

ANNUAL REPORT to TAC
updated to June 2015

Exceptionally good seed increases even with very difficult species

S. cajamarquense



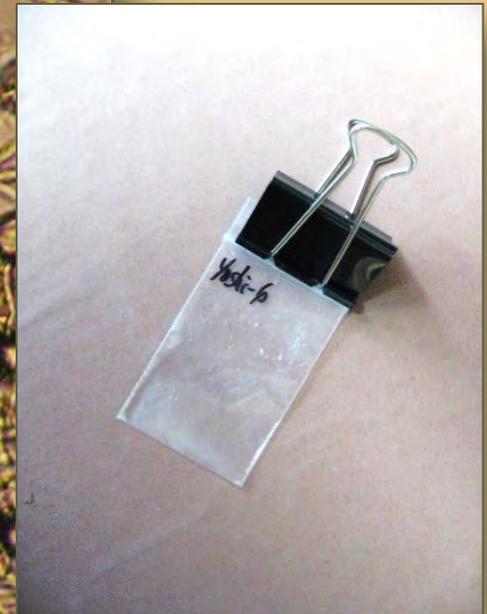
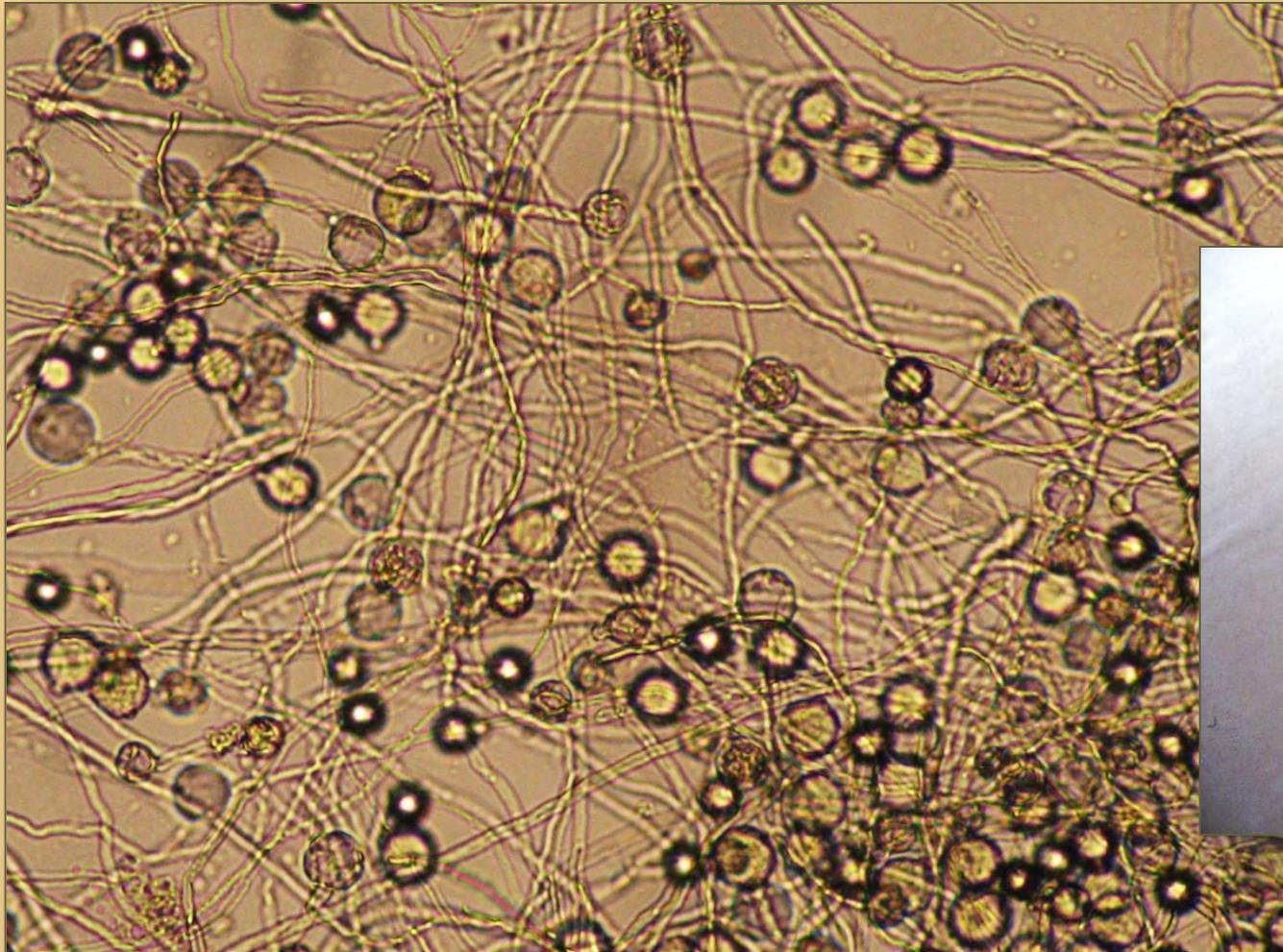
SNP and GBS genotyping of all clonals



