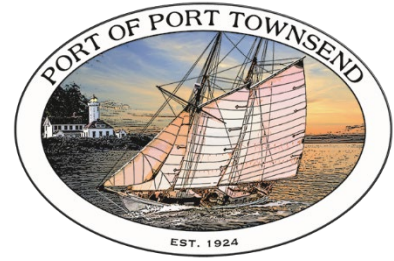


Port of Port Townsend – Short’s Farm Steering Committee



Date: May 29, 2024

Time: 5:30 p.m. – 7:30 p.m.

Location: In-Person – WSU Extension (Kivley Center, 97 Oak Bay Road, Port Hadlock)

| Time | Item | Leader |
|-------------|--|-----------------|
| 5:30 – 5:40 | Introduction | Eric Toews |
| 5:40 – 6:40 | Discussion and Deliberations | FSC/Facilitator |
| 6:40 – 6:50 | <i>Break</i> | |
| 6:50 – 7:20 | Discussion and Deliberations | FSC/Facilitator |
| 7:20 – 7:30 | <i>Questions, Next Steps, Next Meeting: June 5, 2024</i> | FSC/Facilitator |
| 7:30 | Adjourn | |

This meeting is open to the public. However, it is not a venue for providing public testimony. Written comments may be submitted and entered into the record. The principal purpose of the meeting is to allow the Farm Steering Committee and Port staff to communicate with each other, ask and answer Committee member’s questions, and obtain Committee member input regarding the subject topic(s).

The Mission of the Port of Port Townsend is to serve the citizens of Jefferson County by responsibly maintaining and developing property and facilities to promote sustainable economic growth, to provide community access to Port facilities and services, and to protect and maintain our environment, community resources, and maritime heritage.

2701 Jefferson Street P.O. Box 1180 Port Townsend, Washington 98368

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Farm Steering Committee May 15, 2024 Minutes

The Farm Steering Committee met at the WSU Extension Office Kivley Center, 97 Oak Bay Road, Port Hadlock. The meeting was called to order at 5:30 p.m.

Members present: Janet Aubin, Martin Frederickson, Keith Kisler, Laura Llewellyn, David Seabrook, Kellie Henwood, Al Latham, Rebecca Benjamin **Absent:** Martin Mills

Other Attendees: Heidi Eisenhour, Jefferson County Drainage District and Erik Kingfisher of the Jefferson Land Trust

Staff: Deputy Director Eric Toews, Administrative Assistant Joanna Sanders, and University of Washington Katie Cotie.

UW Students: Malia Wing, Conservation and Ecological Features
Will Palmer, Land Use and Infrastructure
Justin Patterson, Agriculture and Economic Context
Clelie Fielding, Conservation and Ecological Features
Aziz Al-Azzon, Land Use and Infrastructure

Port Commissioners: None

Recap of April 25 Key Takeaways: Eric Toews reviewed the goals to generate short-term leasing ideas to start September 1, the Port developing an operations plan, and working on longer-term actions over the next two years. He recognized the need for additional research, specialist help, including additional Farm Steering Committee work on key concepts (exploring publicly owned farms and how they work and a mobile slaughter facility).

Committee takeaway observations were that the Port is listening, there is a good framework and recognition of the short-term aspects and vision as well as long-term potential uses for operating the farm. FSC has a lot of experience and ideas for managing the farm as well as sustainable ideas. The Port could really benefit from having a manager – someone between the Port and the farm holding the larger vision as well as maintenance oversight.

UW Justin Patterson and Aziz Al-Azzon reviewed the activities map broken into pasture, hay production/summer pasture, farming/crops, summer pasture, and hunting and birding. The lower 6.1 acres is limited by the lack of irrigation and is forested and hilly. There might be a narrow strip that someone who is ambitious might farm. Otherwise, it might be best as pasture or alternatively agroforestry.

During discussion, a question was to what extent did UW consider wetland buffers and whether they are available for agricultural use. The Port should address the concerns previously raised, find a resolution of those tensions, or at least provide a map footnote of what is permissible in those areas. Another comment was that they saw the map as reflective of production zones and not getting into the specific details. A suggestion was to change the name of the map to “Possible Activities.”

Eric Kingfisher of the Land Trust referred to the different funding sources supporting the farm and spoke about standing water wetlands called out in the conservation easement.

Continued discussion resulted in comments about the long-term restoration possibilities and the importance in finding a balance between agriculture and ecology.

When asked if what is being presented is accurate, the Committee had the following remarks: yes, although the segments are not necessarily rectangular; some hydric soils are best not tilled; the area north of the road that was not visited on the tour should be noted as an area being hunted (Sandy Short pointed out hunting areas); and it would be good to understand/see the topography of the 23-acre parcel also not visited on the tour.

Initial Conditions Report: the UW continues to make updates and will incorporate suggested changes and bring it back for review.

Selected Research/Preliminary Report

USDA Mobile Meat Processing: Justin Patterson reviewed slides on the UW's research on the list of potential uses discussed on April 25 (mobile slaughtering unit) and summarized the list of management needs, range of options, and possible next steps. There were comments about possibilities for USDA processing as well as concerns about references to 1,000 head of cattle not being obtainable. There would need to be a place and market to sell the animals. It is worthy of further investigation as a key piece of infrastructure, but it will be a critical regional effort rather than limited to Jefferson County. Having the Port assist with start-up costs to establish the infrastructure would help

Research of Farm Case Studies: Will Palmer reviewed case studies of public farms (Viva Farms, Intervale). A suggestion was to explore other farms, including the Whidbey Island organic farm school at Midvale (public), Cloud Mountain Farm Center in Whatcom County, and Vetter farm in Spokane (Conservation District/WSU/Private farmer) and understand their operational challenges. The strength of WSU and Landworks partners could help with this visioning and they might be able to partner off line. Other farms noted were the WSU farm in Vancouver and one in process on Marrowstone Island. Aside from the staffing costs, given the little amount of land available for farming and balancing the ecological elements, it will be critical to have a long lease term to make it sustainable.

