



United States Department of Agriculture

Agricultural Research Service

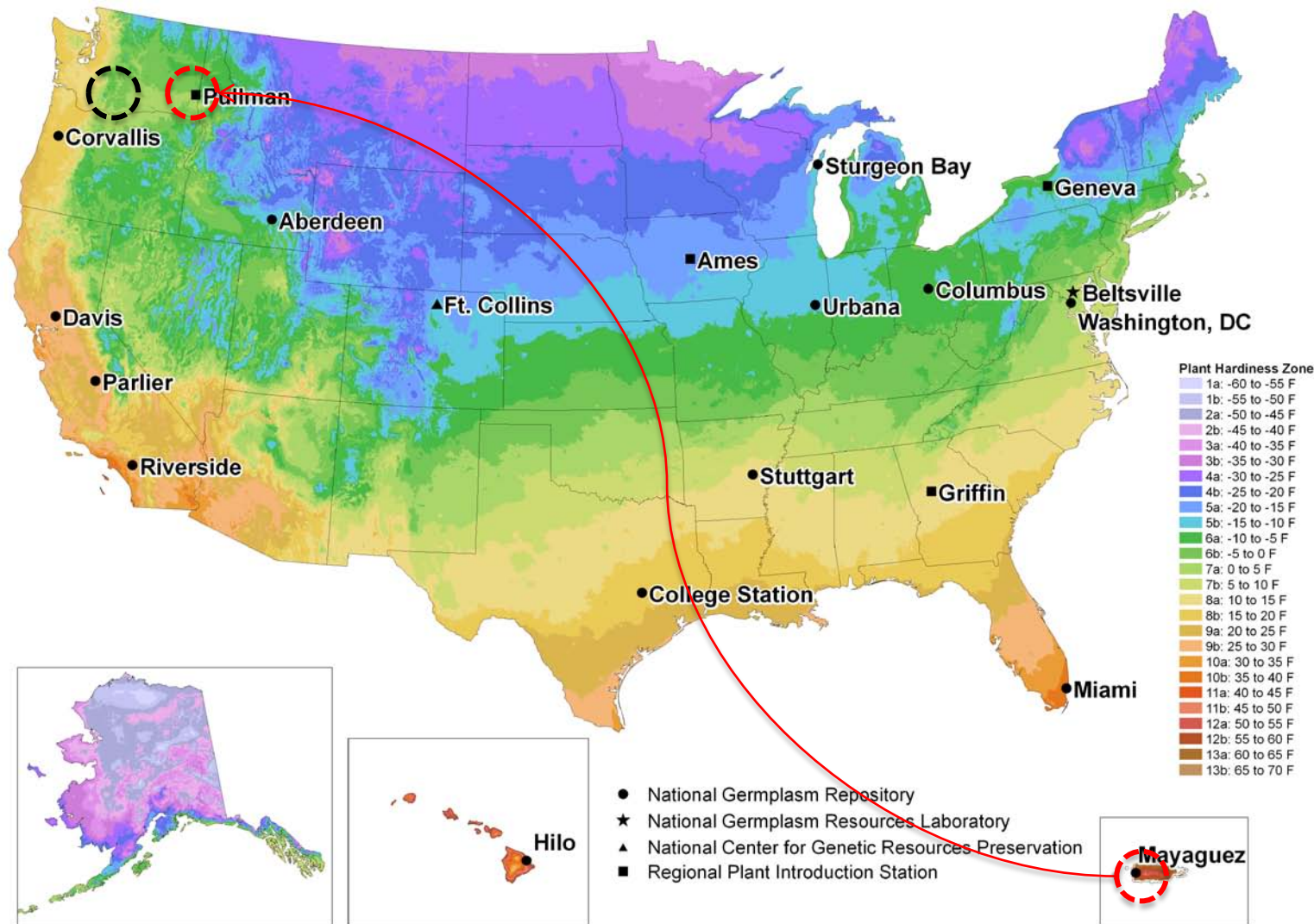
Temperate Forage Legume Genetic Resources Management

Brian M. Irish

North American Alfalfa
Improvement Conference

(7/14/2016)

