

# **Adding Cut Flowers to Your Farm ... adding diversity**





Cathy Jones & Mike Perry  
Chatham County, North Carolina  
26th year of production



# Reasons to grow cut flowers

Flowers sell, which equals more **\$\$\$\$**

Increases your farm's ***crop diversity***

Enhances ***crop rotation options***

***Attracts pollinators*** to your fields

***Attracts customers*** to your farm stand

.... and flowers make people happy!!

# **How are you going to grow them?**

Many flowers are very similar to vegetables in terms of what they need: **full sun, well-drained soils, a neutral pH, adequate fertility, organic matter ...and water!!!**

Very similar equipment needed to work the soil, to plant the crop and keep it weed-free.

When growing flowers it is always best to use **drip irrigation... Don't plant flowers if you don't have a watering strategy**





## **Additional “tools” used in growing flowers**

### **Trellising-**

Posts, wire and netting (Hortonova)

**Harvest tools-** Clippers, shears, scissors, knuckle knives

### **Containers-**

Buckets, buckets and more buckets

### **Coolers / refrigeration-**

Walk-in cooler, CoolBot cooled space, or an air-conditioned room at the very least

### **Shaded processing area-**

Barn, shed, tarps



Don't be a ....

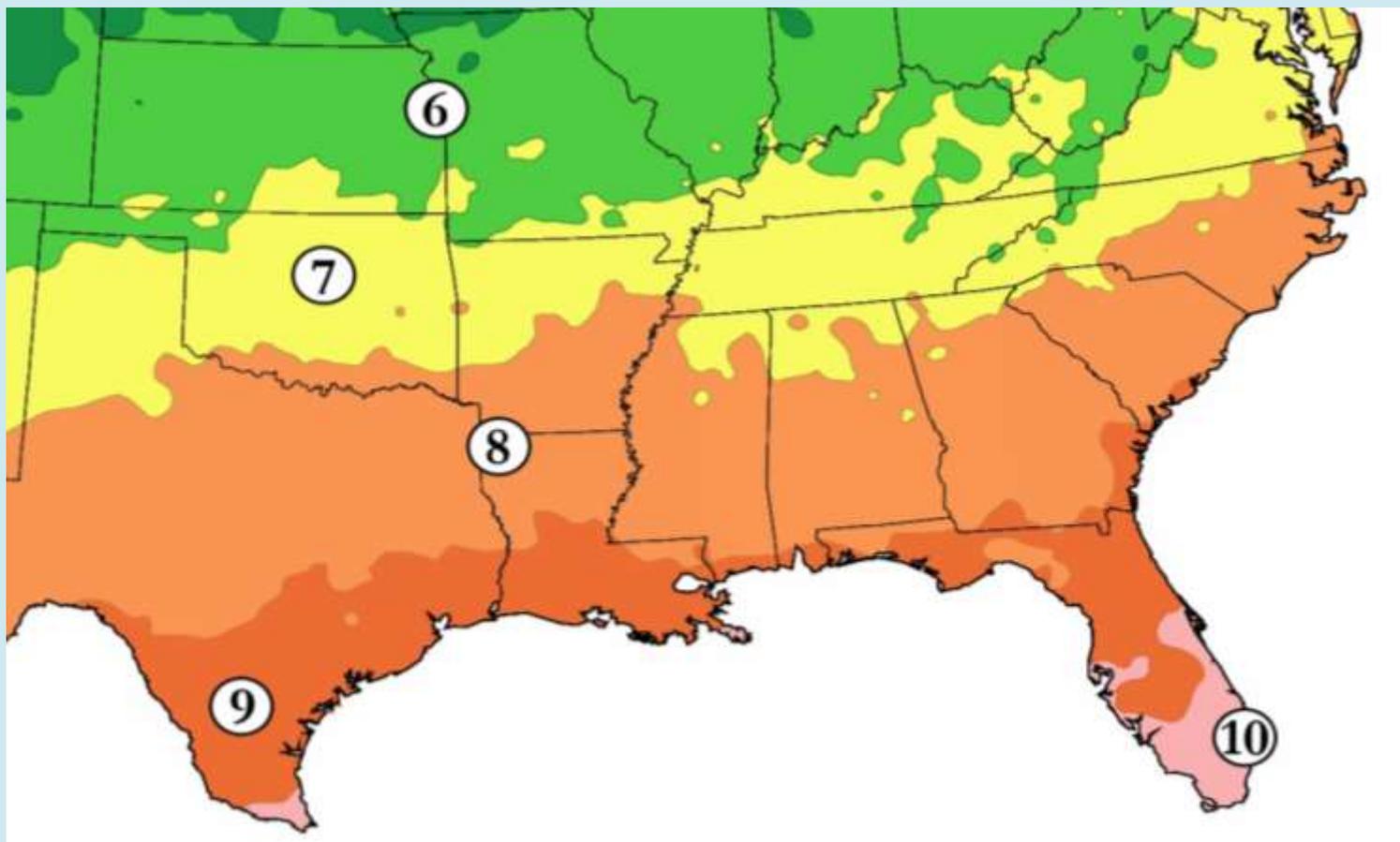
***“Vegetable grower who grows flowers”***

