Pollinator Habitat Program

Project Guidelines

Overview

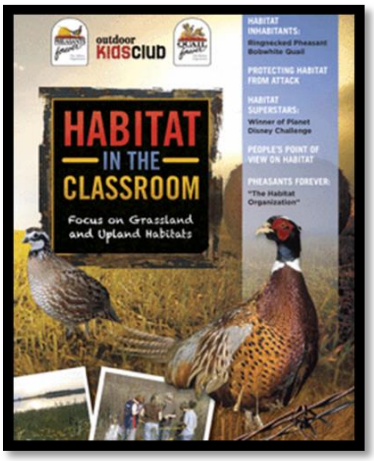
QF/PF's Pollinator Habitat Program is designed to provide support for over 750 grass-roots chapters to engage youth, families and communities in establishing and monitoring pollinator habitat areas across the country. Working with local community partners, chapters will use their expertise, equipment and networks to create habitat projects that involve youth, schools and community groups. The results will benefit pollinators as well as establish critical brood rearing habitat for quail and pheasants. Support will include guidelines on how to establish and maintain projects, educational materials to assure continuing education, and monitoring materials to help provide biologist with important data.

Engaging Classrooms, Communities and Youth Groups

One of the major objectives of the Pollinator Habitat Program is to educate and engage youth groups into all aspects of your project. Chapters are encouraged to engage schools (classrooms) as we can offer curriculum that teachers can use in the classroom in conjunction with the hands-on pollinator project. This way, students are not only getting outside and learning about conservation in a hands-on manner, but they will also be learning about conservation in the classroom. If you are unable to work with your local school, youth groups like 4H, Boy Scouts, Girl Scouts, and FFA are examples of organizations that might be willing to get involved in the project. You will find that when you approach the school administration, teacher or group leader with the details of the program, they will be more than willing to partner in your efforts.

Curriculum

Curriculum is available to chapters that are working with schools and classrooms to establish, maintain, and monitor pollinator habitat projects. PF/QF has partnered with Outdoor Kids Club to develop conservation curriculum (***Habitat in the Classroom***). ***Habitat in the Classroom*** is a standards-based, integrated curriculum that allows teachers to teach about real life habitats while addressing various academic, content standards. The ***Habitat in the Classroom*** programs are aligned to the Common Core States Standards (CCSS) for English Language Arts and Math for the **3rd grade** level. The curriculum will also be aligned to the Next Generation Science Standards (NGSS) when they are completed as well as states' science standards. All of the curriculum programs have full color, student booklets that students get to keep and take home. The curriculum is great way for teachers to address the common core requirement of 50% informational text in a fun, engaging, and real world context. The curricula also include a teacher's guide with lesson plans and assessment ideas aligned to the content in the student book, as well as the various standards. Web site support is also included for teachers to use as a resource to support the various hands-on lessons in the curricula, and provide access to new lessons and lesson updates. The teacher web pages will also include video resources for instructional tips, as well as clips that can be used for student instruction. The ***Habitat in the Classroom*** curriculum is available for chapters to purchase at $100 (plus S&H) per classroom. Each classroom kit includes 25 student booklets and a teacher guide. To purchase the curriculum, visit the Outdoor Kids Club website at http://www.outdoorkidsclub.com/



If your chapter is not working with a 3rd grade classroom, PF/QF recommends using online curriculum provided by the Pollinator Partnership. The Pollinator Partnership has an excellent webpage that provides a complete list of pollinator curriculum and activities that can be downloaded for FREE and emailed to the teacher or group leader. To view the list of curriculum provided by the Pollinator Partnership, visit their website at http://www.pollinator.org/education.htm#cr

Site Selection & Design

At this point, you probably already have a location in mind for your project. However, there are a couple key things to keep in mind when selecting your site and designing your project in order to get the most wildlife and educational value out of your project.

