Bega Valley Seedsavers WORKSHOP RUNNING SHEETS

TIME	CONTENT	PROCESS	RESOURCES
10.00	INTRODUCTION		General:
	Housekeeping and WHS		Seed Trays
	WHS - be aware of hazards when moving around		Seed displays
	in the space, be aware of dust from seed	Name Game	Tables
	processing - good ventilation		Seed Box
	Thank yous		Seeds to
	Rules - ask questions		process
	Outline Program of Day		Sieves
	Workshop Introduction		SCPA Markets
	Story of abundance of seeds - 60 000 seeds on	Discussion	Calendar
	one lettuce plant		Whiteboard
	 Introductions and needs analysis of group - 	Pair Share, Circle Intro	Flip Chart
	"What do you want to know more about?"	with me Scribing on	
	What we will cover - outcomes	board	
	1. How to grow vegetables for seed so that they	Flipchart	
	may confidently be used for seedsaving.	Пропан	
	2. How to harvest, process and store seed and		
	keep accurate records.		
	3. How to start or contribute to a seedsavers		
	group.		
	What is the BVSS? A group of do-ers who come		
	together to save seed of edible and useful plants.		
	• What is SCPA? South East Producers - creators		
	of SE Food Plan and Farmers Mkt		

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Post-it Notes Why Save Seed? Group Improve local food security Brainstorm -Improve local resilience slips of paper Preserve heritage varieties and group into Local adaptation categories Preserve local culture Save money Learn new skills and knowledge Mitigate effects of climate change e.g. develop heat tolerant varieties Swapping between community members encourages community sufficiency Community Sufficiency v Self Sufficiency Self sufficiency is a flawed concept - takes so much time and energy and in terms of seed, it is hard to grow enough food and seed for your needs Much better off growing a few varieties well and swapping seed with others

 Community sufficiency provides more resilience and adaptability and allows for greater diversity

We need to learn to work together

Important Stuff

- It is important to look for cycles and systems
- It is important to connect to nature and to people we can learn each other's names as a first step

Name Game Ball Toss Ball

10.30 PLANT BASICS

We start with some basics relevant to seed saving.

Plant Life Cycles

- Seed, Germinating seed, Seedlings
 (Cotyledons, First true leaves,
 Transplanting), Mature plant, Flowering
 plant, Fruiting plant, Seeding plant
- Time to harvest fruit versus time to harvest seed - need to allow longer to grow to seed so good garden planning helps
- Cotyledons first leaf or pair of leaves don't transplant seedlings until the second
 pair of leaves emerges these are true
 leaves and help to identify the seedling

Slide Show with diagrams of plant life cycle

Handout -Reference Table

Pollination Methods

- Need to know which plants are self pollinating and which are cross pollinating for seedsaving - important
- Self Pollinating varieties have "complete flowers" (both male and female reproductive parts in one flower) in which pollination occurs either before the flower opens (perfect flower) or with the slightest movement of the flower because the male and female parts are so close together
- Self Pollinating varieties essentially do not cross - these are the easiest to save seed from e.g bean, pea, tomato, lettuce

Slide Show with diagrams of complete flowers and male and female flowers of the curcurbit family

- Cross pollinating varieties have either complete flowers or separate male and female flowers and are pollinated either by wind or by insects which allows crosses between different plants
- Some cross pollinating plants are self incompatible
- For seed saving, techniques are needed to prevent cross pollinating between different varieties in the same species

Scientific Plant Names

- Scientific names are not just used to show off - they are used to help us identify different varieties accurately as well as give us hints about what plants will cross with each other
- Genus / Species / Variety (cultivar).
 Sometimes different varieties are the same species and sometimes they are different species e.g. lettuces and pumpkins respectively
- Cultivar is just another word for a cultivated (grown) variety
- For seedsaving, you need to have a
 working knowledge of scientific names as it
 tells you which varieties are likely to cross
 pollinate

Slide show of plant name explanation

how to identify
different
pumpkin
species

Cheat sheet of

Activity to look up scientific names for beetroot & silverbeet, various brassicas

Slide Show

Open Pollinated Varieties v F1 Hybrids

- Open pollinated varieties are the plants we save seed from - they produce seeds which grow true to type (same characteristics as parent plant) as long as they are properly isolated from other varieties in the same species
- Heirloom open pollinated variety of a certain age (older than 50-100 years), not used in large scale modern agriculture
- Heritage same as the term heirloom but may have a significant ethnic importance
- F1 Hybrids first generation cross from two different parent plants in which the plant has characteristics from one or both parents.
- F1 Hybrids often show extra vigour, but the seed cannot be used as it may be sterile or it may revert to either parent plant or a cross
- The extra vigour is more noticeable in some plants such as Sweet Corn
- It is possible to produce an open pollinated variety from a hybrid but takes many generations for it to become stable e.g. butternut pumpkin
- Techniques for breeding plants bagging, isolating, hand pollinating (advanced)