Draft Future Use Concepts – Presentation and Discussion

Clelie Fielding facilitated a discussion of ideas supported in the April 17 visioning meeting to narrow those to remain as part of a long-term strategy and priority list. A comment was that although the committee may not feel certain ideas are a priority, if the Port is open for business an entrepreneur might pursue a lease for their idea. Melia Wing recorded revisions. Economic development opportunities and housing options were discussed. Erik Kingfisher noted the conservation easement specifies housing (two units existing and a potential to rebuild the third one). There was some desire to create a separate list of "other acceptable options."

The discussion of the draft Vision Statement was constrained by time, but resulted in a revision as follows: *Short's Farm is a place that preserves agricultural opportunities for the farmers of Jefferson County. Short's Farm enhances the resilience of local food systems, supports the community as a multifunctional hub for agriculture and recreational uses (though recreational is secondary) and improves and maintains a biodiverse and healthy ecosystem.*

Also suggested was an abbreviated alternative vision or mission statement. *Enhance productivity and improve habitat of Short's farm.*

Eric Toews summarized the main desire for the committee to frame a basic vision. The UW could work to further elaborate the vision, goals, and issues for further Committee discussion before presenting at a public meeting on June 5. There is also a possibility a subcommittee could further develop the plan.

The consensus was that the Committee needs more time during the next meeting for facilitated discussion including the options distributed and explained by Al Latham in order to arrive at recommendations. There was no objection to UW taking another cut at a summary and the Port working to address the operational issues and outlining a draft report template and conceptual materials.

Next public meetings: May 29 and June 5. The meeting adjourned at 7:48 p.m.

From: [Al Latham](#)
To: [Joanna Sanders](#); [Eric Toews](#)
Subject: short farm public access
Date: Tuesday, May 21, 2024 9:45:51 PM
Attachments: [image001.png](#)

5/21/24

To Port of Port Townsend Short Farm Committee

From Al Latham

Subject: Public Access/recreation

One of the many things being considered for the Short Farm is public access for things like birding, recreation, etc. Since farming is the main reason the farm was purchased, and it's a main component of the conservation easement these other uses must be secondary to farming. Based on my dealings with the public utilizing the Chimacum Grange I can tell you that most people are responsible, but some aren't. I won't go into my grumpy old man routine and list the irresponsible things that happen there but I can extrapolate those to the farm. It only takes one person to ruin it for everyone else but that one person will eventually take advantage of public access to the farm.

Concerns to name a few would be: farm gates left open, fences damaged, crops trampled, dog owners not following rules (there should be a strict "no dogs allowed" rule), conflicts between farm equipment movement and pedestrians, etc.. All I'm saying is that any public access will have to be controlled and compatible with the farming operations. And it shouldn't be the farmers responsibility to do so.

Al Latham

Thoughts on the Short's Farm plan development to date

Dave Seabrook, May 2024\

Considering the future & the context we're planning for:

I feel the Port's decision to buy Short's Farm is a historic development. Port Commissioners have taken bold action that may help shift how we think about our food system. I've been an advocate for considering our local food system as a "public good", rather than just another commodity. **We now have the equivalent of an agricultural Commons and the Port has selected us to draft a farm plan.** But I think what's needed is bigger than that. The Port needs to consider the entire property, how to manage the creek bottom and sections that flood regularly, how to steward the wildlife habitat, and so on. Below I discuss my thoughts first on the ecological issues then talk about Ag. Much of this falls into the category of visioning or brainstorming, looking ahead to what we think the place could look like in five or ten years.

Also, I think it's vitally important to consider the big picture of the future as we plan: 2023 data seems to indicate climate change is accelerating. The national social fabric is fraying. Geopolitical conflict is rising in many regions. Rising sea level, droughts, fires, etc. **I believe there is an increasing risk for failure of the current food system as it relies on complex interdependent systems. Bottom line: If there's a way to utilize Short's Farm to improve our self-sufficiency we should take it.**

Ecological considerations

A genuinely sustainable local food system would be one that can deliver life-sustaining food to the community without harming the ecosystem upon which we are all dependent. We need to consider the species who live or migrate through the Farm, including but not limited to salmon at the same time we figure out where we can grow or raise food on the farm.

I suggest we recommend the development of a strategic plan for conservation repair and recovery. That is, the Port should hire an appropriate firm or agency to conduct a thorough analysis built around the Port's goals for the property. One goal I hope we can revisit is the concept of public access to what could be a type of wildlife refuge flanked by farming operations. A public access trail, with maybe a few interpretive signs can, I think, be designed to not impact wildlife or farming activities. Public support for such an integrated wildlife refuge and farm could really pay critical dividends (**\$\$**) that would help the chances for success of the entire project. Consider for example, the potential of a "Friends of Short's Farm" non-profit fund-raising group writing grants and raising money. Money that could be used to hire that conservation restoration consultant. And to get the work done after that.

Regarding the duck hunting issue, the Port wants us to make a recommendation. I am not opposed to hunting in general, (I see it as part of a diverse and resilient food system), but **I think this issue requires further study** given recent reports of drastic

decreases in migratory bird populations. In other words, **its not just about the ducks**. There are other near term decisions to be made as well, including facilitation of salmon migration, response to beaver activity, and canary reed grass management. Concern for the entire ecosystem impacts (including farmers) can still apply to the entire project.

Agricultural Activities

For the **near term** decisions must be made with the goal of continuity of agriculture on the property. **The path of least resistance will probably be to continue some version of what the Shorts have been doing - raising beef**. The near term plan could also include leasing the land but hopefully with some general goals in mind. Besides cows there may be others interested in leasing land for other grazing animals. Or a mix of crops and critters. Now, as a new farmer and relative newbie to this community, I lack the experience and knowledge of many of the other SC members and will rely on SC members to help educate me. However, I can imagine what *may* be possible. **I am hopeful that there will be room for small scale innovative agricultural projects**. We could recommend Ag guidelines to the Port to help boost desired priorities such as improving topsoil for future generations, growing crops without imported compost or nutrients, etc.