Found *commersonii* and *cardiophyllum* with very large tubers



Improved pollen viability assay



Established embryo rescue tech for difficult crosses



Expanded Peru cooperation

--Comparing genetics of wild species at spot collected 40 years ago 🖱️

--Donating hybrids that National Program at Puno incorporated into their cold resistance breeding program with release expected next year

--Coordinating seed increase exchanges with CIP

--Alfonso and Jiwan play leading roles



Progress in comparison and development of diploid *tuberosum* nubilizing males



Yoshi-6 (654351) is a highly male fertile and homozygous selfable diploid *tuberosum*



Progress in search for an adapted *Criolla* type

Egg Yolk – style potatoes

With cooperators Dan & Irene Douglass, Kathy Haynes, Curzio, Linc Zotarelli, Tinita Lozano

Harlequin Moon



ZEBRA CHIP resistance

With cooperator Rod Cooper

S. bulbocastanum has separate forms of insect resistance as anti-feeding and anti-development. We made crosses to stack them.

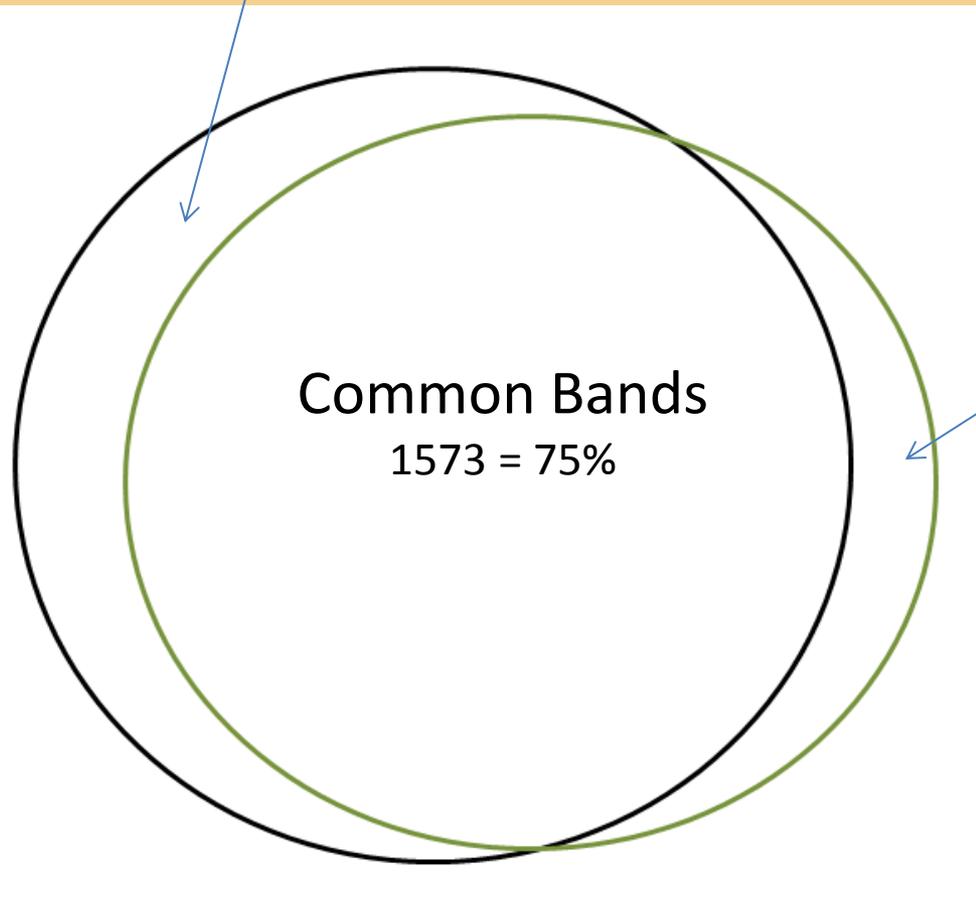


jamesii MegaPopulation analysis

128 (all other) *jamesii*
347 unique bands = 16½%



78 Mesa Verde *jamesii*
180 unique bands = 8½%



Initiated selection of core collections from *phureja*, *verrucosum*, *demissum*



Conducted systematic tests of various influences on germination



Diurnal cold/warm fluctuation

Position on greenhouse bench

Concentration and timing of GA₃ pretreatment

**First hybrid
with *jamesii***

verrucosum female with
mentor pollination



Seeds of Time film now out

(featuring Alfonso, Chico & John)

- Getting a lot of recognition from germplasm system and others
- Opportunity for attracting donors?



Cooperating with industry to expand use of NRSP-6 germplasm

Frito – tuber calcium

Kemin – safe anti-appetite compounds

CETS – evaluating cultivar collection

Curzio – taste and cooking quality

Simplot – Innate and various traits