Be a **vegetable and flower** grower who does a **really good job** at both!!!

**Quality matters!** You wouldn't take ugly broccoli to market, don't take an inferior product to market

**Long Vase Life** = repeat, loyal customers

# Arbor Day Foundation Hardiness Zone Map- where is your farm located?



Your **location** has everything to do with what you will be able to **grow** and **sell**



# **Marketing your Flowers**

... you need to have a plan

Who are you going to sell to?

**Retail or Wholesale?**

How will you differentiate yourself from other flower growers?

What seasons do you want to sell in?



# “Bucket Truck” sales to florists- driving a delivery route



# Bucket sales for special events





# **Start Small !!!**

Making mistakes on a small scale  
lays the ground work for  
**Success** on a larger scale

# Which varieties to grow?

## Decisions to make:

amount of space?

financial investment?

marketing plan- who  
are your customers?

when are you going  
to start (season)?

location of farm?



# Fertility for Flowers

**Soil test- every year, at the same time of year**

**Ideal pH is 6.5-6.8**

Fertilizer recommendations:

**N - 100-150# / acre**

**P - 200-225# / acre**

**K - 100-120# / acre**

**Nitrogen- (N)** general plant growth

**Phosphorous- (P)** root, stem vigor

**Potassium- (K)** flower and/or fruit

## **Heavy feeders:**

sunflowers, zinnias, celosias  
most multiple harvest varieties

## **Medium feeders:**

dianthus, many summer  
annuals

## **Light feeders:**

most over-winter annuals, most  
perennials, some annuals

**Before you fertilize- you need to know what nutrients you already have or you will waste money**

# When “direct seeding” a crop makes sense

## Suitable conditions:

When soil conditions are favorable- fine dry texture with suitable soil temperature

When spacing between plants is not critical

When the seed is inexpensive

When the seeds are vigorous and germinate quickly

When the young plant can “out grow” (compete) the weeds

## Crops that we direct seed

### For the spring-

Bachelor Buttons

Larkspur

Agrostemma

Nigella

Bupleurum

Saponaria

### For the summer-

Sunflowers

Zinnias

# Earthway Seeder-

what we started with.... still in use  
20+ years later







ACERATUM Blue Horizon  
9-12 o.c.  
House - light - early April  
Barr recommends to dig plant in late fall (before frost)  
prune back a little, keep in 50° house, get cuttings.  
starting in Jan.

# Planning/scheduling our plantings

Excel Spreadsheet  
for each crop/  
plant family

Target planting date  
and when it really  
happens!

Germination-  
important info

Harvest dates can  
help you plan for  
the future

## CUTFLOWERS - 2016

Variety		source am't	Target	Actual	Germ.	Trans.	Harvest
Ageratum	Blue Horizon	GEO 500 P	3/1				
	High Tide White cuttings	Geo 100	3/1 7/1				
Agrostemma	Ocean Pearl	Gloeck 2000	2/14				
	Ocean Pearl		10/1				
	Purp.Queen Purp.Queen	Gloeck 5000	2/14 10/1				
Ammi (in freezer)	Graceland						
	Green Mist		1/15				
	Queen of Africa		1/15				

## Vegetable “families” at PWF

**Brassicas-** Kales, Collards, Broccoli, Cabbage

**Solanaceae-** Potatoes, Peppers, Tomatoes, Eggplant

**Alliums-** Onions, garlic, leeks

## Rotational Advantage in Adding Flowers

Almost ½ our vegetable crops are solanaceae

We want at least a 5-year rotation between our potato crops, but what about all the peppers, tomatoes, etc?