Others have voiced the need for access to land for aspiring young farmers who lack access to capital. Although there may not really be that much farmable acreage, **I support prioritizing leases for activities that will assist the development of new farmers**. The Port may want to seek out a partnership with an agency that helps develop small farms in the Community to provide educational services and farmer development programs. (WSU Extension?) Support may be possible from grants from federal legislation, or from supporters in the community who share the Vision.

The members of the Steering Committee may not be able to produce a farm plan that is rich in operational details and specific economic goals, but we should be able to find consensus for an outline of a Short's Farm plan that can help get things started. **We can also help the Port by suggesting values, vision and an initial mission statement for the farm plan.**

Larger Food System Issues & Implications

Local agricultural production does not exist in isolation from the rest of the food system. Beyond Ag production, our food system could be made more resilient with improved local processing and storage facilities. We have briefly discussed some of those options but whether such facilities would best be located at Short's Farm remains to be seen. **Energy demand, water requirements and waste management for such projects are areas for future research for longer term projects and beyond what the SC can make informed recommendations on.**

The Port may also want to consider some of the following concepts in support of the Short Farm plan.

- With help from other units of local government, **support and develop markets for increased local food production**. This may require innovative programs that treat food as something more important than the current paradigm does. For example, a publicly owned (or funded) food storage warehouse program could provide price support and risk management to farmers for increased local production while also creating a food stockpile for emergency situations.
- **Provide the "institutional infrastructure"** that will be needed to plan for processing and storage facilities at Short's Farm or perhaps at some other Port property. And to secure those big grants.
- **Write a grant to fund a comprehensive local food system analysis**, and strategic plan (actually two different things) using community-decided criteria, including input from local growers. Using food sovereignty as the standard, measure how far we are from feeding the population of East Jefferson with local production. (This could be adapted to a regional model if desired but food system analysis and planning does require decisions on geographic area to be included.)
- Support farmer training, and farmworker housing and rights. Encourage organization and collaboration of small farmers.
- Encourage collaboration between organizations with like-minded interests. Perhaps a **Short's Farm consortium** including but not limited to JLT, NOSC, NODC, Audubon Society, Tribal governments, each contributing its expertise for problem solving.
- **Help develop a local food system collaborative effort amongst local governmental organizations**, probably within the ICG framework. We all have "skin" in the local food system; hopefully our public institutions can put a portion of our tax dollars where our mouths are.
- **Consider alternate methods for evaluating the Port's return on investment**. Rather than simply a calculation of transactions in dollars we should consider the added value that food locally grown and locally consumed provides. For example, beyond the income that would derive from leasing land to farmers, the Port could consider the "community value" of locally produced meat, vegetables, and grain. If a farmer leasing property at Short's Farm sells food to a local buyer that money typically stays in circulation locally. There is value for the community in keeping local farmers working. There is value for the community in public funding of local food processing and storage facilities. And when the going gets tough, there is untold value in having a strong, functional local community food system.

Summary

The Port's acquisition of the Short Farm creates an opportunity for a big step forward in the resilience of our local food system. It's significance lies perhaps not as much with the potential at Short's Farm itself, but rather in its potential to shift our thinking about what's possible. To create a local food system that is sustainable in the long-term and effective at meeting the demand will require vision, out-of-the-box thinking, hard work, and leadership. It also may require the development of local economic programs to help the new local food economy get established while the existing food economy paradigm dominates. If we can create the conditions and build the infrastructure for a sustainable

and effective local food system then this community will stand a far greater chance of successfully navigating the uncharted waters into which it appears we're headed. I look forward to discussing the issues at our next meeting.

Farm Steering Committee Vision Statement:

Short's Farm is a place that preserves agricultural opportunities for the farmers of Jefferson County. Short's Farm enhances the resilience of local food systems, supports the community as a multifunctional hub for agriculture, and maintains a biodiverse and healthy ecosystem.

Goals:

1. Balance agriculture, conservation, and recreation
 - a. Connecting producers & local needs
 - b. Enhancing food resiliency
 - c. Support local supply network
2. Manage floodplain for fish and agriculture
 - a. Manage ecosystem
3. Ensure longevity of creek health
 - a. Maintain flow
4. Improve aquatic habitat
 - a. Preserve swan habitat
 - b. Create beaver strategy

Encouraged Activities:

Continue livestock grazing
Continue waterfowl hunting
Continue bird watching opportunities
Encourage crop production
Manage reed canarygrass
Allow for farmer housing
Manage creek meander

Economic Development Opportunities (through lease agreement with the Port)

Cold storage
Commercial kitchen
Compost
Energy generation
Equipment rental
Farm stand
Outdoor classroom for agricultural education
Pack shed
Shared farm hub (supporting multiple uses in one building space)
USDA meat processing facility



PORT OF PORT TOWNSEND SHORT'S FAMILY FARM PLAN

Working Together to Support Community Resilience and Prosperity



Port Commission

Peter W. Hanke, President (District 3)
Carol L. Hasse, Vice President (District 2)
Pamela A. Petranek, Secretary (District 1)

Farm Steering Committee (FSC)

Janet Aubin, Stellar J. Farm
Rebecca Benjamin, North Olympic Salmon Coalition
Martin Fredrickson, One Straw Ranch
Kellie Henwood, Jefferson Landworks Collaborative
Keith Kisler, Finn River & Center Valley Orchards
Al Latham, Jefferson County Conservation District
Laura Llewellyn, Chimalow Produce
Martin Mills, The Flying Knucklehead Ranch
David Seabrook, Chimaicum Workhorse Project

Planning Team

Master's Students from the University of Washington, CBE - Department of Urban Design & Planning
Heidi Eisenhour, Jefferson County Drainage District
Erik Kingfisher, Jefferson County Land Trust
Eron Berg, Port of Port Townsend Executive Director
Joanna Sanders, Administrative Assistant/Public Records Officer
Eric Toews, Port of Port Townsend Deputy Director

I: Introduction & Background

[Note: Provided as a Placeholder Only]

In the summer of 2023, the Port acquired the 253-acre Short's Family Farm in Chimacum, one of the largest contiguous agricultural land holdings in Jefferson County. The Commission authorized the purchase of the farm with the objective of developing and maintaining infrastructure and establishing uses of the property that will help sustain and expand agriculture in Jefferson County. Acquisition, re-development, and active use of the Short's Family Farm represents a rare opportunity for the Port to help to strengthen the agricultural sector of our economy and support the health of our local food system.

