

Food democracy in action

- Can-do attitude? What's the feeling of the room?
- How is conflict resolved?
- How do small groups come to consensus?
- How do decisions coalesce and form with larger track syntheses?
- How are people learning from each other?

Friday, 11-12:15 section:

Sue speaking:

- Setting the stage
- What are the emerging practices, studies and technologies for MT producers facing changing climate conditions and how can they access it all?
- We will develop a tangible action plan!

Core track questions:

- How can MT agencies, the University system and others work together to meet producers' needs for resilient ag?
- How can producers effectively prepare for and respond to drought?
- How can producers increase awareness of resilience?
- How can operations increase capacity to assure healthier soils?
- Are there policy changes that can create more capacity for resilience?

Ron DeYong:

- Came in 2007 as director of MT Dept. of Ag
- Resilience, diversifying, adapting for change
- Resilience: we can lose producers because they suffer economic losses because of urban development and poor practices
- Changing environment: 9.6 billion fed by 2060—a challenge
- Diversity and adaptation=solutions
- Look at things holistically—where are we? Where are we headed?
 - Analogy: 5 gallon bucket—trying to fill it as effectively as possible—use large rocks, gravel, sand—represent different parts of ag system
 - Large rocks for weight: first few might be corn and soy from US and Brazil—GMOs are the start, then US, Australian wheat producers, organic producers, US dairy producers
 - Doesn't weigh enough! And this might not be that sustainable...but it's the reality right now...so you throw the gravel in to fill the spaces...European and GE products, then more organics and sustainable smaller producers...
 - Still doesn't weigh enough. Sand: urban agriculture and small producers globally—very diverse group, erring on the side of organic and less on the GE side→much more diverse and sustainable, and now we have enough weight and a full bucket
- Diversity is key
- Reality: future=all sizes of agriculture, organic, conventional, GE and non-GMO

- This composition will evolve over time to be more sustainable, more diverse → this is our charge
- Diversity in size, farming methods, monoculture to multi-cultural situation in agriculture—crop rotations and building soil health
- *What has MT done?*
 - We built up capacity for pulses and pulse rotations.
 - Certification and training for new manufacturing and processing
 - Focusing on filling the gaps

Mitch Auer:

- 4th generation farmer in Broadview, MT—4000-acre farm that he manages solely with his dad
- Started with only winter wheat and now does rotational crops w/ winter wheat, malt barley, generally diversifying and it has minimized pest and disease problems
- Reality: uses GMO, but doesn't have to use clear field system, his inputs are declining due to diversifying (only uses Roundup now)
- Roundup ready alfalfa to fix nitrogen—helping to cut fertilizer needs/costs
- Quality of winter wheat (protein content) increasing
- Trying to figure out how exactly to apply chemicals
- *Interesting perspective on changes in environment*—says it is controversial but he believes in it and believes we need to find ways to be resilient and adapt
- Also finding ways to build soil health and prevent erosion
- Have to keep in mind time and economic restraints/bottom line
- Cost of input: show banker that value is increasing, not decreasing, wants to be consistent and keep payments for machinery and other inputs down

Susan Tallman:

- Area agronomist for NRCS
- History of NRCS—direct result of Dust Bowl, federal program, work in almost every county in MT, at request of soil conservation districts by county, free technical assistance to farmers
- Precip and temperature in MT?—very local/watershed dependent responses to climate change
- Generally more intense extremes—wetter wet periods and drier dry periods
- Challenge: precip is happening at different times than may be helpful in terms of the farmer's season
- Build carbon/organic matter in soils—resiliency by storing water, infiltration of water, carbon sequestration
 - Minimizing disturbance—soil moisture
 - Maintaining residue on soil—prevents erosion
 - Intensification—keeping living roots in soil—minimizing fallow
 - Diversify crop rotations—putting carbon at different locations in soil and resilience to pests
 - Graze instead of hay
- Positives:
 - no-till system by most producers
 - increase in diversity, esp of dryland crops, risk taking
 - stripper headers
 - intensification
 - more reduced tillage in sugar beets
- Challenges:
 - Drought—irrigation ending early

- Introducing livestock, but no water for livestock in grazing
- Increased peas and lentils without residue on field
- A lot of tillage in sugar beet system, but roundup ready beets mean they can reduce tillage → “for many reasons it’s good for everyone”
- Erosion from furrow irrigation systems
- Disease
- And some resources