- Pollinator projects must be a minimum of 1/2 acre in size
- If planted in a strip, strip must be a minimum of 20 ft. wide
- Site must get at least 6 (or more) hours of direct sun a day

- Site should occur in or near existing wildlife habitat (i.e. adjacent to or within a CRP field or Wildlife Management Area) in order to get the maximum wildlife benefits

- Since you will be engaging kids in the establishment/maintenance of this project, make sure you site can be accessed by a vehicles (bus) or short walk

- Locations that can be seen by the general public are encouraged to help promote your chapter and the pollinator program

Selecting Your Seed Mix

You are encouraged to purchase your pollinator seed mixes from Pheasants/Quail Forever (PF/QF) unless you are able to get your seed donated from a local seed vendor. PF/QF state specific pollinator seed mixes have been designed by wildlife professionals to accommodate the needs of specific soil types and climates in your state, to provide quality wildlife habitat, and to meet the minimum requirements of USDA conservation programs. **When you purchase your seed through PF/QF, you are also helping support additional habitat and youth education projects across the country!** To order your PF/QF pollinator seed mix, please contact Drew Larsen (308-293-1194 or dlarsen@pheasantsforever.org). You should contact PF/QF approximately one month prior to planting your project to ensure timely delivery.

If you do purchase your seed from another vendor, your seed mix must meet USDA pollinator habitat specifications. All pollinator habitat projects must meet the minimum specifications of a USDA pollinator planting **(Note: You are encouraged to create mixes that go beyond the minimum specifications. The more species you plant, the more beneficial your project will be to wildlife).** Below you will find the minimum USDA specifications for creating a pollinator seed mix:

- A minimum of 9 native wildflower species (wildflowers, legumes, and shrubs) must be planted on project **(20 or more species is encouraged to increase wildlife value of project)**

- At least 3 species shall have their primary onset of blooming during each period of April-June 15, June 15-July, and August-October

Ordering Plugs and Shrubs

In addition to ordering a pollinator seed mix, you will also want to order plugs for your youth pollinator habitat project. Plugs, by definition, are young native plants that are started in a greenhouse. By planting plugs, you can really give your planting a "jump start" by allowing participants to see blooming wildflowers quicker than they normally would through a broadcast seeding alone. Plugs also help reduce weed competition on the site because the plant is already actively growing when you put it in the ground which helps out-compete annual weeds that are certain to grow. If your project is more urban in nature, you certainly want to order as many plugs as you can afford. Native shrubs are another component to consider for your planting. Shrubs can serve as an excellent food source for pollinators and they also benefit many species of grassland birds. When ordering your plugs and shrubs, be sure that they are not treated with insecticides. You will also want to order your plugs and shrubs as early as possible. Most suppliers would like you to place orders sometime in January or February. If you wait until the last minute to order, many popular species will be sold out. Below you will find a list of recommended vendors that provide pesticide free native plugs and/or shrubs.

AGRECOL
10101 N Casey Road
Evansville, WI 53536
Tel: 608-223-3571
Email: **ecosolutions@agrecol.com**
Website: http://www.agrecol.com/

MILLBORN SEEDS
1335 Western Avenue
Brookings, SD 57006
Tel: 888-498-7333
Fax: 888-471-1706
Email: jasont@millbornseeds.com
Website: http://www.millbornseeds.com/index.htm

PRAIRIE MOON NURSERY
32115 Prairie Lane
Winona, MN 55987
Toll Free: 866-417-8156
Tel: 507-452-1362
Fax: 507-454-5238
Email: **info@prairiemoon.com**
Website: https://www.prairiemoon.com/home.php

SHOOTING STAR NATIVE PLANTS
20740 County Road 33
Spring Grove, MN 55974
Tel: 888-983-3670
Fax: (507) 498-3953
Email: ssns@springgrove.coop
Website: http://www.shootingstarnativeseed.com/index.htm

Site Preparation

Proper site preparation is very important to the success of your planting. For best results, the site should be tilled or disked just prior to planting your pollinator mix. Tilling/disking the ground prior to planting will provide a proper seed bed for your planting and allow for good seed to soil contact. In addition, removing all existing vegetation will help avoid competition from other weeds and grasses. If your site contains any perennial weeds or sod forming grasses (i.e. smooth broom/fescue), it is recommended that you apply a herbicide (Round-Up) prior to tillage/disking. This process will help reduce competition from grasses and invasive weeds, and it will also make tillage much easier. You should strive to have a clean seed bed free from any plant matter and debris that would inhibit plant germination or seed to soil contact. This may require that you till the site more than once to get desired results.