On September 27, 2023, the Commission adopted Resolution No. 797-24 to guide the development of a plan for the farm. The resolution outlined four planning objectives, a schedule for plan development, and established a committee of local experts (the Farm Steering Committee (FSC)) to help prepare a Farm Plan to guide future use and development of the property.

In late 2023, the Port contracted with the University of Washington's Department of Urban Design (UW) to employ master's degree students and faculty to assist the FSC and Port staff with the visioning process, community engagement, meeting facilitation, and to assist the FSC in preparing its recommendations for Commission consideration.

FSC meetings were held regularly between January and June of 2024. Between January and March of 2024, the FSC's work focused on developing a common understanding of existing site conditions and identifying issues requiring additional information and research. In April and May, community and FSC meetings concentrated on developing a vision for future use and development of the property. All FSC meetings were conducted at the WSU Extension Offices in Hadlock, or on-site at the Short's Family Farm. The FSC's recommendations were presented to the Port Commission at a Public Workshop Meeting on July 10, 2024.



II: Plan Purpose & Vision for the Future

PLAN PURPOSE

To help promote a thriving agricultural sector in Jefferson County.

A VISION FOR THE FARM'S FUTURE

The Port's ownership and management of the Short's Family Farm has expanded agricultural opportunities for the farmers of Jefferson County, enhanced the resilience of the local food system, and improved fish and wildlife habitat along Chimacum and Naylor's Creeks. The ag-supporting infrastructure developed and maintained by the Port includes a multi-functional hub for processing, storing and distributing local ag products, and the property has been wisely stewarded to help nurture a new generation of farmers in our community.



KEY CHALLENGES & OPPORTUNITIES PRESENTED BY THE FARM

Challenges:

- Ongoing need to manage reed canary grass
- Site topography and channelized creek that contribute to flooding and poor salmon habitat
- Shortage of arable land – better suited to grazing/pasture than crops/perennials
- Aging farm infrastructure in need of replacement or rehabilitation

Opportunities:

- Collaborating to build community consensus for future use
- Leveraging Port capabilities to fund and construct infrastructure that widely benefits farmers in the community
- Forging partnerships with agencies, non-profits and producers to address complex habitat restoration and management challenges
- Incubating new farmers that lack access to land and capital

FOUR KEY PLAN GOALS

Consistent with the guidance provided by the Port Commission in Resolution No. 797-23, the Farm Steering Committee has recommended adoption of four key goals to guide the Port's future decision-making concerning the Short's Family Farm, as follows:

1. **Support, Sustain & Expand Local Ag:** Develop and manage the farm to tangibly benefit area farmers and support, sustain, and expand agricultural production in Jefferson County.
2. **Restore Habitat:** Undertake restoration efforts to improve habitat functions and values on site, especially for migratory fish.
3. **Seek a Return on Port Investments:** Whenever possible, advance uses and activities that achieve the Port's standard rate of a return on its directly invested dollars.
4. **Buy Time for Further Research & Investigation:** Establish a standing committee or specific ad hoc committees to assess the feasibility of the ideas and concepts outlined in this plan.



Figure 1 - Short's Family Farm & Chimacum Valley – View Looking North/Northwest, June 2023

III: Goals, Strategies & Actions

Goal #1 - Support, Sustain & Expand Local Ag: *Develop and manage the farm to tangibly benefit area farmers and support, sustain, and expand agricultural production in Jefferson County.*

Strategy 1.1: Seek funding to design, build and permit on-site infrastructure that provides wide benefits to Jefferson County farmers.

- Investigate, and if feasible, fund and construct the infrastructure needed to periodically host a mobile slaughter unit (MSU) at the Short's Family Farm.
- Research the potential to construct and license use of a Food Hub, supporting multiple users, for the processing, cold storage, and distribution of locally grown ag products.
- Explore the viability of either hosting under a lease agreement, or directly owning and managing, a farm equipment rental center.

Strategy 1.2: Encourage continued active agricultural use of the farm for both grazing and growing arable crops.

- Identify and delineate¹ areas of the farm for specific uses, including:
 - Year-round pasture
 - Hay production/year-round pasture
 - Summer-only pasture
 - Arable crops and perennials
 - A farm “incubator” area that could provide small parcels for new growers that lack land and capital to get started (managed by a non-profit)
 - Seasonal Hunting
 - Public access for birding, walking and wildlife viewing
- Support and encourage a range of activities and uses, including:
 - Livestock grazing
 - Seasonal waterfowl hunting
 - Bird watching
 - Growing arable crops and perennials (e.g. barley, blueberries, etc.)
- In collaboration with the USFWS, NOAA/NMFS and NRCS, continually apply adaptive management principles at the farm to attain the Port's goals of benefitting both agriculture and habitat, while achieving the Port's adopted rate of return.
- Investigate, and if feasible construct, vehicular farm access from West Valley Road.
- Explore the potential to, and if feasible irrigate areas on the west side of the farm for arable crops and perennials.
- Research the potential for persistently wet soils on-site to be used for paludiculture crops (e.g., cranberries, watercress, etc.).

¹ See Figure #2 on the following page depicting potential production areas.

