A Comprehensive Echinacea Germplasm Collection Located at the North Central Regional Plant Introduction Station, Ames, Iowa

Joe-Ann H. McCoy  
*United States Department of Agriculture*

Mark P. Widrlechner  
*Iowa State University, isumw@iastate.edu*

Jeffrey D. Carstens  
*Iowa State University, jdc@iastate.edu*

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**A Comprehensive Echinacea Germplasm Collection Located at the North Central Regional Plant Introduction Station**

Joe-Ann McCoy, Mark Widrlechner, Jeff Carstens

USDA/ARS North Central Regional Plant Introduction Station,
Iowa State University, Ames, IA 50011-1170

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*Echinacea* is becoming a well-established, high-value crop, both as an ornamental and a dietary supplement. A comprehensive collection of *Echinacea* germplasm is conserved by the USDA-ARS North Central Regional Plant Introduction Station (NCRPIS) in Ames, Iowa and is freely available via seed distribution for research and educational purposes (www.ars-grin.gov/npgs).

The mission of the North Central Regional Plant Introduction Station (NCRPIS) includes: 1.) the conservation of genetically diverse crop germplasm and associated information; 2.) conducting germplasm-related research; and 3.) encouraging the use of germplasm and associated information for research, crop improvement, and product development.

<table>
<thead>
<tr>
<th>Echinacea taxa</th>
<th># of Accessions</th>
<th>Available Accessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. angustifolia DC</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>E. angustifolia var. angustifolia</td>
<td>39</td>
<td>34</td>
</tr>
<tr>
<td>E. angustifolia var. atrorubens</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>E. atrorubens Nutt.</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>E. hybrids</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><em>E. nigritata</em> (F.E. Boynton &amp; Beadle)</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>E. pallida (Nutt.) Nutt.</td>
<td>45</td>
<td>41</td>
</tr>
<tr>
<td>E. paradoxa (Norton) Britton var. neglecta McGregor</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>E. purpurea var. purpurea</td>
<td>5</td>
<td>5</td>
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<tr>
<td>E. purpurea (L.) Moench</td>
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<td>E. sanguinea Nutt.</td>
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<td>E. simulata McGregor</td>
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<tr>
<td><em>E. tennessensis</em> (Beadle) Small</td>
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<td>92% of the collection is available</td>
<td>159</td>
<td>120</td>
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*Federally Endangered, require letter of intent or appropriate permit*

Representing all nine species collected throughout their respective North American geographic ranges, the *Echinacea* collection includes 159 accessions, many of which were collected by Kathleen McKeown in 1997. Extensive morphological characterization data associated with this collection have been compiled and are available to researchers on the Germplasm Resources Information Network (GRIN) database to aid in selection criteria. The collection has been used extensively for various research projects, ranging from ornamental breeding studies to HPLC analyses of metabolites of interest to the phytopharmaceutical industry.

(Thanks to USDA-HS for providing the germplasm and to Kathleen McKeown for her assistance with data compilation.)

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