When to Plant Your Pollinator Mix

In most areas of the country, there are two basic times to plant your pollinator project (Spring & Fall). Each season has its advantages and disadvantages, but location, climate and annual rainfall amounts will help determine when you should plant your pollinator project.

If you are planting in the spring, you should try to time your planting as early as possible but not until the potential for a killing frost has passed. The one big advantage of planting in the spring is the fact that you can adequately prepare the site before planting. A spring planting will allow you to remove any weed or grass competition prior to planting your pollinator project. The one disadvantage of planting in the spring is missing some timely early spring rains that can be so beneficial for seedlings.

If you are planting in the fall, you should wait until after a killing frost. A fall planting (dormant planting) can take place any time after a killing frost up until the ground freezes. A fall planting is advantageous over a spring planting as it will be able to take advantage of early spring moisture and will be much further ahead than a spring planting. If your site is susceptible to soil erosion, you should not conduct a fall planting as the ground will have to remain bare throughout much of the fall and winter.

Educational Activities/Stations Day of the Event

Since this is an educational program, you are encouraged to incorporate a number of educational activities/stations into your planting event. Adding these activities to your event also helps lengthen the event as it does not take long to plant a 1-2 acre plot. The staff at PF/QF has put together a number of educational activities that you can use the day of your event, or you can create your own stations and offer unique educational activities tied to conservation and wildlife habitat. Examples of possible educational activities include the following:

- Plant I.D. Contest
- Making Pollinator Seed Balls
- Making Native Bee Nesting Houses
- Making Native Bee Nesting Blocks
- Bee Free Breakfast, Lunch and Dinner Menu
- Bee Keeping 101
- Pollinators 101
- Pheasants/Quail 101

You can provide as many educational stations as you like, but it is recommended that you have at least three stations at your event. As soon as the students arrive at the planting site, you will want to break them up into small groups. If you are running three educational stations, break the large group up into three small groups and send each group to a station. Run your stations no longer than 30 minutes and then have the groups rotate to the next station. After the groups have been through each station, you can move onto seeding the project site.

Planting Your Pollinator Seed Mix & Plugs

Since you will be engaging students in the establishment of your pollinator project, it's best to have them broadcast seeds evenly by hand or by use of a hand fertilizer spreader. 1-2 gallon buckets work great for students to carry and mix their seed. It's very helpful to mix in a carrier such as clean, dry sand or saw dust as this type of carrier adds volume and aids in even distribution of your seeds. It also helps with being able to see where you have seeded on your site. We recommend using a ratio of 10 parts carrier to 1 part seed.

Once you have your seed mix and seed filler mixed at the recommended ratio, divide the seed evenly among all the students. Each student should have a 1-2 gallon bucket or fertilizer spreader. Next, evenly line up (arm length apart) the students along one side of the field you are planting. Have the students walk across the field in a straight line evenly broadcasting seeds as they walk to the opposite end of the field. After you have completed one pass, line the students up along another side of the field

so they will be walking at a 90 degree angle to your first pass. This insures a nice even distribution of seed. You need to be sure to divide up the seed amongst the students in a way that you have a little extra at the end in case you need to go over a few more spots. If you don't have enough students to efficiently seed the entire site in one pass, divide your site into sections small enough to efficiently cover each section.

After you have seeded the entire site, you can then have your students hand plant plugs and shrubs. If you have nice loose soil, plugs and shrubs can be planted by hand. If your soil is not loose enough to plant plugs and shrubs by hand, then you can have the students use a dibble bar or small garden tool to aide in their planting efforts. It is recommended that you plant your plugs in groups of the same species with individual plugs being planted no closer than 1 foot apart. Shrubs should also be planted in small thicketts of the same species. It is recommended that thickets be a minimum of 1,500 square feet with approximately 250 shrubs per thicket.

Event Report Form & Signage

After your event is complete, be sure to fill out a NCLI Event Report form. The information you provide on this form is very important and will help us secure additional support for the program in the future. The NCLI Event Report Form is due 30 days after the completion of your event.