Shaun McGrath:

- EPA—former mayor of Boulder, CO!
- Bigger perspective
 - Air quality, water quality, ecosystem health
- Many challenges related to such a diversity of stakeholders—need to be comprehensive/holistic
- Science on climate change:
 - US Global Change Research Program:
 - *Risks*: longer, hotter growing seasons, earlier spring, declining snowpack, more extreme events, more winter and spring but less summer precip, greater wildfire risk, more pest and pathogen outbreaks
 - For rural MT: could have both positive and negative impacts—hard to know! Increased crop yields **or** decreased crop yields! Increased weed/pest pressures, soil erosion, reduced forage, greater pest abundance on livestock, etc.
 - Long-term: existing adaptive practices may not be sufficient—that’s why we’re here! We don’t have all the answers and don’t know how to adapt to the manifold changes coming, but we’re here to take a longer term look at these issues.
 - *Work we’re doing*:
 - Integrate climate change considerations into *all* state and tribal governments
 - Developing tools and resources to promote community resiliency
 - Decreasing food waste—40 percent of food is thrown out in US every year! So many implications...
 - Supporting research on impacts on WQ and health, nexus of food/water/energy to integrate interrelationships
 - Water supply projects w/ state and tribal governments
- Climate change already affecting everyone. EPA is working on that by integrating into programs, policies, rules, and complementing other programs throughout government
- Mitigation side—reducing greenhouse gas emissions
- Thanking us for being here and expressing excitement about the importance about this topic

Questions:

- Future for sharing of risk *among* farmers, who gets the big data, how are they going about climate research? (Who’s doing the mapping?)
 - Shaun: Holistic look at indicators, investment of many to compile and drive collaborative decision making, long term forecasting and development of science
 - Risk: not necessarily farmer against farmer, one sector against another (ag against species, against drinking water, etc.)—need to have mitigating structure in place to aid collaboration
- What tipped your farm into trying new ideas and take risks by changing operation?
 - Mitch: Dad went to Kansas, visited friends, just asked “well why can’t we do this too?”

- How can we make money so we can pass the farm on to our kids if we want to? “I don’t know what I’m doing tomorrow, but I know what I’m doing next year, the year after...If I can control the climate a little bit with my straw and seeding techniques, that’s what I’m going to do.”
- Building carbon in soil: is NRCS gearing up to build a baseline for ag for how to sequester carbon and build soil? Baseline going forward?
 - Susan: building carbon in dryland soils takes a long time, so it’s a big challenge and a long-term solution, but it’s important for us to have more metrics

POST LUNCH:

WHO IS HERE? Introductions: where are you from, what do you do, and what are you hoping to get out of this conference?

- Maggie—NPRC
- John—Havre, MSU student, to get involved in ag movement
- John—farmer in Havre—committee member of MT Pulse Advisory Committee, what he can get to bring home and be better farmers and citizens
- Casey Bailey—east of Fort Benton, conventional and OG, always learns something to take home to farm and makes connections to propel forward, sees fields and soil responding to incremental changes, being able to communicate the uniqueness of products from OG systems in terms of their role in adapting to climate change
- Name—Learn new things to bring back to school program in Helena, MT
- Ken—farmer in WI and MN, Land Stewardship Project, supporting young farmers, Good Food World—runs it,
- Max—Helena, involved in AERO, board of Timeless Seeds, big thinking—how do we create new investment in regenerative economy, impact investing—stay in those networks, wanted to hear Fred Kirschmenn and Michael Schumann talk, wants to see where its going
- Name—Helena Community Gardens, biomimicry, how can we use community gardens to promote local food? Receptivity of farmers to using nature
- Ron DeYong—farm in Helena, collaborate and move forward
- Rachel—Helena, here to learn and understand MT
- Brent—based in Helena, has a farm, learn about needs
- Susan—Maggie invited her, excited to hear other perspectives besides large conventional farmers, how NRCS improve assistance to farmers
- Peter—Bozeman, Gallatin Valley Land Trust, family farm, take messages back to farmers they work with