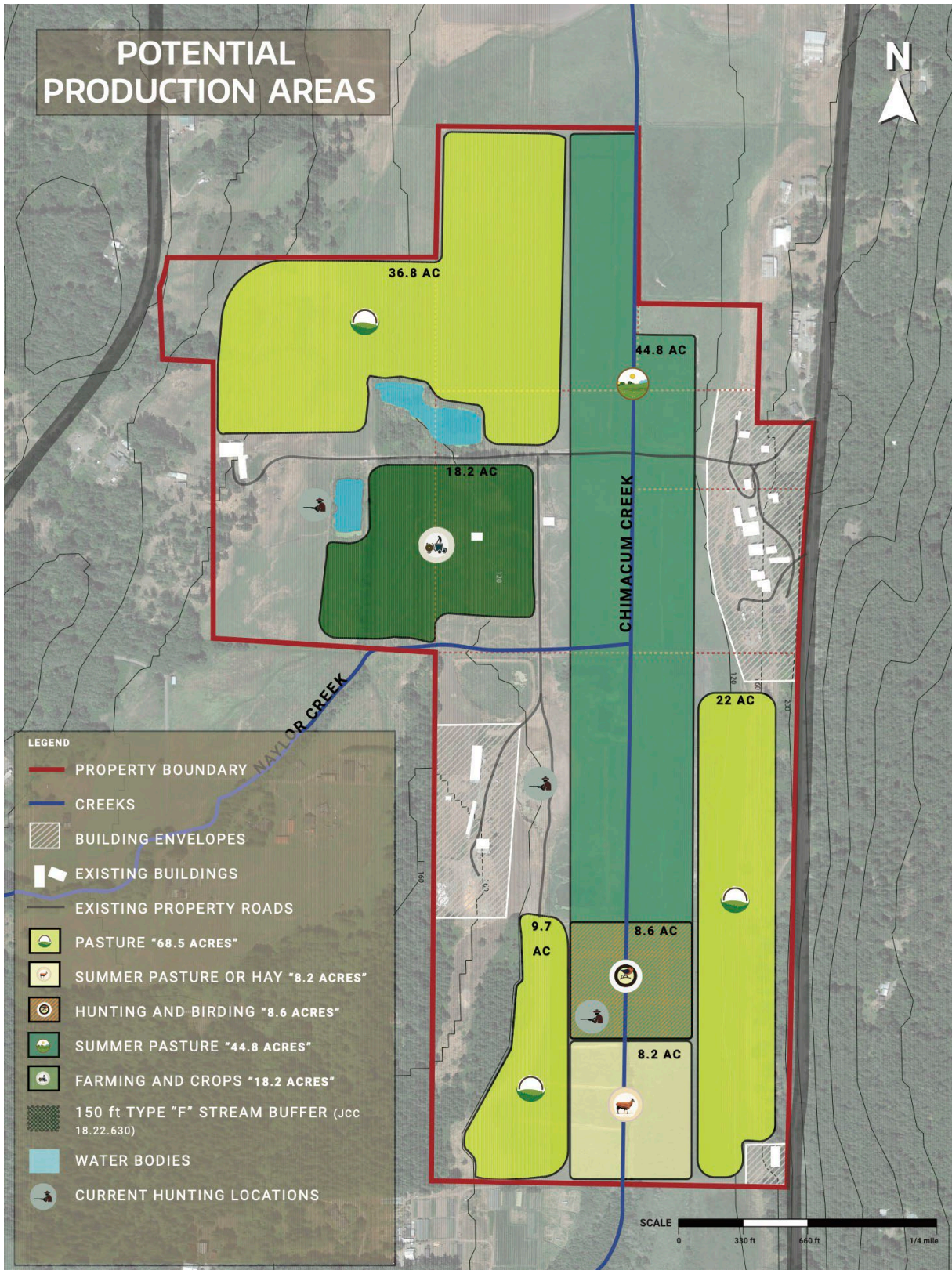


Figure 2 – Potential Production Areas

(Note: the Port is coordinating with the Natural Resources Conservation Service (NRCS), US Department of Agriculture (USDA), to determine whether the potential use areas identified are viable from a regulatory standpoint).

Goal #2 – Restore Habitat: *Undertake restoration efforts to improve habitat functions and values on site, especially for migratory fish.*

Strategy 2.1: In consultation with agency regulators, habitat and wetland specialists, and non-profits (e.g., NOSC and Jefferson Land Trust), develop a Habitat Restoration Plan.

- Investigate and confirm the extent of historic agricultural activities to inform decisions concerning the geographic scope of future habitat restoration efforts.
- Develop improved topographic survey data to inform habitat restoration design.
- Research the potential to re-meander Chimacum Creek and provide vegetative buffers to reduce summer water temperatures for migratory fish.
- Coordinate with agency regulators, wetland and habitat specialists, and non-profits to design a Habitat Restoration Plan capable of funding and implementation.

Strategy 2.2: Immediately (i.e., July-September 2024) implement measures to manage invasive Reed Canary Grass to improve stream flow and reduce the extent of fall and winter flooding.

- Work with the Jefferson County Conservation District and other partners to mechanically remove Reed Canary Grass and other invasive species via rake and flail mower attachments from the main stem of Chimacum Creek.
- Develop, fund and implement an annual plan to manage Reed Canary Grass and other invasives on-site.
- Collaborate and coordinate with other landowners on the main stem of Chimacum Creek and the JCCD to encourage system-wide Reed Canary Grass management efforts.

Strategy 2.3: Investigate the potential to access 2024 Emergency Drought grant funding to replace the Naylor’s Creek culvert on-site to improve fish passage.

Goal #3 – Seek a Return on Port Investments: *Whenever possible, advance uses and activities that achieve the Port’s standard rate of a return on its directly invested dollars.*

Strategy 3.1: Ensure that licenses, leases, and capital investment decisions at the Short Farm employ a “triple bottom line” analysis to confirm that each is responsible economically, environmentally, and socially.

