



Institute for
Applied Ecology

Seeds for Change: Growing a Resilient Ecosystem

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Successful habitat restoration depends on an adequate supply of native plant materials. Planting a diverse array of native species provides ecosystem services for pollinators, wildlife, and people, and increases ecosystem resilience in the face of climate change and invasive species. Lack of quantity and quality of native plant materials, both seeds and nursery stock, has significantly hindered landscape recovery efforts. To address this need, native seed partnerships are collaborating to expand native plant materials programs in many regions of the country, including the Pacific Northwest. The Willamette Valley Native Plant Partnership (WVNPP) and the Coastal Native Seed Partnership (CNSP) are two regional plant materials partnerships coordinated by the Institute for Applied Ecology (IAE).

Historically, the Willamette Valley of Oregon was lush with fields of purple camas and rosy seablush in the spring, and goldenrod highlighted by the last rays of sun in the fall. Today prairie habitats are among the most endangered ecosystems in North America, with over 90% of upland and wet prairie habitat converted to other uses. Restoration practitioners have been actively restoring this critical habitat for decades but have been challenged to find high quality, diverse native seed for their projects.

In 2012, 21 partners came together to form the Willamette Valley Native Plant Partnership (WVNPP) to address this problem. These restoration organizations and native plant producers formed a collaborative group with the goal of creating a supply of seed that is genetically and ecologically

appropriate for the Willamette Valley. To achieve this, participating organizations collected seed from many source populations throughout the ecoregion to capture a broad genetic base for each species. This seed was used to establish farm fields of high priority native species for partners to use in restoration and revegetation projects.

Since its inception nearly a decade ago, the WVNPP has much to celebrate: the partnership has collected over 75 pounds of wild seed from 35 species, established 21 seed production fields, produced 4,810 pounds of native seed, and distributed nearly 3,300 pounds of seed. This genetically diverse, local seed has been broadcast throughout the ecoregion in prairie and oak habitat, and is an essential part of creating more resilient and robust systems.



The IAE native seed production farm. Photo Credit: Shinji Kawai



Trifolium wormskioldii (springbank clover) plug which will be used to establish a native seed bed.
Photo Credit: Alexis Larsen



Lomatium nudicaule (barestem biscuitroot) seed.
Photo Credit: James McAuliffe

In contrast to this longer running partnership, IAE is also coordinating a budding partnership on the Oregon coast. The coast is host to a diverse array of habitats that support unique flora and fauna. However, these places are among the most rare and impacted ecosystems in the Pacific Northwest. As a result, threatened species like the Oregon silverspot butterfly (*Speyeria zerene hippolyta*), Coho salmon (*Oncorhynchus kisutch*), western snowy plover (*Charadrius nivosus nivosus*), and other plant and animal species that make their home in these habitats are greatly imperiled. In response to these impacts partners are working together to restore coastal grasslands, estuaries, and dunes to recover the listed species that depend upon them.

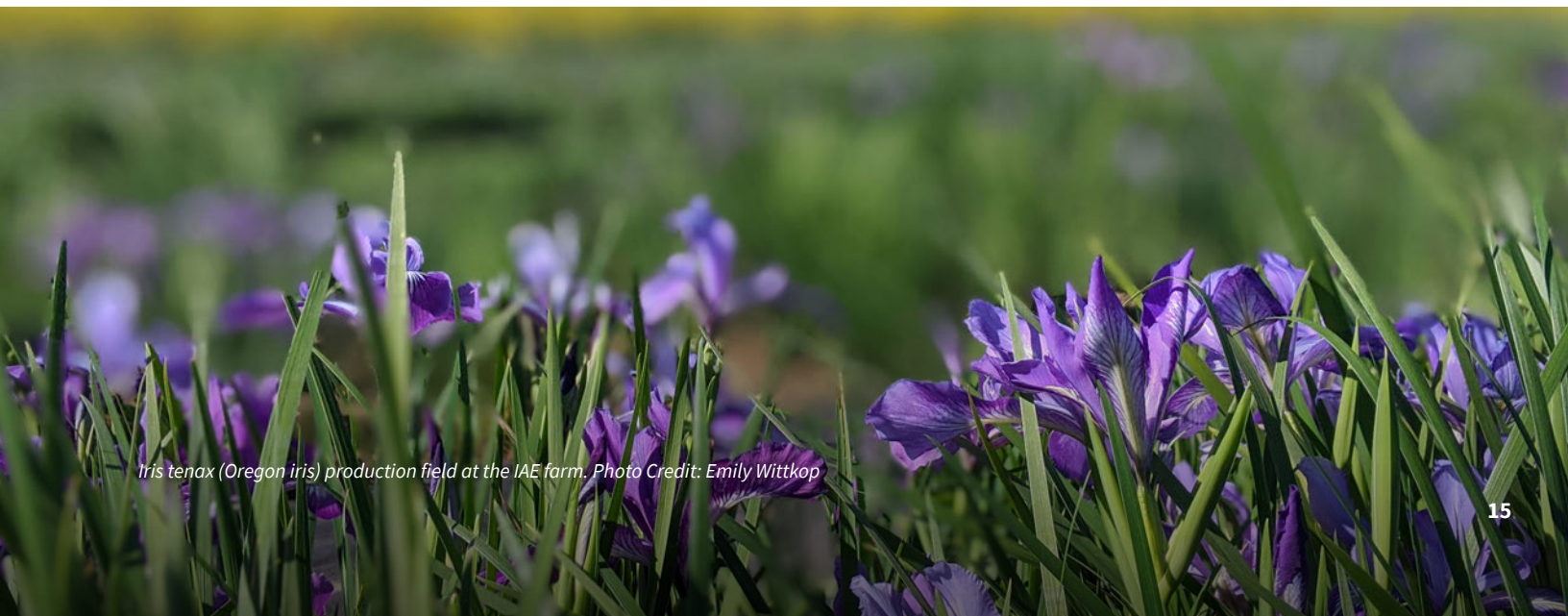
Successful habitat restoration for these species depends on having sufficient supplies of native seed and plants, which restoration practitioners in the region have found to be lacking. To remedy this, partners along the coast have come together to develop the Coastal Native Seed Partnership (CNSP). This collaborative group is developing a seed strategy to establish a dependable and sustainable supply of native seed that is genetically diverse, ecologically appropriate, and available in sufficient quantities to meet restoration goals on a landscape scale.

The CNSP began with a kickoff meeting in January 2020 which brought together coastal partners from Astoria to Bandon to discuss target habitats, geographic scope, and partnership structure. From

this meeting, an Operations Plan was developed followed by a 5-year strategic action plan. On the cusp of its third year, the CNSP is focused on developing a priority species list, wild seed collection, and finding new potential growers for seed production beds.

A regional approach to the coordination of native plant materials development, production, and restoration may contribute to a more cohesive ecoregional effort to conserve and restore increasingly rare habitats such as wetlands, oak savanna, and upland prairies. Plant material partnerships can help land managers and restoration practitioners meet their plant materials needs by increasing the quantity and quality of plant materials available. These partnerships have a unique opportunity to increase the genetic diversity of native plant material available on the market, and therefore play a crucial role in preparing for and mitigating climate change.

If you are interested in joining either of these partnerships please reach out to Alexis Larsen at alexislarsen@appliedeco.org



Iris tenax (Oregon iris) production field at the IAE farm. Photo Credit: Emily Wittkop