We grow lots of brassicas every spring and fall, forage radish and rape are used as cover crops

Food safety concerns about crops following fresh manures = our chickens

Flowers offer more plant “families” and therefore more options

Field	2014	2015	2016
C	spring	taters	owf/garlic
	sunfl/cowp	taters	sunfl/cowp
	buckwheat	millet	summer
	rape/radish	owf/garlic	VR
D	pigs	owf	CVR
	pigs	buckwheat	L Spring
	chickens	L Summer	millet
	fall / owf	CVR	fall/owf
E	CVR	ow veggies	VR
	L Spring	millet	chickens
	sunfl/cowp	summer	L Summer
	fall	VR	rape/radish
F	owf	CVR	VR
	spring	chickens	L spring
	sunfl/cowp	summer	millet
G	spring	CVR	VR
	summer	L spring	chickens
	sunfl/cowp	millet	summer
	CVR	chickens	rape/radish



# Deer will eat your flowers if given the chance !!!!

Flowers that they “seem” to leave alone:

Marigolds

Asclepias

Basils

Dutch Irises

Alliums

Salvia Leucantha

Rx- 8' fencing



# Other Pests of Cut Flowers

Aphids

Thrips

Grasshoppers

Stink bugs

Kudzu beetles

Worms, worms and more worms...

Rx- scouting, timely harvesting and if needed- a judicious spraying of a spinosad



# Categories of Cut Flowers

Annuals, Biennials, Half Hardy, Perennials

Seeds, Cuttings, Bulbs, Corms, Tubers

Foliage, Woody Cuts

Herbs

Edible blooms

Vegetables

Weeds (?)

Filler Flowers

vs

Focal Flowers

# Recommended Flower Varieties

## at Perry-winkle Farm

**Ageratum**- 'Blue Horizon'  
**Basils**- Mrs. Burns, Oriental Breeze  
**Celosia**- Pampas Plume, Chief  
**Centaurea**- (bachelor buttons) Blue Boy, Choice Mix  
**Consolida** (larkspur)- Cloud Series, Giant Imperial  
**Helianthus** (sunflower)- Pro-cut Orange, Sunbright, Sunbright Supreme  
**Iris tiphium** (Dutch iris)- Casablanca, Apollo, Hildegarde  
**Rubeckia** (Black eyed Susan)- Indian Summer, Irish Eyes, Prairie Sun  
**Tagetes** (marigold)- Gold Coin, Babuda, Jedi series  
**Zinnia**- Benary Giant, Giant Dahlia

## ...other local farms

**Achillea** (yarrow)- Colorado  
**Agrostemma**- Purple Queen, Ocean Pearl  
**Ammi**- Queen of Africa, Green Mist  
**Antirrhium** (snapdragons)- Chantilly  
**Dahlia**- Karma  
**Dianthus**- Purple Majesty, Messenger, Super Duplex  
**Eustoma** (lisianthus)- Echo  
**Gomphrena**- Bi-color Rose, 'QIS' series  
Grasses- sorghums, millets  
**Lilium** (lily)- oriental, asiatic  
**Limonium sinuatum**- 'QIS' series  
**Monarda** (Bee Balm)- Lambada  
**Paeonia** (peonies)  
**Polianthes tuberosa** (tuberose)- singles

# ***Ageratum***

**Blue Horizon** and **White Tide**

One of the few BLUE flowers

Fairly expensive seeds

Seed in February for  
transplanting after last frost

Second seeding in April or take  
cuttings and root them



# ***Basils***

**Red Rubin-** purple

**Mrs. Burns-** lemony

**Cinnamon-** green with  
purple flowers

**Oriental Breeze-**  
purple bracts

Great filler, scented

Seed in late March for  
late April/ early May  
transplanting

Seed every 3-4 weeks



# ***Celosia-***

(Cockscomb, Wheat or  
a mix/hybrid types)