Strategy 3.2: Aggressively seek grant funding for capital infrastructure improvement and habitat restoration efforts to minimize directly invested Port dollars and maximize the potential to achieve the Port’s standard rate of return.

Strategy 3.1: Recognize that the Port’s standard rate of return of 9.5% for the Short’s Family Farm may not be achieved immediately but may require a period of years.

Goal #4 - Buy Time for Further Research & Investigation: *Establish a standing committee or specific ad hoc committees to assess the feasibility of the ideas and concepts outlined in this plan.*

Strategy 4.1: Immediately (i.e., before September 1, 2024) develop an “Operations Plan” that documents the locations of key utilities and improvements on the Farm, and that outlines the day-to-day, month-to-month, and year-to-year activities that must be undertaken to ensure that the farm remains viable.

Strategy 4.2: Retain a part-time/temporary farm caretaker to routinely inspect the property and oversee implementation of the Operations Plan.

Strategy 4.3: Create an Implementation Matrix outlining action items requiring further research and analysis to determine their feasibility (see Attachment “A”, Implementation Actions). Ensure that the matrix identifies a timeline for completion of each item, its estimated rough order of magnitude cost, implementation leaders and partners, and measures of success.

Strategy 4.4: Consider establishing the Farm Steering Committee as a regular standing committee to advance the work outlined in this Plan between July 2024, and December 2026. Alternatively, consider convening an ad hoc committee or committees to assist the Port in implementing this plan as needed.



Figure 3 – Large Ruminants!

ATTACHMENT A

Implementation Actions

Successful implementation of this Farm Plan will require the Port to undertake a variety of studies, programs and capital investments. The following matrix identifies priority studies, programs and capital projects to be initiated over the coming years. Items in the matrix are not listed in order of priority. The matrix should be reassessed periodically to ensure that the correct priorities have been identified, consistent with the direction outlined in this Plan.

| IMPLEMENTATION MATRIX: PRIORITY STUDIES, PROGRAMS & CAPITAL PROJECTS | | | | | | |
|---|---|------------------|--------------------------|---|--|--|
| STUDIES & PROGRAMS | Timeline for Initiation/Completion | | | Estimated Cost (Rough Order of Magnitude)* | Implementation Leaders & Partners | Measuring Success |
| | 2024-2026 | 2027-2030 | 2031 & Beyond | | | |
| Research the on-site infrastructure requirements and potential to attract a regional meat processor to periodically use the Short Farm as a location for a Mobile Slaughter Unit (MSU). | X | | | Moderate (\$85,000) | Port staff in collaboration w/local livestock ranchers and WSU Extension | Construction of necessary on-site improvements and a license and use agreement with regional meat processor – or a determination that such investment is not economically viable. |
| Complete a refined and updated topographical survey of the property to inform the design of a Habitat Restoration Plan. | X | | | High (\$150,000+) | Port consultant selected via RCW 39.80 | Sufficiently detailed topographic data to inform the design of a Habitat Restoration Plan. |
| Collaborate with WSU Extension to complete an updated Farm Census for Jefferson County. | X | | | Low | Senior Port staff | A completed census that helps inform future Port infrastructure investments. |
| Conduct a feasibility analysis to determine the viability of developing a Food Hub for the processing, cold storage, and distribution of agricultural products on-site. | | X | | Moderate | Port staff w/consultant support (grant funded) | A completed Feasibility Analysis meeting the requirements of the Community Economic Revitalization Board (CERB) to ascertain the viability of establishing a Food Hub on the site. |
| | | | | | | |
| | | | | | | |
| | | | | | | |

* Key to estimated cost terminology: "Low" = up to \$10,000; "Moderate" = \$10,001 - \$100,000; "High" = over \$100,000.

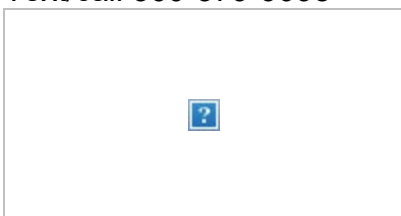
From: [JCFM Market Manager](#)
To: [Public Comments](#)
Subject: Grant opportunity for Short's Project
Date: Tuesday, May 21, 2024 8:47:23 AM

Dear Port,

This USDA infrastructure grant may fit the Short's Farm project well: <https://agr.wa.gov/services/grant-opportunities/resilient-food-system-infrastructure>. I am happy to provide a letter of support if you decide to apply.

Kindly,

Amanda Milholland (she/her)
Executive Director
Jefferson County Farmers Markets
Text/call 360-379-9098



From: [Eric Toews](#)
To: [Joanna Sanders](#)
Subject: FW: paludiculture
Date: Monday, May 20, 2024 10:07:39 AM
Attachments: [LBF-69-01-2 PP Geurts et al 121220.pdf](#)

Hi Joanna,

FYI - email and attachment re: paludiculture from Joe Holtrop, below.

Thanks,

E

From: Joe Holtrop <jholtrop@jeffersoncd.org>
Date: Thursday, May 16, 2024 at 9:42 AM
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Subject: paludiculture

Hi Eric,

Interesting discussions during last night's Short Farm steering committee meeting.

Some of the talk about potential activities made me think of the potential for paludiculture on the Short Farm. Paludiculture is the cultivation of crops in deliberately wetted organic soils rather than draining them. This is a concept that has received considerable attention in parts of Europe in recent years, mainly in response to greenhouse gas emissions. Attached is a paper on it.

Note that this paper is a few years old and more recent research into the economics of paludiculture has so far determined that none of the crops that have been looked at so far are economically viable without subsidies for reducing carbon emissions.