National Plant Germplasm System

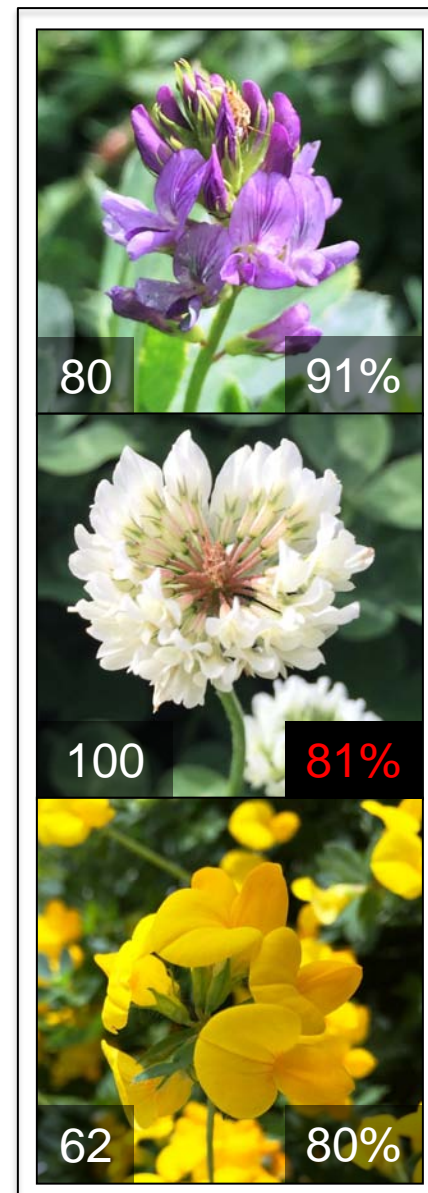


• Total # accessions in the NPGS – **574,462**
 • Western Regional Plant Introduction Station – **96,258**
 • Temperate Forage Legume germplasm – **12,391**

Significance of TFL!

- Medic (*Medicago* – 8,630 [7,712])
 - Alfalfa (*M. sativa* - 4,086)
 - 4th largest crop by land area
 - Barrell medic (*M. truncatula* - 406)
 - Important model species
 - Sequenced genome, Nitrogen fixation
- Clover (*Trifolium* 3,756 [2,667])
- Trefoil (*Lotus* 981 [831])
 - *L. japonicus* – model/sequenced genome

13,367 accessions!



Major Phases –PGR Management

Higher precedence

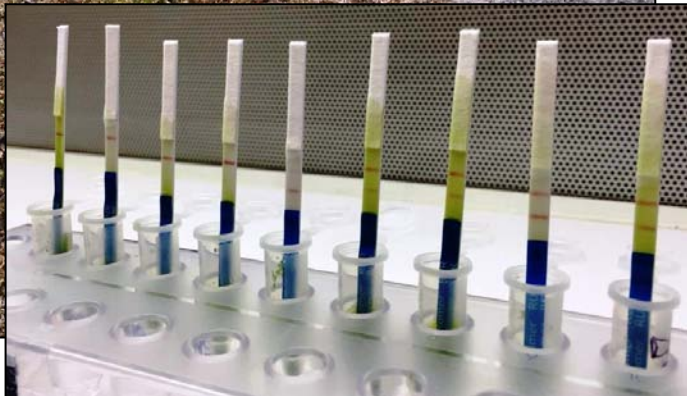
- Acquisition
- Maintenance
- Regeneration
- Documentation/Data Management
- Distribution

Lower precedence

- Characterization
- Evaluation
- Enhancement
- Research in support of the preceding priorities



Adventitious presence (feral populations)



REGENERATION (2016)					
E-52-E-53					
R1	R2	R3	R4	R5	R6
1	50	51	100	101	150
2	49	52	99	102	149
3	48	53	98	103	148
4	47	54	97	104	147
5	46	55	96	105	146
6	45	56	95	106	145
7	44	57	94	107	144
8	43	58	93	108	143
9	42	59	92	109	142
10	41	60	91	110	141
11	40	61	90	111	140
12	39	62	89	112	139
13	38	63	88	113	138
14	37	64	87	114	137
15	36	65	86	115	136
16	35	66	85	116	135
17	34	67	84	117	134
18	33	68	83	118	133
19	32	69	82	119	132
20	31	70	81	120	131
21	30	71	80	121	130
22	29	72	79	122	129
23	28	73	78	123	128
24	27	74	77	124	127
25	26	75	76	125	126