**Chief Series**

**Cramer's Amazon**

**Pampas Plume**

**Flamingo Feather**

Loves the heat, seed in  
late March for after  
frost transplanting

Seed every 3-4 weeks

Tiny seeds that need  
light to germinate



# ***Centaurea***

Bachelor Buttons

**Boy Series- Blue Boy  
Choice Mix  
Frosted**

Another **blue** flower

Edible petals

Direct seed in the fall and  
again in late winter



# ***Consolida-***

## **Larkspur**

(filler or single spike)

**Giant Imperial, QIS,  
Sublime series**

**Cloud series- Blue  
Cloud, Snow Cloud  
and Bi-color Cloud**

Direct seed in the fall and  
again in late winter-  
needs 6 weeks of  
temps below 55

One cut per plant, most  
stems bloom at the  
same time



# ***Helianthus***

## Sunflowers

**Pro-Cut, Sunrich series,  
Sunbright Supreme  
and Sunbright**



For a continuous supply  
we direct seed multiple  
varieties every three  
weeks

Harvest when the first  
petals lifts from the  
center



# ***Iris xiphium-***

## Dutch Iris

Apollo, Nova Blue, Holland Lilac, Holland Sapphire, Hommes Blue, Casablanca

Plant bulbs in the fall, keep bulbs warm until planting- cold soils stimulate growth – 50 degrees

\*\*Needs 6 weeks of cold temps!

Harvest at the “pencil stage”, first line of color



# ***Rubeckia-***

Black eyed Susan

Indian Summer, Irish  
Eyes, Prairie Sun,  
and Goldilocks

Harvest first thing in  
the morning to avoid  
hydration problems

Perennial that is  
seeded in July,  
planted in August,  
needs vernalization,  
blooms in the spring



# ***Tagetes-*** **African Marigolds**

Gold Coin Series  
Babuda Series

Edible petals

Successive plantings  
every three weeks

Harvest when centers  
are still tight



# ***Zinnias-***

Benary's Giants, Oklahoma,  
Giant Dahlia Flowered series  
(JSS)

“Workhorse” at PWF

Direct seed every 3 weeks,  
3-4 rows per 3' bed (bleach  
treat the seed)

1<sup>st</sup> cut the most important!  
Be Bold!!!



# Recommended Flower Varieties

## Perry-winkle Farm

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*Basils*- Mrs. Burns, Oriental Breeze

*Celosia*- Pampas Plume, Chief

*Centaurea*- (bachelor buttons) Blue Boy,  
Choice Mix

*Consolida* (larkspur)- Cloud Series, Giant  
Imperial

*Helianthus* (sunflower)- Pro-cut Orange,  
Sunbright Supreme

*Iris tiphium* (Dutch iris)- Casablanca, Apollo,  
Hildegarde

*Rubeckia* (Black eyed Susan)- Indian  
Summer, Irish Eyes, Prairie Sun

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## ...other local farms

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*Ammi*- Queen of Africa, Green Mist

*Antirrhium* (snapdragons)- Chantilly

*Dahlia*- Karma

*Dianthus*- Electron, Purple Majesty,  
Messenger, Super Duplex

*Eustoma* (lisianthus)- Echo

*Gomphrena*- Bi-color Rose, 'QIS' series

*Grasses*- sorghums, millets

*Lilium* (lily)- oriental, asiatic

*Limonium sinuatum*- 'QIS' series

*Monarda* (Bee Balm)- Lambada

*Paeonia* (peonies)

*Polianthes tuberosa* (tuberose)- singles



# Most flowers would prefer to not be rained on...

Short of holding an umbrella over your flowers-  
growers use cold frames, high tunnels, heated  
hoop houses to grow:

Lisianthus

Lilies

Snapdragons

Stock

Ranunculus

Anemones

Tulips

Freesia

Dahlias

.... any other high dollar cut

# Peregrine Farm





ROBIN  
HOLLOW  
FARM



Wild Hare FARM  
Cedar Grove NC



# Harvest and Post Harvest

Learn the **proper stage of harvest** for each variety you grow- see handout

**Time of day** is very important, cut “difficult” varieties first!

**Sharp tools**- clippers, knives

**Clean** buckets are a must!

Allow the flowers to **hydrate**, then store in a cooler

Lady Bird Johnson said-  
*“your vases should be as clean as your teacups”*

Harvest scheduling:

Cut some varieties daily-  
sunflowers, dutch irises, tulips, bulbs

Others can be harvested just 2 or 3 times a week

Some are fine to cut once a week

Flowers drink better when water has a low pH (3.5)

Some varieties need “sugar”, some don't !