In addition to the NCLI Event Report, your chapter should also consider some kind of signage for your project site. Signage not only helps promote your chapter's efforts, but it can also be used to educate the general public about pollinator and pollinator habitat. You can purchase Pollinator Habitat sings through the PF/QF market place, or you can make your own to help promote your project.

Project Maintenance

You can expect your project to contain weeds the first two-three growing seasons. If these weeds are not aggressive or noxious in nature, it may be best just to let the natural succession of plant diversity take place. Many annual weed species offer great food sources for ground nesting birds and pollinating insects. Over time, the perennial wildflower species you planted will out-compete weed species that are present in your planting. Patients is sometimes all that is needed for your site to reach full potential.

If noxious weeds become a problem in your planting, then some maintenance must be done to eradicate the species from your planting. Some conditions must be dealt with promptly while others

may be corrected at a later time. The following are maintenance techniques that may need to be applied to your project to address weed issues:

- **Supplemental Plantings / Reseeding**
- **Weed/Grass Control**
- **Prescribed Burning/Fall Mowing**

Supplemental Plantings / Reseeding

If you are not happy with the diversity of your planting, you can continue to add species by reseeding or supplemental plantings. Bare areas, if any, can be over-seeded with the original pollinator mix or with a custom mix. When reseeding, some scarification of the soil surface may be necessary to ensure good seed-soil contact. You should follow the same planting procedures and timing as the initial establishment when reseeding. If there is a certain species you would like to add to your planting, you can also purchase actual native wildflower plants at a local nursery to supplement your original planting. You would conduct this supplemental planting in the spring when native wildflower plants become available at local nurseries.

Weed/Grass Control

A regular weed control program is essential to a successful pollinator planting, especially, if your planting becomes dominated with noxious weeds. Noxious weeds should be eliminated as soon as they can be recognized, either by pulling or spot-spraying with a general herbicide. Be sure to consult your local extension office prior to applying any herbicides to your pollinator planting. They can recommend specific herbicides and rates to insure success. Not all weeds are detrimental to your planting. In many cases, it takes 2-3 years before some perennial wildflower species actually bloom. Please be patient with your planting, and know that some of those early successional weeds make very good pheasant and quail brood rearing habitat.

Prescribed Burning/Fall Mowing

In order to maintain a diverse pollinator planting, some prescribed burning or mowing may be required. You should only conduct these management activities if you see your planting becoming less diverse over time or if it becomes dominated by grasses. Research has shown that fall prescribed burns/mowings are best to stimulate wildflower growth the following growing season. Spring burns and mowings seem to favor grasses over forbs. Prescribed burns are favored over mowing as they are much more effective at stimulating forb growth the following growing season. When prescribed burning is not possible, mowing is the next best alternative to burning. If you mow, make sure you mow as high as physically possible. The frequency by which you burn/mow will depend on the status of your planting. If you are happy with the diversity of your planting, no burning or mowing is needed.

Project Monitoring

In an effort to monitor the success of the project, chapters are encouraged to engage students in a monitoring activity on the project site. The monitoring part of the project can be led by the chapter or by the teacher/group leader. There are a number of citizen science monitoring activities that can be used in conjunction with your pollinator habitat projects. These citizen science monitoring activities are designed to engage students in the data collection of actual research projects being conducted by universities and biologists. Data collected at these sites will aide professors and biologists in answering important questions and possibly impact pollinator conservation policy. In addition, students will learn about the scientific method and see the results of their efforts. A complete list of citizen science monitoring activities can be found at http://www.pollinatorlive.pwnet.org/teacher/citizen.php

Other Things to Consider

While not required to complete a successful project, chapters are encouraged to purchase t-shirts and memberships for all participants. This gesture is a cheap way to continue to educate students about conservation and our organization through the *Forever Outdoors* magazine. This is also a great way to increase your banquet invite list. You will be surprised about how many students will show up at your next fundraising event once they have had a positive experience with your chapter.

If you purchase t-shirts for participants, try to get them to the students prior to the actual event. Having all the kids in a PF/QF shirt will make great newspaper photos and you will find that students will wear their free shirt throughout the year providing additional promotion for your local chapter. You can purchase youth PF/QF shirts through the PF/QF Market Place.