Brief facts about multifunctional buffers

(feel free to add your ideas in the category "other" and share with us)

Why would a producer plant multifunctional buffers?

- To improve water quality
- To increase biodiversity
- To diversify the on-field production
- To reduce crop and soil losses from flooding
- Other ?

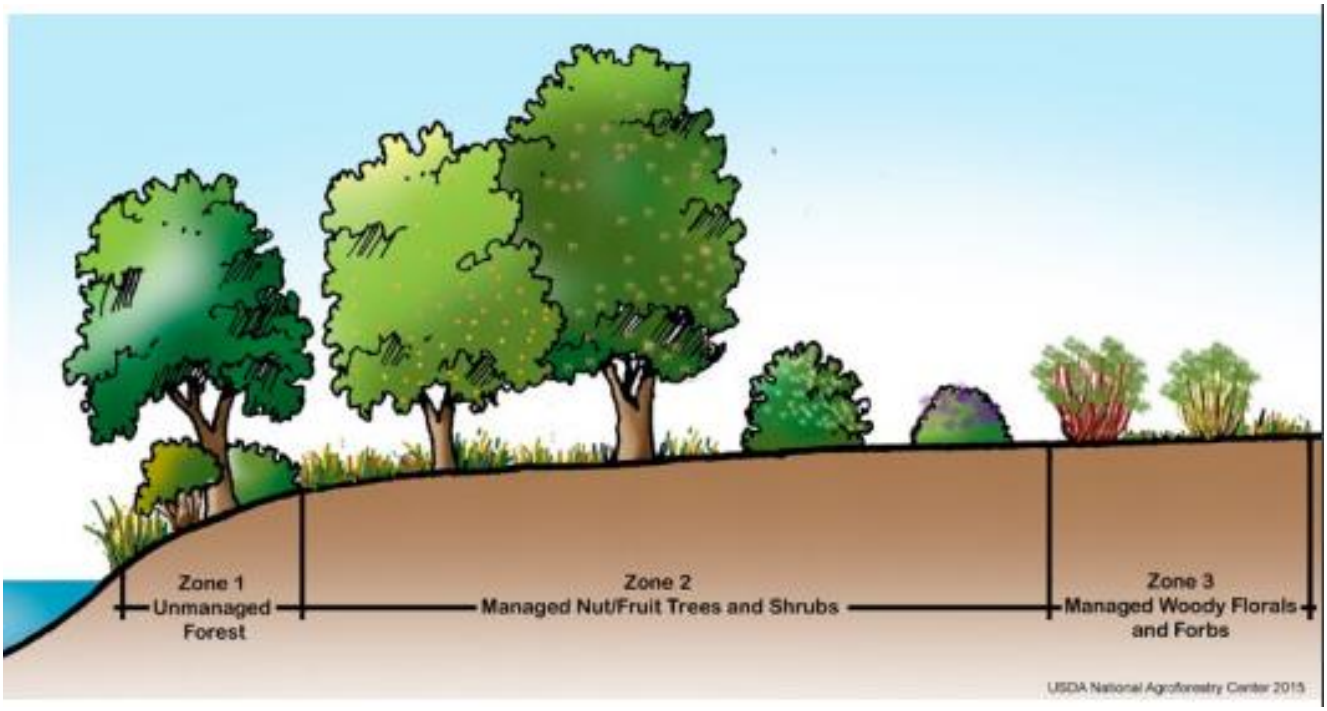
What types of multifunctional buffers can a producer adopt?

- Perennial grass buffers (mixed prairie buffers, switchgrass, miscanthus), other ?
- Woody biomass buffers (willow, hybrid poplar), other ?
- Edible and floral buffers (elderberry, black walnut, hazelnut), other ?

Where does it make environmental and economic sense to plant multifunctional buffers?

Near streams or in areas prone to flooding;

Can plant different types of buffers depending on the zone: 1st zone – closest to the water, 2nd zone – intermediate, 3rd zone – bordering the field [See Figure 1 or the attached Booklet 1]



Where can a producer purchase the seeds/seedlings?

- State mixes from local providers
- Create your own mix (E.g. from the species available through Ernst Seeds)

What machinery can the producer use to plant or harvest from the multifunctional buffers?

- Grass buffers: use forage/hay machinery for switchgrass (see more information in the attached Booklet 2); for miscanthus – planter for the rhizomes
- Woody buffers: willow planter. To harvest – forage harvester with a willow cutting head
- Edible and floral buffers: by hand with tree shelter/ seeding with hay seeder depending on the plant type
- Other ?

When can the producer plant/harvest?

- Grass buffers: planted in spring, can be harvested either in fall or winter two or three years after establishment
- Woody buffers: planted in spring, can be harvested either in fall or winter two or three years after establishment
- Edible and floral buffers: plant/flower dependent [add graphic]
- Other times ?

Can multifunctional buffers increase producer's profit?

- Subfield-level: Using free/commercial consulting tools or Precision Ag equipment, can suggest where to plant the perennial plants to eliminate areas with unprofitable annual crop production
- Edible and floral buffers: can sell the fruits and nuts, or the decorative florals from the buffers (see the attached Booklet 3)
- Other ?

Who can buy the produce from multifunctional buffers?

- Grass buffers: bioenergy, bedding, erosion sock
- Woody buffers: biomass co-firing, animal bedding
- Edible and floral buffers: local markets (see Booklet 3)
- Other ?

Are there any alternative ways to cover the cost of planting and maintenance?

- CRP program support
- Placing bee hives in the buffers
- Other ?