Comparison

Slide Show

	Annu	als, Biennials, Perennials		
	•	An annual plant is a plant that usually		
		germinates, flowers, and dies in a year or		
		season		
	•	A biennial plant is a flowering plant that		
		takes two years to complete its biological		
		lifecycle. e.g carrots, celery, parsley - wait		
		till they produce seed in the second season		
		before saving seed		
	•	A perennial plant or simply perennial		
		(Latin <i>per</i> , "through", <i>annus</i> , "year") is a		
		plant that lives for more than two years.		
	•	Before saving seed, need to consider how		
		much space / time will the plants take up in		
		your garden. For biennials, need to wait till		Date for Bega
		the second season (after cold season) to		Divide and
		harvest seed - remove any plants that go to		Swap day - July
		seed in the first season.		19, 2013
	•	Perennials are normally easier to grow		
		from cuttings or divisions rather than seed.		
		Divide and swap day in Bega in winter.		
11.00	SEED GR	POWING		
11.00	SEED GR	COWING		
	Pacor	d Keeping		
	Necoi	An important part of seed saving right from	Group Brainstorm on	Chinagraph
		the start to ensure that you have the correct	whiteboard what we	pencils
		variety of seed.	need to record for	Periolis
	_	Check your variety, label your seeds/	seedsaving	
	•		i seeusaviiiy	
	<u> </u>	seedlings and keep a record of plantings on	1	

your calendar or diary.

 Put waterproof labels adjacent to your plants listing species and variety as well as date. Use "Chinagraph" oil based pencil on plastic tags for best results.

Growing from Seed

- Choose open pollinated seed from your local seed group or from catalogues.
- Allow enough time in your garden to grow from seed (takes extra 3-4 weeks than seedlings)
- Choose healthiest looking seedlings and discard the rest.
- Consult garden books for growing conditions.
- Seed raising mix needs to be light and well drained e.g can use 50-50 mix of compost or cow manure with river sand
- Direct sowing versus sowing in seed trays

Planning for Seed
Growing Table
Activity - fill in blank
sheet for selected
vegie

Table catalogues
fill in blank
selected

Seed

Practical - make
seed raising mix and
plant seeds in
punnets

Genetic Integrity - Crucial!

- Check whether plants are self pollinated or cross pollinated by referring to tables.
- Beginners should start with self pollinated varieties such as peas, beans, lettuce, tomatoes. Grow only one variety to seed at a time or separate different varieties by a few metres, as a small rate of cross pollination can still occur.

Isolation distance column in table

- For cross pollinated vegetables, for those which are single variety species (such as rocket, dill, coriander) no special action is needed.
- For cross pollinated vegetables which have multiple varieties, determine if they are pollinated by insects or wind
 - insects isolate by distances as shown in table or cage / bag to prevent insect cross pollination
 - wind isolate by distances as shown
 in table these will generally be
 larger distances as wind borne
 pollen will travel large distances

Growing for favourable characteristics

- Selection:
 - select the most vigorous seedlings to plant
 - choose the most vigorous plants to collect seed from
 - choose the healthiest plants with the
 best / biggest fruit (delay gratification)
 and don't eat their fruit
 - tie a marker ribbon around seed plants
 - save seed from early fruiting plants
- Rogueing:
 - remove any plants with unwanted characteristics e.g. early bolters, unfavourable colour, shape, etc

	Minim	um Populations		
	•	Can ignore minimum populations if growing		
		small quantities, but might need to buy in	Minimum population	
		more seed if you notice a reduction in	column in table	
		vigour after a few years		
	•	When growing for seedsavers or if		
		preserving a rare or unique variety, need to		
		comply with min. population tables to		
		ensure genetic robustness		
	•	Some species are prone to inbreeding		
		depression e.g. corn, sunflowers		
11 20	CEED IIA	DVECTING		
11.30	SEED HA	ARVESTING		
	T !!			
	Timing			
	•	Needs careful observation once seeds have	Demonstration of	Examples of
		begun to form - a balance between getting	various different	seed types just
		the best (early forming) seed and getting	types of seeds and	harvested
		enough quantity from each plant	seed heads	
	•	Podding seeds - allow pods to go brown		
		and dry on plant before harvesting		
	•	Lettuce seeds - seeds ripen progressively		
		from the tip down, so harvest when about		
		2/3 are ripe (look for white fluffy bits)		
	•	Fruits - leave on plant until fruits are very		
		ripe then harvest		
	•	Allow to sit post harvest for a few days		
		(tomatoes) to a few weeks (pumpkins) - this		
		is called "after-ripening"		