- Eric—small scale conventional farmer, direct market farm, Great Falls, vegetables and beef, can get insular in farming world but it's good to meet people, learn, and make connections with people thinking about the same things in different positive ways
- Hadley—family farm, dairy goats, attends MSU, learn more about ag
- Sue—Bozeman, CLLC, water resources planning, drought mitigation tools for all sectors
- Name—Nepal, 4th year PhD, at MSU to learn about MT ag
- Bruce Maxwell—interested in resilience, works at MSU, important to be involved using the knowledge you have
- Name—mitigate health concerns around poor diet, third generation Bozeman and fifth generation MT, loves state, new connections, learn about production methods to avoid getting “monovision” about different ways to produce food
- Madison—Bozeman, Big Sky Watershed Coordinator—building resilience and adaptation, learning about barriers and opportunities to building resilience
- Jamie—Bozeman, teaches at MSU, summit informative to research, documentary film maker—food security and climate change, see what people are doing and talking about potentially for film
- Sandra—Butte, how can NCAT be of better service
- Karl—Butte, also at NCAT, program manager for sustainable ag, looking for innovative ideas we can incorporate into educational programs
- Steven—Corvallis farm manager, take plans to incorporate into farm to build on relationships with community, land grant
- Robin—heirloom seeds for common use, reestablish selecting and saving seeds in communities, resilience—how we can learn how to practice it in our daily lives that can “spill out into our communities, states, and planets”
- Meg—PhD at U of AZ, supporting farmers and ranchers, escape the 95 degree weather in Tucson, renewing optimism by hearing about good work people are doing
- Shaun McGrath—Boulder, CO, excited and curious about climate resilience in ag and is critical
- Matt—Carnegie Mellon, different stakeholders perceive use and interpret climate information
- Tess—MSU grad student, evaluating weed communities in cropping systems, how do we gain resilience
- Fabian—faculty at MSU, weed ecology and mgmt., research and extension, brainstorming and moving forward cropping systems in Montana

Bruce Maxwell:

- What is resilience? Resilience is returning to or maintaining the desired stable state—how close are we to the edge and how can we then move away from the edge to be stable?
- Farmers must learn *for themselves* on their land—site specificity, history, time specificity
- Many drivers of ag decisions—how do we make the wise one to “stay off the precipice of climate resilience”
- Drought adds a lot of uncertainty (~40%), then price of wheat (~15-20%) and cost of N fertilizer (~15-20%)
- Thinking about resilience on multiple scales
 - How do local food systems work and interact?
 - Maximizing efficiency, profitability, quality of life for all involved
 - What is the ideal system that stabilizes and can handle perturbations and increases in producers, etc? → looking at meat processors through systems mgmt. theory and ecology

Fabian Menalled:

- Explain what changes have been seen in MT ag and a recent project assessing how people react to the changes in terms of environmental variables
- Change: something that is going to happen BUT
 - Change has already arrived in MT ag system!
 - Meteorological stations also show change in climatic conditions: steady increase in temps, increased variability in extremes and more intense extremes
- With changes in climate, MT ag has been diversifying and trying to find solutions like lentils and peas
 - Lots of feedback cycles
- **How do citizens respond to these changes in climate? Should we get this from Fabian?**
 - Need to start engaging with social scientists
 - Increasing population in mostly western MT: Hispanic and African American groups increasing more than white people in MT → changing population!
 - Asking demographic questions—where reside? How many years in MT? Age and gender? Affiliation/occupation? Income? Political view? Race?
 - Perception questions: what do you think is the main cause of climate change? Some listed, some open-ended options; concern? Seriousness? Capability? have you perceived changes in climate? In the way you farm?
 - Trends (using web diagrams):
 - very equal across groups in terms of equally concerned about climate change regardless of political affiliation
 - liberals think more serious in future
 - extension agents and organic people significantly more concerned about future and think more serious
 - Actually a lot of agreement across political spectrum

Shaun McGrath:

- Building drought resilience in upper Missouri River Basin
- Background: 2013 Obama’s climate action plan—included resilience—National Drought Resilience Partnership