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POSITION PAPER

Recognize the high potential of paludiculture on rewetted peat soils to mitigate climate change

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1 Introduction

Draining peat soils leads to oxidation of the peat and soil subsidence. In Germany, drained peatlands account for only 7% of the agricultural land but are responsible for 37% of the agricultural greenhouse gas (GHG) emissions (GMC, 2018). Rewetting peat soils appears to be a cost efficient GHG mitigation measure (Röder et al., 2015). The ideal situation would be a natural colonisation with peat forming plants after rewetting and a return to a carbon sequestering system without harvesting. However, the productive function can often not be relinquished and paludiculture, the practice of productive use of wet and rewetted peatlands, should be considered. In paludiculture, harvesting wet crops for food, fodder, fibre and fuel is combined with the provision of vital ecosystem services (Wichtmann et al., 2016). This concept provides production opportunities for the necessary, fundamental change in land use of drained peatlands to a more sustainable, wetter land use, which should benefit both the regional economy and the climate. Peatlands used for paludiculture maintain a productive function under permanent-

ly wet, peat preserving conditions. The average groundwater level in the growing season is 20 cm below the soil surface or higher, and the minimum groundwater level is never more than 40 cm below the soil surface (Geurts and Fritz, 2018). This implies that drained grasslands and croplands can be converted into peat moss lawns, reed and cattail plantations, or wet meadows with grass species adapted to a higher soil moisture content. The biomass can be used for a whole range of products and applications, including human consumption and fodder, or wet grasslands can still be used as pastures (e.g. by light dairy cows or water buffaloes).

2 Paludicrops

There are various types of peatland cultivation systems with crops grown under wet conditions, so-called paludicrops. Many of these are ready to be implemented on a larger scale, including on farms. Biomass yields of 15 to 30 t dry matter per ha are potentially possible (Heinz, 2012; Köbbing et al., 2013; Grosshans, 2014), which is comparable to conventional crops. Paludicrops can be used as fodder, as protein

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source, or as raw material for the production of horticultural growing substrates, or alternatively for bio-energy and as a resource for bio-based materials (insulation, building materials, paper, bioplastics). Paludicrops differ in their soil chemical and hydrological requirements, and growers need to adapt to these requirements (Geurts and Fritz, 2018). *Table 1* lists promising paludicrops, their preferred range in water levels, applications for which they are grown (both on-farm and off-farm), existing pilots and large-scale implementation, and to which extent they have potential for carbon and blue crediting systems (see below). Moreover, usage of biomass for bio-based materials will prolong the lifecycle of carbon, as compared to fodder for ruminants where part of the carbon is rapidly emitted again as CH₄ and CO₂.

3 Payments for ecosystem services

There is a large GHG emission reduction potential when rewetting drained and fertilised peat soils, commonly 40 to 60 t CO₂-eq. ha⁻¹ a⁻¹ for productive and fertilised grasslands. Firstly, CO₂ emissions become lower at higher groundwater levels and approach zero in waterlogged soil. Secondly, emissions of N₂O, a very strong GHG, are reduced as N fertilisation will usually be decreased and N₂, rather than N₂O, will be formed during denitrification when oxygen availability is low in wet conditions (Tiemeyer et al., 2016). In addition to biomass use, the GHG emission reduction creates opportunities for business models based on carbon crediting schemes (e.g. Moorfutures®; Joosten et al., 2015; Günther et al., 2018). The climate mitigation potential is partly counteracted by methane emissions that are largely driven by summer inundation, topsoil chemistry, vegetation type, availability of easily decomposable biomass, and nutrient or carbon input (Couwenberg and Fritz, 2012). Guidelines for low GHG emission (< 10 t CO₂-eq. ha⁻¹ a⁻¹) production cycles on rewetted peatlands are available (Tiemeyer et al., 2016; Günther et al., 2017; Geurts and Fritz, 2018). In addition, every hectare of drained peatland that is converted to paludiculture is as effective as taking climate mitigation actions on 10 to 100 ha of mineral soils for food production, which would have led to a lower productivity (e.g. lower use of fertilisers).

In addition to climate benefits, paludiculture can reduce nutrients in surface water and reduce flood risks and droughts by acting as temporary water storage areas, and increase biodiversity compared with conventional agriculture. In so-called blue crediting schemes, farmers could be paid for these water management related ecosystem services (Bohlen et al., 2009; Grygoruk et al., 2013). However, these schemes are still in the development stage.

4 Pilot projects

Paludiculture pilots and demonstration sites on a farm-scale already exist in various countries (*Table 1*). Preliminary results suggest that peat forming paludicrops (e.g. peat moss, reed and alder) grown at groundwater levels 10 cm below the soil surface are the optimal compromise between biomass production, climate mitigation, and peat preservation (Schäfer

and Joosten, 2005; Jurasinski et al., 2016; Günther et al., 2017). However, some crops, such as cattail, perform better at water levels 5 to 20 cm above the surface, which may lead to substantial methane emissions in case of adverse circumstances (high carbon input or presence of fresh litter (Couwenberg and Fritz, 2012)). Harvesting belowground biomass is not eligible since causing regular soil disturbance conflicts with the preservation of the peat carbon stock as a primary concern of paludiculture. In addition, caution should be taken if using exotic plant species as paludicrops (e.g. wild rice, rice, giant reed, miscanthus), because they may become invasive (Matthews et al., 2015).

5 Opportunities and bottlenecks for implementation

For large-scale implementation of paludiculture, long-term schemes and income security for farmers is required. In this respect, paludicrops need to acquire the general eligibility for agricultural payments in the first and second pillar of the EU's Common Agricultural Policy (CAP) as currently exist for conventional CO₂-intensive crops from drainage-based agriculture (Wichmann, 2018). So far, most paludicrops lack the status of agricultural crops despite centuries of productive use (e.g. reed for thatching, willow for wattle fences). Within the next funding period, any kind of cultivation for food, fibre, or energy on rewetted peat soils should become eligible for direct CAP payments. Furthermore, future public payment schemes need to set a new course by considering the external effects of peatland use, i.e. phasing out any support for drainage-based peatland use, supporting the shift to paludiculture (e.g. investments for planning, planting, special machinery), and paying for reduced GHG emissions and other ecosystem services provided by wet and rewetted peatlands (Wichmann, 2018). Moreover, the application of the 'polluter pays principle' (e.g. used in the Water Framework Directive; Correljé et al., 2007) on drainage-based peatland use may promote CO₂-neutral and economically sustainable production systems on peat such as paludiculture.