Some varieties need to be “conditioned” for a day before you use them

**Stage of development for harvest of numerous cut flower species.  
Table obtained from *Floriculture Principles and Species* (Dole and Wilkins, 2004).**

Name	Stage of Development
<i>Ageratum houstonianum</i>	center floret fully open, lateral florets well colored
<i>Agrostemma githago</i>	1 to 2 flowers open
<i>Allium</i> cultivars	1/4 to 1/2 florets open
<i>Ammi majus</i>	80% of flowers in umbel open
<i>Antirrhinum majus</i>	1/3 flowers open
<i>Asclepias tuberosa</i>	1/2 to 2/3 flowers open
<i>Bupleurum rotundifolium</i>	almost all flowers fully open
<i>Calendula officinalis</i>	fully open flowers
<i>Celosia argentea</i>	inflorescence fully colored but prior to significant seed formation
<i>Centaurea cyanus</i>	apical flower 3/4 to fully open
<i>Consolida ambigua</i>	2 to 5 florets open
<i>Dahlia</i> cultivars	3/4 to fully open flowers
<i>Delphinium</i> cultivars	1/4 to 1/3 florets open
<i>Dianthus barbatus</i>	10 to 20% of florets open
<i>Echinacea purpurea</i>	petals fully expanded, first ring of disk florets open

.... and lots more on handout

# Harvest flowers with the same care and consideration as you would your salad greens

## Pay attention to:

The best time of day

The proper stage of maturity

Proper harvest/pruning cuts for re-growth

Keep the flowers cool

## In our system:

We are cutting something most mornings

We strip lower leaves, extra stems in the field

We are constantly “dead-heading” most beds



# Things I believe:

- 1) Bouquets should have a scent
- 2) Flowers should last at least a week
- 3) Buckets need to clean- inside and out
- 4) All stems should be stripped
- 5) Keep studying and learning