- One project: How do you build drought resilience in a landscape? Idea—get ahead rather than always reacting
- How can resilience and mitigation programs improve and be achieved when agencies *go all in*?
- Vision: to be locally driven and locally led, reflect the watershed approach, produce on-the-ground results
- 14,000 square miles and eight watersheds→must involve different and many stakeholders, especially in a collaborative solution for drought resilience
- Goals:
 - Provide tools for drought monitoring, assessing, forecasting
 - Develop local and regional capacity to plan for drought
 - Implement local projects to build regional drought resilience
- Project outcomes
 - Stronger partnerships
 - Others
- Accomplishments are many and varied already from local to national level
- Tension to make this kind of collaboration happen in politics because it's slow whereas politicians need to show results, progress, and success
- How do you sustain this moving forward? Drought shouldn't be a political issue!
- This takes resources—federal government and private sector
- Takes people at the watershed level to really have the foresight and commitment. To want to do this means you have to acknowledge vulnerability, but resilience and adaptation is a much better approach than crisis management.

Questions:

- How do we pass projects on and assure accountability at the federal government level? Tension between mechanical solutions to natural problems and natural solutions to natural problems?
 - Takes time to build and it's hard with changes in administration→how do we make drought removed from the partisan debate?
 - Trying to come at it from all sides, from all scales, and from many different approaches and taking advantage of opportunities
 - We need to find proactive approaches

Interesting point of conflict—someone felt their voice is not being represented and no one is challenging the norms and that conservatives are “up in arms” because they feel like no one is holding the federal government accountable for follow-through, this was starting to escalate

Working in small groups on core questions:

- People using their unique skills and backgrounds to understand the question
- Others asking them about their own background
- Some groups going around circle and sharing individually
- People convening around one common theme (eg community) to create new ideas and come together around them
- Using concrete examples
- Talking about the basics: time and money
- How to work within the system vs...
- Also talking about how to change the system

- Throwing out ideas via one's lens and then posing a question for how we can figure out ideas
- Some people talking about opportunities as challenges
- People are hopeful, but...
- Seems to be a little bit of a defeatist attitude—talking more about adaptation as opposed to mitigation
- Some groups seem to have a couple key participants and others are a bit more collaborative
- Many seem to be finding bridges between challenges and opportunities—how are they the same? How are they different?
- I see people going back to the main purpose and relating topics to panelists
- Very positive feeling of the room

Session Three:

Report out from brainstorms:

- **How can MT producers better learn about how to and who is increasing resilience?**
- No producers at table to discuss
- Challenges v. opportunities
- Challenges:
 - Access to information about resilience
 - Translation: how do we translate climate and resilience to language that everyone can understand?
 - Making it relevant to producers—presupposes that producers care about resilience
- Opportunities:
 - Producers live in communities, which are a network resource—provide information through community venues
 - Taking advantage of community leaders and gatekeepers to provide information
 - Support producers in mitigating risk in experimenting and doing tests (financial buffers/safety nets/incentives for experimenting with diversity and resilience)
 - Patterns of resilience that might be key in informing how we distribute information about diversity
 - Redundant, systematic, diverse
- **How do smaller producers access capital and resources to shift to healthier, more productive soils?**
- What is the right question? Include processors? What is capital? Add education and social support.
- Challenges:
 - Producers don't have time or confidence or resources to try new methods
 - Little knowledge on loan creation for new projects because it hasn't been done much
 - Thin safety net for smaller producers—no outside backing to try new things
 - How do people learn about these new ideas? How can they get the knowledge and social support to take on trying new things? And rewards when they do?
 - Beginning farmers
 - Conventional methods leading to negative consequences
- Opportunities:
 - There are people and organizations willing to support experiments and projects in resilience
 - World wants healthier soils and food coming from those soils, so there must be buyers out there willing to pay producers to do and try this
 - How do people learn about these new ideas? How can they get the knowledge and social support to take on trying new things? And rewards when they do?
 - Grants for beginning farmers

