	x	
Sticktight	x		x					x	x	x
<i>Brassica arvensis</i>	x	x								
Wild mustard										
<i>Brassica juncea</i>		x	x						x	
Indian mustard										
<i>Brassica nigra</i>		x	x		x	x		x	x	
Black mustard										
<i>Bromus tectorum</i>	x	x	x	x	x	x	x	x		x
Downy brome-grass										
<i>Cannabis sativa</i>			x	x	x		x	x		
Hemp										
<i>Capsella Bursa-pastoris</i>				x	x		x			
Shepherd's purse	x	x	x	x	x	x		x		x
<i>Chenopodium album</i>	x	x	x	x	x	x		x		x
Lamb's quarters										
<i>Chenopodium hybridum</i>	x			x	x			x		x
Maple-leaved goose-foot										
<i>Cirsium arvense</i>										
Canada thistle	x									
<i>Convolvulus sepium</i>										
Hedge bindweed			x							x
<i>Digitaria sanguinalis</i>										
Fetid marigold	x	x	x	x	x			x		x
<i>Echinochloa crusgalli</i>	x	x	x	x	x	x		x		x
Barnyard grass										
<i>Echinopspermum lappula</i>										
Stick seed		x				x				
<i>Equisetum arvense</i>										
Horsetail		x						x		x
<i>Eragrostis major</i>										
Candy grass	x	x	x	x	x			x		x
<i>Eragrostis pilosa</i>										
Tufted candy-grass	x	x	x	x	x	x		x		x

TABLE I. DOMINANT WEEDS IN VICINITY OF ELEVATORS IN IOWA,
IN 1928—(Continued).

	Lake Mills	McGregor	Oskaloosa	Hamburg	Denison	Story City	Cambridge	Nevada	Ames	Des Moines
<i>Erigeron annuus</i>										
Fleabane		x			x				x	x
<i>Erigeron canadense</i>										
Horse weed				x	x				x	x
<i>Euphorbia maculata</i>										
Dotted spurge		x	x	x	x	x	x	x		x
<i>Euphorbia preslii</i>										
Upright spurge	x	x	x	x	x	x		x	x	x
<i>Helianthus annuus</i>										
Sunflower				x	x					x
<i>Helianthus petiolaris</i>										
Western sunflower				x	x					x
<i>Hordeum jubatum</i>										
Squirrel-tail grass	x	x	x	x	x	x		x	x	x
<i>Iva xanthifolia</i>										
Marsh elder				x	x					x
<i>Kochia scoparia</i>										
Mexican fire-bush		x						x	x	x
<i>Lactuca scariola</i>										
Prickly lettuce	x	x	x	x	x			x	x	
<i>Leonurus cardiaca</i>										
Motherwort										x
<i>Lepidium apetalum</i>										
Peppergrass	x	x	x	x	x	x		x		x
<i>Lepidium virginicum</i>										
Larger peppergrass			x	x	x			x		x
<i>Linum usitatissimum</i>										
Flax								x		
<i>Malva rotundifolia</i>										
Cheeses	x		x	x	x	x		x		x
<i>Marrubium vulgare</i>										
Horehound				x						
<i>Muhlenbergia mexicana</i>										
Mexican dropseed grass	x	x			x			x	x	x
<i>Nepeta cataria</i>										
Catnip	x	x		x		x	x	x	x	
<i>Panicum capillare</i>										
Old witch grass	x		x		x			x		x
<i>Pastinaca sativa</i>										
Parsnip	x	x	x		x				x	x
<i>Plantago rugelii</i>										
Rugel's plantain	x	x	x	x	x			x	x	x
<i>Polygonum acre</i>										
Water smartweed							x	x		x
<i>Polygonum convolvulus</i>										
Wild buckwheat	x	x	x	x	x			x		x
<i>Polygonum aviculare</i>										
Dooryard knotgrass	x	x	x	x	x	x	x	x	x	x
<i>Polygonum erectum</i>										
Erect knotweed	x	x								
<i>Polygonum lapathifolium</i>										
Nodding smartweed			x	x	x			x		x
<i>Polygonum pennsylvanicum</i>										
Pennsylvania smartweed	x	x	x	x	x	x		x		x
<i>Polygonum persicaria</i>										
Lady's thumb	x	x	x		x	x		x		x
<i>Portulaca oleracea</i>										
Purslane	x	x	x	x		x		x		x
<i>Rumex altissimus</i>										
Tall dock	x	x	x	x	x	x	x	x		x
<i>Rumex crispus</i>										
Curled dock	x	x	x	x	x			x		x
<i>Salvia lanceafolia</i>										
Lance-leaved sage				x	x					x

TABLE I. DOMINANT WEEDS IN VICINITY OF ELEVATORS IN IOWA,
IN 1928—(Concluded).

	Lake Mills	McGregor	Oskaloosa	Hamburg	Denison	Story City	Cambridge	Nevada	Ames	Des Moines
<i>Salsola kali</i> var. <i>tenuifolia</i>										
Russian thistle	x	x	x		x		x			x
<i>Saponaria officinalis</i>										
Soapwort, Bouncing Bet										x
<i>Setaria glauca</i>										
Foxtail pigeon grass	x	x	x	x	x			x		x
<i>Setaria verticillata</i>										
Bristly foxtail				x					x	
<i>Setaria viridis</i>										
Green foxtail	x	x	x	x	x	x		x		x
<i>Sisymorium altissimum</i>										
Tall hedge mustard	x	x	x		x	x		x		x
<i>Sisymborium officinale</i>										
Hedge mustard	x	x	x	x	x	x		x		x
<i>Solanum carolinense</i>										
Horse nettle			x	x						
<i>Solanum nigrum</i>										
Black nightshade	x	x	x	x	x			x	x	x
<i>Solanum rostratum</i>										
Buffalo bur				x	x		x			
<i>Sonchus arvensis</i>										
Perennial sow thistle	x							x		
<i>Sonchus oleraceus</i>										
Annual sow thistle	x	x	x	x	x			x		x
<i>Taraxacum officinale</i>										
Dandelion	x	x	x		x			x	x	
<i>Thlaspi arvense</i>										
Penny cress							x			
<i>Verbena bracteosa</i>										
Bracted vervain	x	x	x	x	x			x		x
<i>Verbena hastata</i>										
Blue vervain		x	x	x					x	x
<i>Verbena stricta</i>										
Hoary vervain	x		x	x	x		x	x		x
<i>Verbena urticaefolia</i>										
White vervain			x	x	x				x	x
<i>Xanthium commune</i>										
Cocklebur	x			x	x		x			x