	How to Harvest Seed		
	How to harvest - best to pull up whole plant		
	if possible as the plant will put more energy		
	into the seeds and produce more mature		
	seed. Keep dirt from roots away from seed.		
	 Drying - to ensure that seeds are very dry 		
	before processing, pick in dry weather,		
	hang in a paper or cloth bag or layout on a		
	tarp in a dry cool area		
	Wet seeds - allow fruits to sit for a week or		
	two to help the fermentation process		
	 Ensure you keep a record of the variety, 		
	where it was grown and the date the seed		
	was harvested		
12.00	LUNCH		
12.00	LONGIT		
13.00	SEED PROCESSING		
	Dry Processing		
	 Separate seeds from pods / chaff using 	Demonstration /	Seeds, sieves,
	various methods:	practical exercise	bags, winnower
	 stomping or threshing seeds in cloth 	with a variety of	
	bags	seeds	
	 rubbing on sieves dependent on size 		
	of seed		
	 using rubber car mat and trowel to 		
	scrape fine seeds		
	 use rolling pin for seed pods 		

	Separate any dust out using fine sieve		
	Winnowing - this removes light chaff from		
	the heavier seed and can be done in a		
	variety of ways		
	Wet Processing		
	After fruits are very ripe, scrape out the	Demonstration	Fermenting
	seeds and soft flesh into a bowl and let them		tomato or
	sit and ferment for a few days - this mimics		cucumber
	the process in nature and breaks the gel sac		seeds
	that the seed is in and breaks down the		
	germinator inhibitor as well as promoting		
	good microbes to prevent diseases in the		
	seed		
	Then rinse the seeds in clean water and		
	remove the flesh - can keep adding water to		
	the container and gently pour the gunk (and		
	any floating, immature seeds) off the top,		
	then rinse		
	Dry the seeds and store		
14.00	SEED STORAGE		
14.00	SEED STORAGE		
	Demoving Incests		
	Removing Insects	.	
	If there are small insects in the seed, put the	Demonstration	Seedbank or
	seed in an airtight plastic container, ensure		seeds in jars
	the lid is tight and sit in a freezer for 48		
	hours. Remove the container from the		

	freezer and allow it to come to room		
	temperature before you open the lid to		
	prevent condensation.		
	Storage Conditions		
	Cool and low humidity		
	• Dry		
	Vermin proof		
	Viability		
	Seeds will only reach their maximum seed		
	life if they are stored under certain conditions		
	- temperature can be critical.		
	Can be stored in glass, paper or plastic and		
	these three options have increasing air		
	exchange as listed i.e. glass is the best.		
	Seeds are useless for a seedbank if they are		
	not labelled properly, so ensure that seed		
	containers are properly labelled.		
	IN DEPTH	Answer question on	
	Optional Revision / In Depth Exercise	card and share with	
14.00	CEED CAVING COCUPS	group	
14.30	SEED SAVING GROUPS		
	Look after Volunteers		Local seed
	Need to ensure that volunteers don't burnout	Small group work -	
	or feel unappreciated	What are the 3 most	networks part of Seedsavers
	or reer unappreciated	I vilial are life 3 IIIUSL	DECUSAVEIS

•	Encourage celebrations / shared food	important ways a	Network - 90
	Encourage knowledge / skills exchange	group can support its	groups
•	Group should pay for any out of pocket	members?	
	expenses	What are the 3 most	
•	Group should pay for any out of the ordinary	important ways a	
	work	member can support	
	Don't have endless meetings or	BVSS?	
	administration - just get stuff done	How can BVSS best	
	Encourage members to contribute in their	support its	
	areas of strength	community?	
	Say thank you - often		
Grou	p Vision		
	Keep a big picture vision of the group in mind		
	to help set the direction and make decisions		
	Encourage members to follow through on		
	their ideas for the group		
BVSS	3		
	History of BVSS		
	What BVSS does and how we do it	Personal statements	
	Different ways people contribute	from seedsavers	
	 Administration 	about what we get	
	 Organising gatherings 	out of BVSS	
	 Hosting gatherings 		
	。 Set up / pack up / storage		
	。 Growing Seed		
	 Processing seed 		
	 Talking to the public 		
	。 Promoting		

	o Special events	
	。 IT Support	
	。 Financial	
	 Making food for gatherings 	
	o Inviting new members, etc	
	Multiple and unexpected benefits of being	
	part of a seedsavers group, especially	
	knowledge, skills and swapping of plants	
•	Would you like to be a member of BVSS and	Email List
	get our emails?	
•	Would you be interested in starting up a	
	seedsaving group in your area?	
Conclu	sion and Wrap Up	
•	Choose a seed that you would like to grow to	Select seeds to take
	seed.	home
•	What have you learnt today?	Circle talk