- We see that more healthy, productive soil practices help mitigate consequences of conventional methods
- **How can MT agencies, the university system, and others work together to meet the needs for resilient ag in the state?**
- What is resilience trying to solve for? They created definitions:
 - Practices that build soil health
 - Lower input system
 - Supply chain and infrastructure need to get food “out there” efficiently
 - Solve for waste piece
- Challenges:
 - Creating a lexicon that defines what resilience means and is widely understood, agreed upon, and recognized? What is resilience?
 - Supply chain and infrastructure need to get food “out there” efficiently
- Opportunities:
 - Producers are engaged in extension educational information
 - Processors need to be nimbler to respond to supply changes/surpluses/shortages
 - Take risk out of diversification through local markets and connections to regional and local communities
 - Small and medium producers—distribution and communication of products
 - Education about the experience of producers and connecting producers with consumers and organizations
- **How can producers effectively prepare for and respond to drought?**
- It’s all about the water—that’s the limiting resource—how do we use it efficiently?
- Challenges/opportunities—two sides of the same coin?
 - Water use
 - Diversifying crops
 - Marketing
 - Fortifying your bank statement—how do you save during the good years?
 - Developing water use plans that are place-specific and crop-specific
 - Rotational grazing and using grasses and irrigation to fullest potential
 - Weather modeling
- **What policy opportunities can/could help more producers access more resources to build diversity and resilience?**
- Challenges:
 - Federal budget every year that limits offerings
 - Consolidation of input sector and all along the chain
 - Power concentration
 - GE technology
- Opportunities:
 - Ecosystem services
 - Farm Bill—Title 1 insurance dimension—not incentives for diversification—incremental increase in insurance to increase value with each additional different crop
 - Reflect producers’ reality
 - Possibility for procurement rewards for local sourcing
 - Opportunities for more collaboration across agencies—economic and social incentives
- Ron DeYong: Farm Bill Title 1:
 - Wants feedback for the following:

- Safety nets should be tied to diversification: cap to how much insurance you can get, up to three crops at \$50,000 per crop, but one of three can be a cover crop
 - Other diversity measures
- **“Capturing the momentum” brainstorm:**
- *10 years from now, in the lens of responding to climate impact for agriculture, what is your vision for outcomes in terms of policies, capacity and resources, and on-the-ground projects?*
 - Mitigation—stop the bleeding
 - Shift to a carbon tax
 - Create additional benefits for carbon sequestration in soil
 - Build on existent momentum to make MT the center of ag innovation
 - At all levels—producers, university, organizations, processors, community
 - **Idea of pride in MT**
 - **Could we try this first in Montana and then put it into the federal farm bill? Put this idea to Ron DeYong—interesting moment of innovation—do pilot programs here at state level—Farm Bill Pilot—everyone working together to create the right wording and putting tasks to individual (Ron)—hold accountable**
 - Ability to process beef in MT, livestock cover cropping→keep everything here, including the inputs that cows can produce via manure! “Keep the cow at home”/the closed-loop system
 - Landscape-level integrative planning—bring interests of state together—landscape definition of what resources are and how interests interact and affect one another
 - Empower everyone’s voices—real collaboration
 - Holistically address food waste issue through composting, no organic waste going to landfills, recycle back to producers!
 - Pay farmers a living wage
 - Account for the total cost of food production
 - Investment in plant breeding for regionally adapted dry crops and a mix of plant species to increase diversity—build adaptation into them
 - Continuation and expansion on collaboration and integration among community producers and members—supporting education at the community level—local food for local health
 - Language
 - Internships for MSU students to do on-the-ground farm pilots
 - Beginning farmer resources and knowledge transfer
 - Diversity, immigration, equal rights and decent living conditions
 - K-12 food education
 - Tying water rights to best soils for food security/production and water scarcity
 - More opportunities for public civic engagement (free) and access to those
 - Town hall meetings, MT Farmer’s Union
 - More people farming as a proportion of the population
 - More just economic system
 - Streamline loan programs
 - Conservation easements/land trusts/affordable land
 - Extension agents should not operate in a top-down way, but should be bottom-up!—farmers telling extension agents what kinds of programs they want
 - Growing woody species and changing systems to capture more carbon—how can we diversify and adapt without completely altering the nature of the current state of affairs
 - Openness to different solutions for different paths
- What are our initiatives for moving forward?
 - Maybe we need an initiative to set initiatives?
 - Not jump to solutions too quickly and admit that we don’t know

- Crop diversification, a la AERO, to localize the decision-making process, creating a conversation about what is a best fit and what are good options
 - Groups of people to share local knowledge and support each other
- Quality of life vs. products
- “Ranching for Profit” learning group
- Publish localized case studies on soil health—NRCS w/ Extension
- Social media for knowledge sharing about agronomic issues
- More investment capital/state security laws need reform to allow for investment in local businesses
- Support and engagement between farm clubs and communities
- Innovation in Agriculture award by governor to highlight and bring forward stories
- Engage extension in resiliency discussion
- Scaling technology for small and medium producers
- **FINDING WAYS TO REDUCE INPUTS AND CLOSE THE LOOP**