An obstacle that still exists is the fact that water management in agricultural areas is usually tailored to serve drainage-based agriculture, which often makes rewetting expensive when surrounding fields are still drained. Furthermore, while special machinery and certain important production chains are already available, the scale of production is currently too small to feed supply chains of e.g. peat moss for bulk growing substrate, and cattail for insulation and building material. As a result, the market for most paludiculture products as raw materials for bioenergy and bio-based materials is not yet functional and business models are still under development.

Next to biomass revenues and harmonised subsidies, ecosystem services should be rewarded and incentives should be developed to stimulate the implementation of paludiculture, including the accounting for reduced GHG emissions (carbon credits), water purification, climate change-related water retention and storage (blue credits), and biodiversity. In the Netherlands, this has already been done for some forms of nature-inclusive agriculture (Runhaar, 2017).

Further steps in implementing paludiculture are being taken in several projects in various European countries (see acknowledgement). Pilot projects are very important to further develop management and harvesting techniques,

obtain robust data on environmental benefits (including Life Cycle Analyses (LCA) of land use and associated products), and create markets for products.

TABLE 1

Overview of important paludiculture crops and applications, range in water levels, list of important production areas including pilots and potential areas, potential for carbon credits based on estimates of GHG emission reduction (including biomass use for replacing fossil resources), and potential for blue credits based on suitability for water purification (P) and water storage (S): ++ very high potential, + high potential, 0 little potential, - negative effect. Figures based on references in Wichtmann et al. (2016) and Geurts and Fritz (2018).

| Crop | Water level (cm +/- soil surface) | Product | Potential for carbon credits | Potential for blue credits | Important production areas including pilots (in ha) and potential areas (in italics) |
|--|-----------------------------------|---|------------------------------|----------------------------|---|
| Cattail (<i>Typha sp.</i>) | 0 to +20 | insulation and building material | + | P + S + | Kamp (D) 30 Zuiderveen (NL) 4 Peel (NL) 1 Bûtefjild (NL) 0.1 <i>Danube delta (RO)</i> |
| | | bedding material | + | P + S + | Peel (NL) 1 Zegveld (NL) 0.4 |
| | | extraction of protein, fibres, cellulose | 0/+ | P ++ S + | <i>Canada</i> |
| | | feed for pest-controlling predatory mites | 0/+ | P ++ S + | Zegveld (NL) 0.4 |
| | | fodder | -/+ | P ++ S + | Peel (NL) 1 ha Zegveld (NL) 0.4 |
| | | combustion | -/+ | P + S + | Canada > 500 |
| Reed (<i>Phragmites australis</i>) | -20 to +20 | thatching, insulation and building material | ++ | P + S ++ | UK 6,500 Netherlands 4,500 Mecklenburg-Vorpommern (D) 550 Poland 8,000 Hungary 7,500 Austria 1,500 Denmark, China <i>Romania 190,000</i> <i>Ukraine >100,000</i> |
| | | paper | ++/+ | P + S ++ | China > 1 million |
| | | extraction of protein, fibres, cellulose | 0/+ | P +/++ S ++ | <i>Germany</i> |
| | | combustion/ biogas | -/+ | P ++/++ S ++ | Italy 0.75 <i>Germany</i> <i>Belarus & Ukraine: large potential areas</i> |
| Peat moss (<i>Sphagnum sp.</i>) | -15 to -5 | high quality substrate in horticulture | ++ | P + S 0/+ | Hankhausen (D) 14 Twist (D) 10 Ilperveld (NL) 8 Canada 8 Finland, Chile |
| Grasses like reed canary grass (<i>Phalaris arundinacea</i>) | -30 to +10 | combustion/ biogas | -/+ | P 0 S + | Malchin (D) 200 Denmark, Estonia, Belarus |
| | | fodder | 0/+ | P 0/+ S + | Mecklenburg-Vorpommern (D) |
| Alder (<i>Alnus sp.</i>) | -40 to +5 | wood/timber | ++ | P 0/+ S ++ | Mecklenburg-Vorpommern (D) USA |

To convince landowners, producers/farmers, and manufacturers, long-term schemes and certificates for CO₂ and other ecosystem services have to be developed and experiences from existing paludiculture pilots in Europe and large-scale implementation in peat-rich regions in the world should be shared. The second pillar of the CAP already provides some incentives for all steps of implementation that can be used and refined (cf. Wichmann, 2018).

6 Conclusions

- Farm carbon footprints benefit largely from raising water levels to the peat surface resulting in substantial GHG emission reduction.
- Small areas of drained peatlands converted to climate mitigation optimised paludiculture can offset the need to take climate mitigation actions on 10 to 100 times larger areas of mineral soils for food production.
- Sustainable wet agriculture can also be economically viable. New business models are being created, which can often be combined with conventional farming (fodder, bedding material, meat/milk with CO₂ certificate), but high quality off-farm applications also exist already.
- Society is responsible for creating essential preconditions for large-scale peatland rewetting and paludiculture, including the provision of the necessary infrastructure and recognition of the sustainability value of paludiculture.
- Techniques and tools for paludiculture are available and under optimal conditions comparable biomass yields and revenues as in conventional agriculture are potentially possible.
- Water level management, nutrient availability, and crop choice are the main determinants for productivity. Other aspects are GHG emission reduction, costs of implementation, and the provision of other ecosystem services.
- CAP funding schemes need to be revised to facilitate sustainable solutions for wet peatland agriculture.
- Well-documented, long-term pilot projects and the generation of LCAs are very important to gain insight into long-term yields and income from paludiculture and are necessary for innovations and further market development.

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