\*\*\*\*\*

**A cooler is very important**

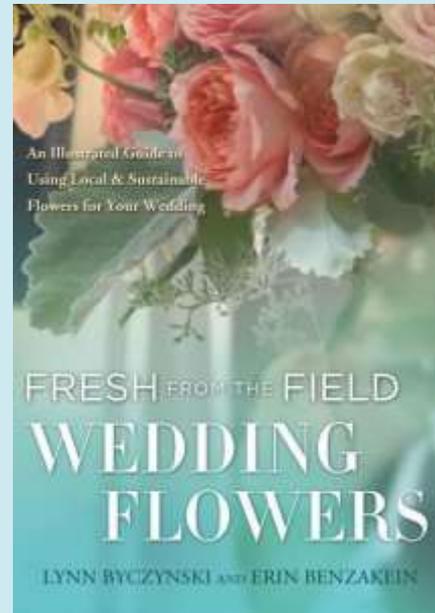
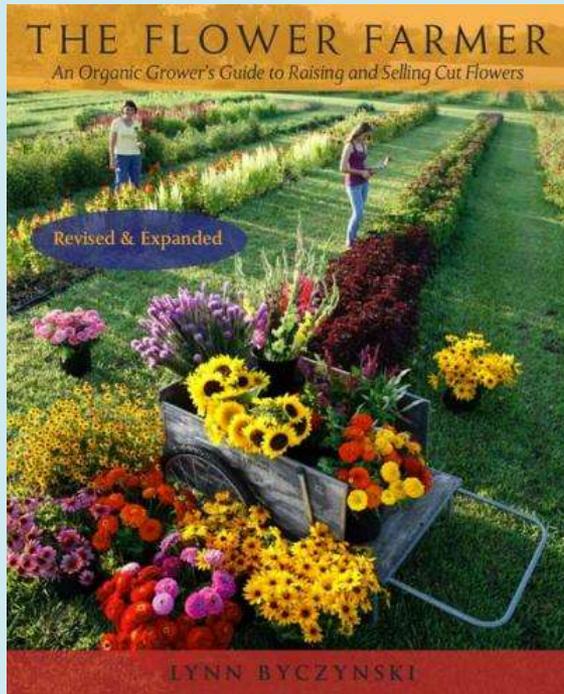
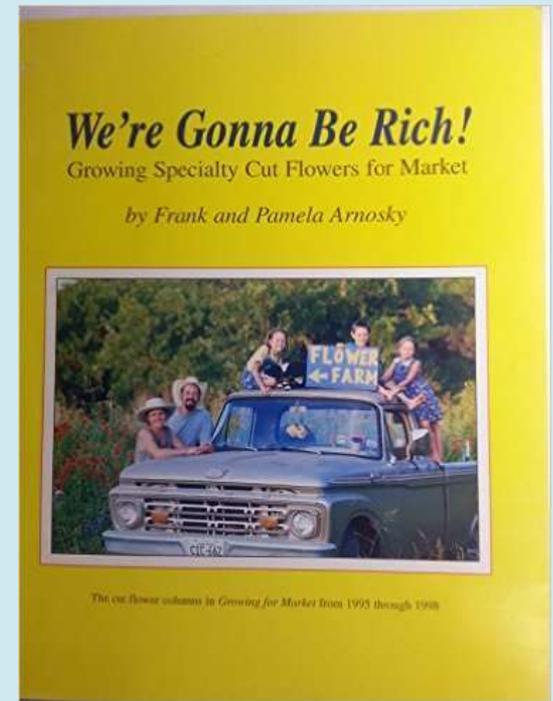
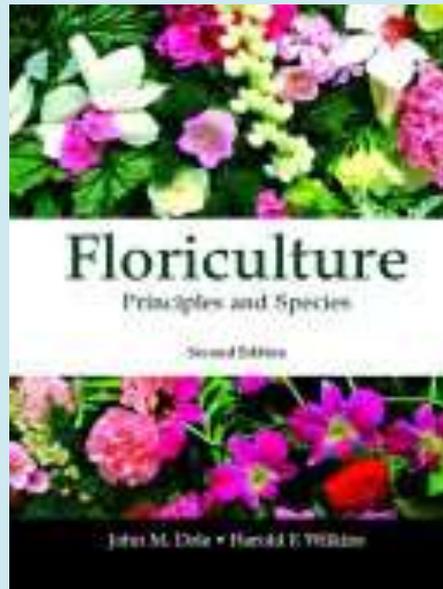
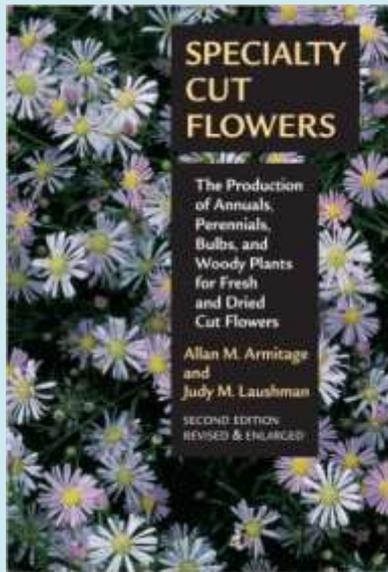
**Successive plantings are necessary**

**Try new varieties at least 2-3 times**

**Keep records - review them - develop a schedule**

**Stage of harvest *really* matters**

**Farmers' Market = Theatre**



For more information on the ASCFG and its other member benefits, contact Judy Laushman at (440) 774-2887 or see [www.ascfg.org](http://www.ascfg.org)

ASCFG membership fees-  
\$195 for commercial grower/farmer  
\$120 for educator  
\$50 for student in horticulture program

## Benefits:

awesome, active listserv  
*The Quarterly* magazine  
discounts on national + regional meetings  
Lots of new friends!!