Meg Mills-Novoa:

- Study on:
- How can MT’s farmers and ranchers be at the forefront of addressing climate change?
- Producers often feel alienated, like they are the problem, when they are actually at the forefront of the solutions
- How can we engage farmers and ranchers from across the political spectrum in conversations about climate change?
- How do we change the discourse from farmers as the problem to farmers as the solution?
- Draft for extension agents to encourage farmers to situate their work in the context of others’
- Draft for MT Climate Assessment
- Finding ways to engage agricultural stakeholders and help them think about their work in terms of climate and mitigation
- Draft for One Montana
- Asking about adaptation and mitigation as a way of getting at some of these questions around climate change
 - Farms and ranches—various questions
 - Role of technology and data

SATURDAY

Morning briefing/review of yesterday:

- Make sure we’re not reinventing the wheel and strengthen existing organizations
- Good layout/design, we all liked having opportunity to collaborate and talk
- More producers in the room? We need their voices. What are their trusted sources for information? Importance of maintaining relationships, integration in regionally specific community manner
- Repositioning our questions in a much bigger scope—revolution of our economic system?
- Vision of a strong local food system network where we feed all Montanans first and then are able to export surplus
- Presupposition that we know things and maybe we don’t—stay open-minded to changes—can we build flexibility and feedback into the action plans we create?
- How can we ensure that we’re making the right decisions as we choose a path? Food policy council?

SIX KEY AREAS FOR MOVING FROM INITIATIVES TO ACTION PLANS

- Policy
 - LOCAL/STATE/FEDERAL
 - Farm Bill Pilot Project rewarding diversity
 - Carbon capture/carbon tax
 - Ecosystem services
 - Landscape-level/holistic planning
- Knowledge sharing
 - Agency/university/community collaboration
 - Farm Club demonstrations
 - Recognition for innovation
 - Community building/networking
 - Bottom-up collaboration
 - NCAT
 - Collaboration with extension and NRCS
 - Social media
 - Individual gardening/action
- Local investment
 - Risk investment
 - Accessing private money
 - Bank loan flexibility
 - State security law reform
 - PACE for ag
- Technology
 - Scaling for affordability
 - Water delivery systems
 - Soil tests
 - Carbon tests
 - Precision ag and mapping
- Farming practices
 - Research—land race, food sovereignty
 - Interns
 - On-the-ground learning
 - Crop diversification and management
 - Promoting individual growing/action
- Food waste
 - Closing the loop
 - Efficiency and connectivity
 - Recycling
 - Prevention

Feedback on list:

- Promoting individual action—farm practice and knowledge sharing categories—recognize the value of individual producers
- Make sure we're not over-separating "consumers" from "producers"—we need a more connective idea of these in restructuring our food system
- Could extension agents be helpful in getting food to people once it's grown? Helping with distribution?

- Soil carbon testing—take caution in this because the technology isn't super developed yet
- Are our groups too silo-ed? Should we combine some ideas since they're all so intertwined?
 - These were developed as actionable steps so that we can have tangible outcomes
- Put technology with farm practices
- Put local investment with policy
- Barbara intervention: we need to represent tribal nations and knowledge—how can these also contribute knowledge to the issues here?

Small groups developing action plans:

- Starting out brainstorming and coming to common ground
- People sharing their biggest concerns and their unique knowledge to help people collaborate about potential action steps
- High levels of respect for other viewpoints, either agreement or respectful questioning
- Posing questions to the group when uncertain, or even certain, rather than statements
- Discussing how specific they want to get and what the scope of outcomes and strategies will be
- Trying to find more specific language
- Coming back to the purpose and the true best strategy
- More vocal individuals leading conversation, but some asking the more quiet folks for their opinions
- Conversation about how to reconcile different opinions
- Raising concerns, coming back to goals and how we need to reframe the current state to fit needs
- Trying to be realistic about goals and outcomes
- Generally very collaborative feeling of room, lots of very hopeful conversation
- People voicing confusion, feels very comfortable, open, and respectful
- Clearing up language in particular
- Finding things that we can all agree on
- Working towards tangible steps based on conversation
- Outcomes are statements about the present that reflect a hope for future truth
- Going around to find thumbs up/thumbs down so there is consensus about language for outcome
- People suggesting many different ideas and really questioning, based on individual experiences
- Coming to consensus and then immediately jumping into strategies
- Grappling with how to define resilience
- Also people outlining how they want to move into next part of conversation via group “leader”
- The “outsider” perspective constantly questioning and bringing in issues of diversity
- Finding ways to use existing knowledge more effectively and efficiently
- Respecting all different voices
- As they encounter barriers, brainstorming and tossing around ideas for different wording
- Now going from barriers to *what would be most helpful*
- Beginning to move outside of existing structures to creation for new ones or how to restructure and find new strategies, getting really creative and doing new kinds of brainstorming now
- Some people lead (tend to be the “top level” folks and men) while others act as supports who reflect back and synthesize (often women)
- Going around circle and sharing one top strategy to achieve outcome
- Everyone is helping each other to clarify and bring everyone to a similar level of understanding of language
- Larger groups taking longer to come to consensus but are also compromising more and coming to a richer understanding of their topic
- How to come to actionable steps seems to be more difficult for larger groups

- People now talking about it in concrete terms (“are going to”) instead of hypotheticals (“could” or “might”)
- Thinking of strategies in terms of what is already happening and then how we can change that and give local food more voice
- Groups celebrating what they’ve done by recapping what they’ve done and saying “I really like this...”
- Sharing knowledge as way of developing new ideas collaboratively
- Zooming out to look at broader context and then resetting before zooming back in
- Getting really specific and then considering many different angles of particular strategies
- Realizing that others are non-present experts and finding ways to include them in the conversation before coming to certain decisions
- Putting specific people/groups on achievable tasks
- **HOW IS THERE GOING TO BE FOLLOW-THROUGH ON THESE THINGS?**
 - Very specific list of *who* might be able to carry things out and *how*

PRESENTATION OF OUTCOMES:

- **Knowledge Sharing Group:**
 - Outcome: All producers and ag stakeholders are connected in a knowledge-exchange community focused on building ag resilience.
 - Strategies:
 - Defining resiliency
 - Building relationships and trust
 - Research and convene innovative gatherings with various local thought leaders, depolarizing climate change
 - Framing conversation in personal and economic terms
 - Creating knowledge and ensuring people have that knowledge—univ system and other research groups?
 - Finding out community language and forums—place-specific
 - Multi-directional flow, not one-way (bottom-up)
 - What we have:
 - extension, MontGuide, social media, extension roundtable, ag industry groups, community gatekeepers
 - What we need:
 - Collaboration b/w agencies—foster dialogue b/w them
 - Formal and informal collaboration—e.g., off-the-record dialogue between producers
 - Clearinghouse on locally relevant info
 - Relationships w/ community leaders—trusted source of information for dispersion and connection
 - Lead person/group:
 - Formal: extension, NRCS, tribal governments, Dept of Ag
 - Informal: existing forums and conversations—industry group meetings—rancher roundtable, watershed organization meetings, fair, schools
 - Ideal deadline:
 - 2026!
 - MontGuide on resiliency by 2017
 - Extension/NRCS collaborate on soil health by 2018/2019
 - Next steps:
 - Opening NRCS soil health calls to partners and maybe public within year

- Visit four county fairs or tribal fairs by next summer with rainfall simulators
 - Build relationship b/w nonprofit sector and ag research centers, extension, NRCS
- **Farming practices and technology Group**
 - Outcome:
 - All MT farms have implemented resilient practices by 2026
 - Strategies:
 - Utilize education networks (NRCS, extension, etc.)
 - Policies that incentivize more resilient farming practices
 - Diversification, water/soil conservation, local farm networks, etc
 - Apply appropriate techs more widely to inform mgmt.
 - What we have:
 - Technology
 - Policies
 - Case studies
 - Adaptive mgmt. through monitoring
 - Understanding
 - Education networks
 - Government agencies
 - Local food interest
 - Groups like Grow MT
 - What we need:
 - To apply existent framework, share, and reform the assets we already have
 - Lead person/groups:
 - Univ/extension service/govt
 - PARA—precision ag research association
 - Other farm groups
 - Farmers
 - Ideal deadline:
 - Ongoing—5 and 10 year benchmarks
 - Next steps:
 - Example: Resiliency “MontGuide”
 - Farm Bill reform and passage
 - Outline some appropriate technologies for different types of farms
 - NASS/MASS for establishing baseline for how to change
 - Governor and MACD awards program for innovation in resilience/adaptive practices
- **Food waste Group**
 - Outcome:
 - A percentage of food waste in MT continually decreases over time
 - Strategies:
 - Awareness of problem and cost
 - Food waste prevention tips at point of purchase
 - Waste reduction challenge across organizations
 - Local compost options
 - Food bank
 - Local food/Farm to school programs
 - Yard compost programs
 - Nutrition programs/universities/colleges/schools/restaurants
 - EPA/USDA programs currently existing
 - “Community supported compost”

- What we need:
 - A way to compost food (local compost/collections)
 - Measurement system for assessing reduction—to show that it is/isn't working
 - Awards program to recognize individual efforts
- Lead person/groups:
 - Any food/nutrition groups and businesses
 - Need local community group to lead
- Ideal deadline:
 - Ongoing
- Next steps:
 - Need a community lead organization (mayor/university/chamber of commerce/community gardens/NCAT/school nutrition programs/schools generally/federal program information and resources/landfills)
 - Need communication strategy
 - Incentive program/challenge to get people to engage
 - Community goals and measurement with broad participation
- **WE NEED TO FIND WAYS TO MOVE THIS FORWARD—SPECIFIC POINT PEOPLE/GROUPS?**
- **Policy and local investment Group**
 - Outcome:
 - Support Farm Bill with strong Nutrition title, Conservation title, and safety net for diversity
 - Strategies:
 - Develop a Food Policy Council to plan around Farm Bill that represents diverse MTs
 - Connect with national groups: NSAC
 - Connect with a MT delegation—senators, reps, Tester (get on Ag Committee?), governor
 - Develop a white paper on Farm Bill needs—one on policy considerations for farm bill, one on resilience
 - What we have:
 - Networks, specific knowledge of farm bill
 - NPRC, One MT, Extension, MFU, Northern Climate Hub
 - What we need:
 - Definitive information on cost/budget scenarios—how will changes to farm bill impact budget of various programs?
 - Money for council, white papers
 - Money—Koch funds at MSU for inefficiencies in policies
 - Lead person/group:
 - MT Policy Council (informal now)
 - Ideal deadline:
 - Immediate
 - Next steps:
 - Grow MT convene policy council
 - Grow MT reach out to Dept of Ag and others for assistance and farm bill specifics
 - Develop white papers and send to governor's office and delegation on farm bill
 - Vince Smith and Wendy Stock at MSU for funding for Food Policy Council
- **Part two policy and local investment group**
 - Outcome:
 - Stable funding for FADCs and GTA
 - Strategies:
 - Get funding from coal trust fund interest entirely, avoid general fund

- Lobby for this in legislature
 - What we have:
 - Great programs
 - What we need:
 - Leadership on funding questions
 - Food Policy Council
 - Funding
 - Study on benefits of these programs on state level
 - Track local ag activity
 - Lead person/group:
 - WMGC, MFU, GFDA
 - Private citizens that use these services
 - Ideal deadline:
 - January 1, for this legislative session
 - Next steps:
 - Talk to FADCs and GFDA about bill
 - Maggie Zaback talk to Zach Grown about ag bills
 - Kristal Jones talk to Mary Stein about NIFA funding, SARE, and tracking local food
- **Closing remarks:**
 - Connecting through our different efforts—Ron’s bucket of rocks: what is the food system comprised of? Can we add to the rocks as having specific elements to them? Elemental makeup of rocks could make them heavier! Can we build nutrition in our big rocks? We need to know this! How do environment and management affect this makeup? Water—the human element—how does that interact with the big rocks on a chemical level? The holes in the bottom of the bucket could be holes in the system. Choice of seeds, for example, is one of the elements.
 - Also the rocks could be defined bioregions
 - Investment piece might need its own conference—food and ag grants to private equity—context could be resilience around climate change
 - Celebrate our accomplishments